Exploring the Role of Relationality in Shaping Water Governance

A Situated Study of New Mexico's Acequias

Katherine Chyna Rose Dixon

Thesis submitted for the degree of Doctor of Philosophy
School of Global Development, University of East Anglia
March 2026

Student Registration Number: 100360377

This copy of the thesis has been supplied on condition that anyone who consults it is understood to recognize that its copyright rests with the author and that use of any information derived there from must be in accordance with current UK Copyright Law. In addition, any quotation or extract must include full attribution.

Abstract

Drawing upon thirteen months of fieldwork practice within the autonomous and collective irrigation systems of New Mexico (*acequias*) this thesis explores the role of relationality in water governance, and the corresponding transformative potential that relational approaches can hold for broader water management paradigms. The study brings forward a close examination of *acequia* water governance, with particular attention paid to the central principle of water sharing – the process of water allocation that *acequias* engage in to maintain equitable water access during times of shortage or drought.

From this space of inquiry, several guiding principles of *acequia* governance are seen to emerge, including concepts such as *querencia* (rootedness and reciprocity to place), relationality, mutuality, and *autonomía* (autonomy). Through empirical analysis of three case studies, the thesis argues that *acequias* function as spaces of relational autonomy wherein *querencia*-informed practices guide not only water access and irrigation, but broader territorial and ontological relationships. By examining the generative tensions that emerge where relational and hegemonic governance regimes meet, the research reveals how *acequia* systems transcend resource management to become relational networks and spaces of autonomy, through which communities assert alternative ontologies of environmental management towards the wider territory. In doing so, the thesis explores how the relational practices of *acequia* systems respond to, and challenge, singular narratives of progress and development, instead yielding way for plurality and hybridity.

This research draws upon political ecology, decolonial theory, and frameworks for just transformations to examine water-sharing practices and acequia governance through lenses that attend to power, politics, ontology, and difference. Methodology is informed by principles of feminist political ecology, and includes close examination of the ways in which research itself is an avenue through which relational and mutualistic outcomes can be borne. By engaging these themes, the thesis ultimately contributes to our understanding of relationality in water governance and explores the transformative potential of pluriversal approaches for creating more equitable and just territorial management systems.

Access Condition and Agreement

Each deposit in UEA Digital Repository is protected by copyright and other intellectual property rights, and duplication or sale of all or part of any of the Data Collections is not permitted, except that material may be duplicated by you for your research use or for educational purposes in electronic or print form. You must obtain permission from the copyright holder, usually the author, for any other use. Exceptions only apply where a deposit may be explicitly provided under a stated license, such as a Creative Commons license or Open Government license.

Electronic or print copies may not be offered, whether for sale or otherwise to anyone, unless explicitly stated under a Creative Commons or Open Government license. Unauthorized reproduction, editing or reformatting for resale purposes is explicitly prohibited (except where approved by the copyright holder themselves) and UEA reserves the right to take immediate 'take down' action on behalf of the copyright and/or rights holder if this Access Condition of the UEA Digital Repository is breached. Any material in this database has been supplied on the understanding that it is copyright material and that no quotation from the material may be published without proper acknowledgement.

Acknowledgements

When I was young, my mother and I would grow paper-white flowers for each of my schoolteachers, every year. We began planting in early spring, growing each one by hand, so that they would be ready and in-bloom by the time the school year finished. Due to the unusual and multi-national upbringing I experienced, I was correspondingly exposed to a variety of school settings, and, in turn, many, many different educators along the way.

Collectively, I thank you all, and offer each of you a proverbial paper-white flower bulb. Each of you shaped, in so many small ways, a path and direction towards continued learning. You also played a tremendous role in my upbringing. Thank you.

To my mentors at Clark University: Professor Butler, Professor Downs, Professor Carr, Professor Caron, and Professor Frey: you each encouraged me and inspired me in many different ways. Professor Frey: you were the first person to tell me I should pursue a PhD, and you said it in such a matter-of-fact tone, that I actually believed you. Professor Butler, you treated me as a colleague and friend, and this made all the difference. Professor Downs, you guided me towards learning how to undertake my own independent research, and taught me the difference between productive and unproductive struggle. Professor Caron, you showed me an example of compassion-driven research in action, and stood as a role model for being a woman in academia. Professor Carr, you illuminated a path of unusual intellectual curiosity and play. Thank you, all, for believing in me.

On the home front, I offer deep gratitude to my advisors — Dr. Teresa Armijos Burneo and Dr. Iokiñe Rodríguez — for your endless support, guiding hand, and exploratory freedom. You have supported me to unlearn how I thought the traditional doctoral dissertation should proceed, and to instead read the decolonial. You have given me trust, and with that trust, I gained so much. Through your patient, candid, and humorous lessons, I have been able to listen and learn more deeply to the wisdom of the acequias: to understand querencia, to think relationally, and to connect the dots between the fluid geography of this terrain, and the decolonial terms of others. You have taught me about the pluriverse, and you have treated me as an individual in my own learning journey: for this, I am tremendously grateful. I continue to be inspired by you both and look forward to many shared conversations together. It is a privilege to be mentored and guided by two incredible women – both from Latin America – both rooted in their own relational and decolonial practice – both who have navigated, learned, and re-worked the structure of academia. As we each build together, my respect for you only deepens. You have created new pathways of scholarship and practice, and I am humbled to be able to walk in that terrain. Thank you for holding my hand, and thank you, also, for trusting me to do it this way.

To Dr. Jessica Budds, my first and initial supervisor of my doctoral program. As you know, I came to East Anglia to meet you, and to learn from your hydrosocial approach. You opened doors for me that I didn't even know existed, and you also showed an unwavering commitment to my scholarship and personal growth. I thank you for our many conversations, for your steady hand, and for the several visits we have maintained throughout the years. I know you insist that my success is always my own, but I feel that you were instrumental in starting this PhD.

I thank the Faculty of Social Sciences at the University of East Anglia for funding my doctoral research and PhD, and for recognizing and going beyond the barriers of traditional 'Development Studies.'

To the early members of the Water Security Research Center, I thank you, too: being a hydro scholar is more fun when you're in the room.

I thank Norwich, and the people and communities with whom I was able to connect and co-create. This includes the beautiful British parks that I became acquainted with, the Conker trees, the enviable rose bushes, and the lakes (ponds).

Dr. Bruce Lankford, thank you for our lively conversations, your enthusiasm about irrigation, for many cups of coffee, and for delightful chats. I appreciate your guidance and support on the journey.

To Dr. Rebecca Elmhirst, thank you for weaving a tapestry of feminist political ecology praxis, and for inspiring many young students to engage in situated, embodied research across scale. Your writing, mentorship, and teaching has created a foundation from which a new generation of feminist political ecology scholarship may flourish — and I am thankful we have been able to cross paths throughout my PhD journey. Thank you.

~

To my dearest friend, Madhuri, with whom I travelled along this PhD journey side-by-side: it has been such a pleasure to grow, discover, initiate, and finish this degree together. Thank you for your endless compassion, sharp witted humor, solidarity, and friendship. You are a real one.

To the lovely women with whom I lived: the experts of 90 Portland Street (and Coleman Road). Emma, Franziska, Petra, Eve, and – my sweet Marina – thank you. Emma, your gritty determination, structure, cycling prowess, and enthusiasm: thank you! Franziska, your zest, excitement, joy, and wonderful copacetic musical enthusiasm for low-lights, fresh food, and good candles: thank you! Petra, your humble and compassionate welcome, your continued hospitality, your sweet kindness and pistachio cream! Thank you. Eve, your unbridled joy, your Brazilian samba, your raw and honest vulnerability, and your continued support: thank you! Emma (the twin), you were the first person I encountered in Norwich, and you helped me to carry my bags. Your sweet kindness, and soft approach has stayed with me: thank you. Marina: from start to finish, you have been continuously present in this PhD – you have reminded me how to be a whole orange, have inspired me to excel beyond the PhD, have continued to bring joy, support, outstanding comedy, and excitement to life! Thank you for being an amiga. Thank you!

~

To Peggy and Sylvia: thank you for our many conversations, countless dinners, and your good wisdom along the way. Our conversations provided an island for me to resurface on during my fieldwork period – a space where I could come and unwind, and make sense of the world and the research around me, and contextualize these happenings within your own experiences of life.

Peggy: your cool-headed and compassionate stance has fostered a greater sense of care and curiosity about the world around me. Thank you for your thoughtful, rigorous, and inquisitive wisdom.

Sylvia: you wrote the book. Quite literally, on acequias, yes, but also on many other things. Your life and writings inspired new ways of thinking about research, of studying 'the field at home,' of working within and beyond the academy, and of engaging in reciprocal research practice. You also have developed a *platica acequiera*, that I think goes beyond tradition. Very often, when I couldn't find the words to describe the multitude of layers I encountered in the research, I turned to the words you had already written: and, the table you built. Thank you for your mentorship, good humor, and support. It has meant an incredible deal to me.

To my other research collaborators and dear friends in Taos: many of whom I knew, and with some of whom I strengthened a bond. To Darryl and Julie Maestas: thank you for taking me under your wing, teaching me so much about the acequias, trusting me to support the fight for acequia rights in Talpa, and for teaching me to bail hay. You became some of my closest companions during the fieldwork period, and I will always be thankful. To Carlos Arguello, and your family: thank you for your generosity of knowledge, support, and comradery. You also took me under your wing, showed me the intricacies of a system I was still discovering, and supported me with an unwavering commitment to my research. To Judy, Sam, Gillian, and Toby: thank you for your wisdom, guidance, and excitement about my research. From our first days working together in *Alianza* (and collaborating through TVAA), I continue to hold you in such high regard. I look forward to more conversations and endeavors together. To my friends who lightened the journey: thank you.

To my friends and colleagues at Amigos Bravos during the fieldwork period, thank you. You brought me joy, learning, and community. To those I worked with in prior endeavors, thank you, too.

To the rest of my research collaborators in the Taos community and beyond: including Patricia Quintana and Tracei Akarlilar, thank you.

~

To my family, I love you so dearly. To my sister, Camila, thank you for paving the way, and for continuing to be an incredible support and role model. I am so lucky. To my four grandparents, and my great-grandparents, none of whom are still here: thank you for inspiring a better life, and for reminding me, through your own unusual legacies and stories, of how to create a life we are excited by.

To my parents: Jim Dixon and Kathy Christianson. You paved the way. You gave me everything I needed in this life to succeed, including, most of all, a supportive and guiding hand – and an insistence to stand on my own two feet. You are an example of dignity and courage in the face of change, of a commitment to respect and individuality, and a connection with nature and self. You are both incredible role models.

Thank you, both, for everything. I love you so very much.

To my dearest friend and partner, Gaurang — Mikko Johannes Lehtola — your wisdom, enthusiasm, compassionate humor, and ability to get me *outside* and *thinking* are unparalleled. You have always brought a centering ability to our shared life: thank you. For your trust, your magic, your sparkle, and your spiritual grounding. To go climbing with you, and to create a world that we both love and are proud of, is an absolute joy. I love you very much.
To Tiina and Veikko: thank you for welcoming me so warmly into your family, and for the countless cups of *kahvia* we have shared together under the cool, winter, Finnish sky. Two of my best chapters were written in the seat of your living room, and I consider myself fortunate to have shared this experience with you.

~

To my dear friends:

Hannah: thank you. Your support and encouragement along the way have proved invaluable. You are a fantastic friend, and an even better character. Thank you.

Makenna: your consideration, creativity, support, and gracious humor delight me.

Catalina: thank you.

Silke, Inka, and Freya: I love you.

Xiili: we have always shared good conversations about the collective role coloniality plays in New Mexico. Thank you.

To the Trujillo and Martínez families: Dolores, Francina, Horacio, Ryan, Phillip, and Connie, too. Thank you.

To the Santa Fe Satsang and ashram community: thank you.

To our proverbial grandparents, Steve and AP: thank you, also. Your shared sense of humor, sharp wit, inquisitive minds, and dedication are beautiful and unparalleled. Many games of pool have been played, and many coffees have been had, while writing this thesis.

To my many aunties and uncles who have guided me throughout my life. Thank you, also.

To my dearest, most beloved, **Amma**, thank you.

I often find gratitude all around me, and this results in a desire to thank everyone and this world: the baristas who serve the tea, the unknown gardeners who tend the trees, the many hands who make light work, and the ancestors who cleaned the acequias for generations before me (and we).

Thank you to the communities of Taos, Lama, and all of the *acequias* (and *acequiero/as*) in New Mexico.

This thesis is dedicated to you: to everyone who makes and remakes a better world, filled with curiosity and querencia, love, joy, and pluriversality.

Table of Contents

ABSTRACT **2**

ACCESS CONDITION AND AGREEMENT **3**

ACKNOWLEDGEMENTS **4**

TABLE OF CONTENTS **9**

INDEX OF TABLES **13**

INDEX OF FIGURES **13**

LIST OF APPENDICES **15**

LIST OF ABBREVIATIONS AND ACRONYMS **15**

GLOSSARY **16**

CHAPTER 1. INTRODUCTION **18**

1.1 Introduction Story - *Vamos a la Acequia!* 18
1.1.1 Central Thesis Argument *21*
1.1.2 Invitation *21*
1.2 Context – Introducing *Acequias* 22
1.3 Research Focus and Gap 24
1.4 Research Questions 25
1.5 Core Concepts and Theoretical Framework 26
1.5.1 Acequias as Hydrosocial Territories: Theorizing the Hydrosocial Cycle *27*
1.5.2 Power as Relational and Co-Constitutive: Towards Just Transformations *29*
1.6 Situating the Literature: Water Governance, Political Ecology, and Those I am Thinking Alongside 30
1.6.1 Points of Departure *33*
1.7 Methods/About This Study 34
1.8 Thesis Organization 37

CHAPTER 2. CONTEXT **41**

2.1 Introduction 41
2.1.1 Statement of Chapter's Central Argument *41*
2.2 "A River Runs Through Here": Taos' Geographic and Environmental Setting 41
2.2.1 Physical Geography *42*
2.2.2 History of Aridity *46*
2.2.3 Climate Context *48*
2.2.4 Water Use in Taos County *50*
2.2.5 Interstate Stream Compacts *52*
2.3 Shifting Ground: Tourism, In-Migration, and the Recomposition of Taos County 52
2.4 Taos Pueblo: The Place of the Red Willows 54
2.4.1 Territorial Sovereignties *55*
2.5 *Acequia* Communities and '*Nuevomexicano*/a' as a Place Based Identity 55
2.6 Land Grants and Territorial Dispossession 58
2.6.1 Brief History of Land Grants (Mercedes) in Northern New Mexico *58*
2.6.2 Mechanisms of Dispossession Following Treaty of Guadalupe Hidalgo *59*
2.6.3 Contemporary Consequences of Dispossession *61*
2.6.4 Historic Processes of Resistance *63*
2.7 Commentary on Contemporary Conditions: New Forms of Cultural Erasure 65

CHAPTER 3. CONCEPTUAL FRAMEWORK **67**

3.1 Introduction 67
3.1.1 Statement of Chapter's Central Argument *67*

3.1.2 Conceptual Graphic ... *68*
3.2 Situating the Framework: Contributions to Water Governance Scholarship ... 69
3.2.1 Hydrosocial Theory and the Limits of Territorial Pluralism ... *69*
3.2.2 Relational Water Justice ... *73*
3.3 Theoretical Framework: Decoloniality and Pluriversal Politics ... 76
3.3.1 Pluriversal Decoloniality and Decolonial Pluriversality ... *79*
3.4 Conceptualizing *Querencia* and *Autonomía* ... 81
3.4.1 Querencia ... *81*
3.4.2 Autonomía ... *83*
3.4.3 Relational Autonomy ... *85*
3.5 Just Transformations ... 86
3.5.1 Power Relations and Relational Autonomy ... *87*
3.6 Conclusion: Sharing Water, Sharing Power ... 88

CHAPTER 4. METHODS ... 90

4.1 Background to the Research ... 90
4.2 Research Site ... 91
4.2.1 Choosing Taos ... *91*
4.2.2 Taos as a Wider Acequia Site ... *92*
4.3 Selecting the *Acequias* ... 95
4.4 Considerations: Taos Pueblo ... 97
4.4.1 Initial Approach and Ethical Framework ... *98*
4.4.2 Recalibration ... *99*
4.5 Positioning and Positionality ... 100
4.5.1 Positioning Trust as Both the Process and the Outcome ... *100*
4.5.2 Language ... *103*
4.6 Methodology ... 103
4.6.1 Introduction: Feminist Political Ecology ... *103*
4.6.2 Listening to Place ... *106*
4.6.3 Deep Hanging Out and "The Field at Home" ... *107*
4.7 Relational Conversations: From Fieldwork Interviews Towards a *Nueva Resolana* ... 109
4.7.1 Interviews: Sitting in the Shade and the Sun ... *109*
4.7.2 Sampling ... *110*
4.7.3 Renegotiating Consent, Trust, and the Prioritization of Relational Conversations: Towards a Nueva Resolana ... *111*
4.8 Women and Water *Pláticas* ... 114
4.8.1 ¡Que Vivan las Acequieras! ... *114*
4.8.2 Plática Acequiera ... *116*
4.9 On Fieldwork Practice: Laboring in the Campo at Home ... 118
4.9.1 In Meetings and in Limpias: Participation as Observation ... *118*
4.9.2 "Field-Work" — Or, Irrigating Fields of Alfalfa Under the Full Moon ... *119*
4.9.3 Participating in the Seasons of the Acequia ... *122*
4.10 Archival and Document Research ... 124
4.11 River Basin Game ... 125
4.11.1 Two Trials and a Taos Adaptation ... *125*
4.12 Data Analysis, Transcription, and Participant Identity ... 126
4.12.1 Thematic Analysis and Grounded Practice ... *126*
4.13 A Note on the Format of This Thesis ... 127

CHAPTER 5. RELATIONALITY AND WATER GOVERNANCE PRACTICES OF THE *ACEQUIAS* OF NORTHERN NEW MEXICO ... 129

5.1 Introduction ... 129
5.1.1 Introduction to the Chapter ... *129*
5.2 *Acequia* Water Sharing and Governance ... 130
5.2.1 Acequia Governance ... *130*
5.2.2 Acequia Water Rights ... *134*

5.2.3 Water Sharing *136*
5.2.4 Equity, Proportion, and Need *142*
5.2.5 Sharing with Nature / Sharing as Nature *146*
5.2.6 Scales of Sharing *150*
5.3 Relational Practices of the *Acequia* Systems 154
5.3.1 Relationality With Oneself, With the Acequias, With Territory, With Each Other *154*
5.3.2 Relational Practice: La Limpia (Communal Cleaning of the Acequia) *156*
5.3.3 Relational Practice - Día de San Ysidro Labrador y Santa María de la Cabeza *170*
5.3.4 Relational Practice – El Congreso *174*
5.3.5 Relational Practice - La Cosecha, Hay Bailing, La Matanza *177*
5.3.6 Relational Practice: Irrigation as Relational and Multi-Cultural *178*
5.4 What Happens When Relationality Breaks Down: Water Sharing Discord Along the Rio Fernando 187
5.4.1 Revitalizing the Vigil y Romo *187*
5.4.2 Legal v. Community Negotiation *188*
5.4.3 What for Equity? *190*
5.5 Discussion: Relationality as *Querencia* in Practice 194
5.5.1 Relational Practice as Hydrosocial Constitution *194*
5.5.2 Querencia as Living Practice *198*

CHAPTER 6. WATER RIGHTS, ADJUDICATION, AND THE PRODUCTION OF HYDROSOCIAL DIFFERENCE 200

6.1 Introduction 200
6.2 Legal Governance Structure of Surface Water in New Mexico 205
6.2.1 Water Rights Overview *205*
6.2.2 Prior Appropriation *206*
6.2.3 Purpose of Use and Beneficial Use *207*
6.2.4 Loss of Water Rights *210*
6.2.5 Acequia Water Banking *213*
6.2.6 Water Rights Transfers and Water Marketing *214*
6.3 Adjudication and the Production of Difference 224
6.3.1 A Production of Difference *226*
6.4 A Shifting Consciousness of the Material Politics of Water 233

CHAPTER 7. TRAILS, TERRITORY, AND *ACEQUIA* RELATIONAL AUTONOMY 238

7.1 Introduction 238
7.1.1 Statement of Chapter's Central Argument *238*
7.1.2 Chapter Structure and Preview of Case Studies *242*
7.2 Conceptual Grounding: Coloniality, Racialized Territoriality, and Relational Autonomy 244
7.2.1 Revisiting Conceptual Terms *244*
7.2.2 Racialized Territoriality (Correia 2008) *245*
7.3 Parallel Struggles: Expanding the Territorial Defense Framework 248
7.3.1 Introduction *248*
7.3.2 Gradient Towards Just Transformations *249*
7.4 Talpa Trails and Territorial Defense: "You Can't Put a Mountain Bike Across My Church!" 251
7.4.1 Introduction to Talpa Trails Proposal *251*
7.4.2 Initial Community Mobilization *253*
7.4.3 Mapping Community Concerns: Relational Environmental Knowledge *256*
7.4.4 The Working Group Process: Institutional Asymmetries and Racialized Territoriality *259*
7.4.5 Participation as an Exclusionary Process: Out of Place, Out of Time, and Problematic *264*
7.4.6 Coloniality in Public Discourse: Whose Knowledge Counts? — Race, Class, and Temporal Othering *266*
7.4.7 Resolution and Implications *269*
7.5 *Parciantes Have Standing!* On Taos Ski Valley Development and the Evolution of a Collaborative Watershed Agreement 271

7.5.1 Historic Foundation ... *273*
7.5.2 A Loudening of the Pulse ... *275*
7.5.3 From Exclusionary Tactics to a Transformative Response? A People's Forum. ... *276*
7.5.4 Towards Legal Recognition and Watershed Collaboration ... *279*
7.5.5 Synthesis: Querencia and Autonomía in Practice ... *281*
7.6 FIRE ON THE MOUNTAIN: THE FOREST *MAYORDOMO* PROJECT AND THE RE-INTEGRATION OF *ACEQUIA*-BASED FORESTRY ... 281
7.6.1 The Forest Mayordomo Project: Acequia-Based Forest Management ... *287*
7.6.2 Steppingstones of Territorial Self-Management ... *290*
7.7 CONCLUSION ... 291

CHAPTER 8. CONCLUSION — TOWARDS A GENERATIVE FRAMEWORK OF LOVE ... 293

8.1 INTRODUCTION ... 293
8.2 SUMMARY OF KEY FINDINGS ... 294
8.2.1 Revisiting the Research Aims and Questions ... *295*
8.3 CONTRIBUTIONS TO LITERATURE AND THEORY ... 302
8.3.1 Applications of the Decolonial Lens ... *302*
8.3.2 Contributions to New Mexico's Acequia Literature ... *303*
8.3.3 Relational Autonomy and Hydrosocial Scholarship ... *306*
8.4 METHODOLOGICAL CONSIDERATIONS, LIMITS, AND SCOPE ... 308
8.4.1 Methodological Considerations ... *308*
8.4.2 Scope, Scale, and Limits to the Research Study ... *309*
8.4.3 Areas for Future Research ... *311*
8.5 SIGNIFICANCE: WHAT IS THE ROLE OF *QUERENCIA* (MUTUALITY, RELATIONALITY) IN MEETING THE UNCERTAIN FUTURE? ... 312
8.5.1 What is the role of querencia (mutuality, relationality) in meeting the uncertain future? ... *313*
8.5.2 Relational and Pluriversal Governance for Just Transformations ... *314*
8.5.3 Querencia: A Generative Framework of Love ... *316*

REFERENCES ... 319

APPENDIX A ... 344

APPENDIX B ... 345

APPENDIX C ... 348

Index of Tables

Table 1: Progressive Justice Dimensions in the Rio Hondo Watershed (1970s-2025)..... 280

Index of Figures

Figure 1.1: Hand-joined pipe system inserted into culvert 19
Figure 1.2: Traditional mud and wood-plank headgate 19
Figure 1.3: Primary and secondary case study stream systems (and corresponding acequias). ... 35
Figure 1.4: Taos County Watershed Map 36
Figure 1.5: Geographic positioning of Taos County, New Mexico, USA 36
Figure 2.1: Taos Mountain (Pueblo Peak), El Prado, New Mexico 42
Figure 2.2: Sangre de Cristo Mountains in Summer 43
Figure 2.3: Sangre de Cristo Mountain Range 43
Figure 2.4: Rio Grande Gorge, Taos, New Mexico 44
Figure 2.5: El Rito de la Lama Acequia in Summer 45
Figure 2.6: Rio Hondo Seasonal Flows: 2019 to 2024 47
Figure 2.7: Global temperature anomalies (2025) 50
Figure 2.8: Taos County as area of increased warming 50
Figure 3.1: Conceptual Diagram 69
Figure 4.1: Regional Acequia Associations in New Mexico 93
Figure 4.2: Distribution of Acequia Systems in New Mexico 94
Figure 4.3: Hypothetical watershed, stream, and acequia systems 96
Figure 4.4: Women and Water Plática, Ranchos de Taos, 2023 118
Figure 4.5: Dusk –to– Midnight irrigation shift with a hired crew 121
Figure 4.6: TVAA Board Members Trial the Water Sharing Game 126
Figure 5.1: Water Schedule – Summer 2024 (El Rito de la Lama Acequia) 135
Figure 5.2: Highways of Talpa and Taos 140
Figure 5.3: Abeyta Settlement Section 8.2 143
Figure 5.4: Abeyta Settlement Section 8.2.2. 143
Figure 5.5: Taos ‘green belt’ 148
Figure 5.6: Close up of the green belt 149
Figure 5.7: Schematic depicting different levels of sharing within acequia systems 151
Figure 5.8: Map of Taos Valley Acequias 152
Figure 5.9: Figure demonstrating sobrante and auxilio water rights 153
Figure 5.10: Acequia Madre del Rio Chiquito limpia 159
Figure 5.11: Parciantes of the Vigil y Romo Acequia 160
Figure 5.12: Acequia treasurer’s book 161
Figure 5.13: Newspaper noticia
Figure 5.14: Parciantes clean the dry Acequia Madre del Rio Chiquito 164
Figure 5.15: Schematic illustrating acequia population dynamics 165
Figure 5.16: Parciantes work together 167
Figure 5.17: A female parciante cleans the Vigil y Romo Acequia, 2023 168

Figure 5.18: A parciante cleans the El Rito de la Lama acequia 169
Figure 5.19: Altar to San Ysidro 172
Figure 5.20: Teatro Acequiero 173
Figure 5.21: Flower petals thrown into the acequia to honor its first water of the season 174
Figure 5.22: Congreso de las Acequias Flyers 2022-2024 175
Figure 5.23: Acequia Day at the State Capital (2020) 176
Figure 5.24: Hay bailing off of the Acequia Madre del Rio Chiquito 178
Figure 5.25: A field being prepared with seeds before irrigation 183
Figure 5.26: The same field, after the first irrigation 183
Figure 5.27: Examples of different headgates……....186
Figure 5.28: “Umberto” cartoon from the local newspaper 196
Figure 6.1: Fallowed field off the Acequia Madre del Sur, Rio Fernando 211
Figure 6.2: Sample Water Banking Form (Office of the State Engineer, 2024) 214
Figure 6.3: "El Agua no se Vende: El Agua se Defiende" 215
Figure 6.4: Water Transfer Flowchart 219
Figure 6.5: Young activists gather to oppose the development of the 'Tarleton Eco Ranch' 220
Figure 6.6: Opening lines of the Draft Taos Regional Water Plan Public Welfare Statement... 221
Figure 6.7: Taos Pueblo Historic Irrigated Acreage Forbearance 223
Figure 7.1: Schematic of Rio Hondo watershed 239
Figure 7.2: Bumper sticker reading 'la acequia es nuestra escuela' 245
Figure 7.3: Racialized Territoriality as theorized by Wilmsen (2007) 247
Figure 7.4: Just Transformations Framework for Acequia Territorial Defense. 250
Figure 7.5: Just Transformations Framework for Acequia Territorial Defense: Talpa Trails.... 251
Figure 7.6: Talpa Ridge Trail Conceptual Plan – Initially Proposed Trail Plan 253
Figure 7.7: Our Culture is Not for Your Entertainment 259
Figure 7.8: Timeline Proposed by USFS for the Talpa Trails Working Group 261
Figure 7.9: Talpa Trails Working Group Composition 261
Figure 7.10: "The Inclusive Typology of the Many Values of Nature” 264
Figure 7.11: Flyer encouraging Talpa community members to provide input 266
Figure 7.12: New website developed by the Talpa communities 270
Figure 7.13: Just Transformations Framework for Acequia Territorial Defense: Taos Ski Valley 272
Figure 7.14: The 1982 Funeral for a River 274
Figure 7.15: Protest signs at 2023 EA Community Meeting 278
Figure 7.16: Protest signs at 2023 EA Community Meeting 278
Figure 7.17: Just Transformations Framework for Acequia Territorial Defense. Forest Mayordomo Project 282
Figure 7.18: Begging Sign for Firewood 289

List of Appendices

Appendix A: Original guiding research questions used within the semi-structured interviews.

Appendix B: The Rio Hondo Administrative Flow Sharing Agreement (2006)

Appendix C: Examples of Unified Priority Dates Amongst Acequias (Rio Hondo)

List of Abbreviations and Acronyms

FMP: (Forest Mayordomo Project)

NMAA: (New Mexico Acequia Association)

TVAA: (Taos Valley Acequia Association)

USFS: (United States Forest Service)

Glossary

Term	Definition
Acequia	Autonomous, community-governed irrigation ditch A form of irrigation infrastructure, usually a hand-dug, earthen, gravity-fed canal A political and community institution. A political subdivision of the State of New Mexico with recognized governing authority
Acequia Commission	The Commission is elected by parciantes and generally made up of three members: a president, secretary, and treasurer. The commission serves as the governing body for an acequia, supporting the work of the mayordomo, developing policy, addressing disputes, and managing legal and business matters of the acequia*
Acequia Madre	The "mother ditch," or main irrigation canal diverting water from a stream. This mother ditch then feeds the smaller acequias and laterals that run off of it
Acequiero/a/s	A member of an acequia, and also a term of identity Acequiera denotes a female acequia member
Autonomia	A form of relational autonomy. A political process and also a form of worldmaking
Auxilio	Special dispersions of water to sister ditches (along the same river or Acequia Madre), as determined by the Mayordomo, during times of extreme scarcity, in order to avert disaster
Cafecito	A small cup of coffee
Cancíon	Song or ballad (see, also, 'alabanza' – a ballad)
Comisionado/a/s	Acequia commissioner (elected to the commission by the parciantes)
Compuerta	The headgate that is used to direct and divide the waters. The compuerta is opened or closed to release or divert water from the stream into the Acequia Madre, or from the Acequia Madre to smaller lateral acequias
Concilio	Council (for instance, the Land Grant Concilio)
Congreso de las Acequias	Annual statewide acequia congress, led by New Mexico Acequia Association (NMAA). The Congreso brings together acequia representatives from across the state, who are members of the NMAA, to engage in political dialogue, legislative updates and planning, cultural celebration, and educational endeavors.
Cosecha	Harvest
Cuento	A story or tale — used illustratively within the thesis to ground the writing and the narrative in the everyday lived, embodied realities of the acequias.
Desagüe	A small channel or outlet from the field that allows excess water to return to the Acequia Madre or to the stream
Descanso	Shrine
Dicho	A traditional folkloric saying
Leñero	Forest wood cutter / harvester

Limpia	The communal cleaning of the acequia each Spring or Fall before irrigation season
Mayordomo/a/s	The ditch 'boss' elected by the parciantes or appointed by the commission to oversee the operations and maintenance of the acequia, and to allocate water to parciantes in accordance with custom and bylaws. Water use is determined by the Mayordomo*
Mercedes (de Comun)	Land Grant
Mestizo	In the context of the thesis, Indo-Hispano
Mutualismo	Mutualism; an ethic of mutual aid and care
Nuevomexicano/a/s	A term of identity used within the thesis to denote the demographic and cultural population of New Mexico that is culturally tied to the acequia — non-indigenous yet undoubtedly rooted in land-based culture, tradition, and Indo-Hispano ethnic heritage.
Pala	Traditional wooden-handled acequia shovel
Parciante	A member of an acequia, or holder of an acequia water right, responsible for a share of ditch maintenance proportionate to his or her irrigated acreage*
Pastora	Shepherdess
Penitente	A member of Los Hermanos de los Penitentes, a northern New Mexico religious sect and fraternity. History of mutual aid.
Peone/s	Mandatory or hired labor for the acequia cleaning (limpia)
Platíca	Conversation, dialogue, chat
Querencia	A deep and enduring love of place, 'the place where one's strength is drawn.' A reciprocal relationship with territory that informs stewardship
Remedio/s	Remedy; wild grown and harvested medicinal hebs
Repartimiento de Agua / Reparto	A process of water sharing in a time of drought The process by which the Mayordomo determines the availability and schedule of water for distribution to parciantes. This process varies acequia by acequia, but can include fixed rotations, weekly distribution schedules, in-person requests, or flexible and dynamic scheduling
Respeto	Respect
Sangría / Venita / Lateral / Lindero	Sangria is traditionally translated as "bloodletting," which refers to a lateral ditch that runs from the main acequia to irrigate individual plots of land
Sobrante (water rights)	Water rights that are granted to sister ditches, generally off the same river or Acequia Madre, when there is surplus of water available
Taos Pueblo	A sovereign tribal nation; the northern most of the Pueblos. A living community; the original stewards of Taos
Taoseño	Someone from Taos (see also: Talpeño – someone from Talpa)
Vecino/a/s	Neighbor

**Definitions informed by Taos Valley Acequia Association's Glossary of Acequia Terms.*

Chapter 1. Introduction

1.1 Introduction Story - *Vamos a la Acequia!*

"Vamos a la acequia!" I could hear my dad calling – beckoning me to come with him towards our communal irrigation ditch. Our *acequia*, like many others of northern New Mexico, defines the figurative and geographic contours of our community. The stream that feeds our *acequia madre* (mother ditch) begins in the high mountains, specific to our local valley's watershed. Combining snowmelt and spring water, it then travels downhill, until it reaches a small splitter box, where it can be diverted for irrigation and household purposes according to the corresponding time allotment of each respective *parciante* (*acequia* member). The *acequia* is a communal system – maintained through collective labour, governed through democratic participation, and held together by a continually evolving cycle of recursive relations. Thus, the '*acequia*' transforms from a simple irrigation system into a community institution.

In our community, the *acequia* can also be diverted into a small hand-joined pipe system – a rudimentary drought adaptation installed by our *mayordomo* (ditch boss) – in order to deliver water to fill the varying cisterns (or small water holding tanks) of the many households, like my own, for which the *acequia* is the only source of domestic water supply.

Pulling my irrigation boots on, I expected to walk outside of the door and slightly uphill to greet the waters. Instead, I saw my father idling in the car. We drove past the usual *acequia* headgate – a wooden plank wedged between the earthen streambanks, held in place with a mixture of mud and sod – and continued uphill. When we finally reached the waters, I was surprised at how far upstream we had travelled, and how little water was running through the ditch.



Figure 1.1: Hand-joined pipe system inserted into culvert, channeling acequia waters to varying household cisterns. Pipe adaptation installed in order to augment water supply and flow, due to changing drought conditions (El Rito de la Lama Acequia, 2020) (Source: Author)



Figure 1.2: Traditional mud and wood-plank headgate – used for dividing the waters (El Rito de la Lama Acequia, 2023) (Source: Author)

Growing up within an *acequia* community, one becomes accustomed to reading the snowpack of the surrounding mountain-tops, estimating how much water supply will be available in the coming

weeks and months. As the impacts of climate change accelerate in this already arid-landscape, so too does the speed of the seasonal snow-melt. Coupled with an increase in development pressure, recreational industry expansion, land-use change, a persistent out-migration of farming generations, the marketization of water rights, and an overarching landscape of abstracted resource management frameworks, *acequia* systems face increasing pressure. It is also in this time, however, that the adaptive, recursive, relational, and perhaps anti-fragile nature of *acequia* water governance can be seen to emerge.

That day, driving far uphill to reach the waters, a neighbor agreed to let us use his share of water, in order to fill the cistern that would sustain us through the winter. Within the allotted time, we also brought water to the home of an elder, now too old to labour in the ditch. As water availability dwindled, we each were called to lessen our use, in order to sustain the collective as a whole. This principle is known as *repartimiento de agua*, a method for collaborative water sharing that has underpinned adaptive *acequia* governance over time.

Experiences such as these, collected over time, inspired me to understand the role of water sharing in sustaining *acequia* adaptive practice – particularly in the face of climate and political-economic change. These original questions – of adaptive governance, resilience, and *acequia* water sharing – informed the cornerstone of my nascent PhD research. As I moved forward into a process of learning and unlearning, however, I also began to identify *acequia* systems – and their governance practices, not simply as hydrosocial institutions that demonstrated consistent resilience, but also as something deeper: as relational networks and spaces of autonomy, where community members could assert alternative ontologies of environmental management towards the wider territory, particularly in a context of ongoing coloniality and asymmetrical power relations. I understood that *acequias* tell a story of contradictions, and of coloniality past, present, and future. Importantly, I began to understand that these same contradictions also existed within me. Most significantly, however, I learned that *querencia*, or that deep and enduring love for, responsibility towards, and rootedness to place that defines so much of *acequia* culture, and which will form a weft-thread of this thesis, underpinned nearly all I had *experienced*: both the 'good' and the 'bad.' And so, in turn, I aim to write this thesis through my own practice of *querencia* — as complex, dynamic, and imperfect as it always may be.

1.1.1 Central Thesis Argument

This thesis argues that *acequias* function as spaces of relational autonomy wherein *querencia*-informed practices guide not merely water access and irrigation practice, but broader territorial and ontological relationships. By examining the generative tensions that emerge where relational and hegemonic governance regimes meet, the research reveals how *acequia* governance transcends resource management to become a practice of reciprocity, responsibility, and place-based belonging. In doing so, the thesis contributes to our understanding of relationality in water governance and explores the transformative potential of pluriversal approaches—where multiple governance systems and knowledge forms converge—for creating more equitable and just territorial management systems.

1.1.2 Invitation

I invite you to take a walk with me. In this thesis, we will travel together along the banks of an *acequia* – through the early morning light, watching as the snow melts off the stones gathered in the streamside, and listening to the stories of this place. As we walk together, the day may grow long. We will stop at a *reparto* (water sharing meeting), to understand how the water will be divided, bringing our *palas* (shovels), to help clean the *acequias* along the way. We will bail hay, and pick *remedios*, learning about the intricate relationships of this land. If we travel far enough, undoubtably we will reach a meeting space wherein multiple and some-times contrasting logics of water allocation and land management practices converge. Let us travel further, still, then – and see what can be transformed through processes of pluriversal governance…exploring the ways in which *acequias* transmute from centuries-old irrigation institutions, into fluid commons – spaces of relational autonomy (*autonomía*) from which communities assert relational values of environmental management into hegemonic land use frameworks, birthing new and hybrid forms of resource governance and epistemic justice, that carry lessons for broader water management in our current time.

If we are ready then, *vamos a la acequia*.

1.2 Context – Introducing *Acequias*

Acequias are community governed irrigation systems that are both physical networks of water provision, and living, sociopolitical institutions. The term *acequia* refers to both the gravity-fed irrigation canal as well as the community of farmers and irrigators around it. While *acequias* primarily provide water for irrigation and—less frequently—for household use, they concomitantly serve a key role in maintaining ecological health and community relations. Thus, *acequias* as autonomous, communally governed irrigation systems, serve as agents of water distribution, of resource governance, and of community and cultural cohesion.

Acequias can be understood as living institutions that represent centuries of interweaving cultures, cosmologies, and resource management practices. The resulting arrangements of governance and infrastructure are uniquely adapted to Northern New Mexico, and yet are simultaneously imbedded in a broad lineage of community-based irrigation systems, worldwide.[1] *Acequia* governance combines democratic election principles with intricate methods for water-sharing, distribution, and conflict resolution (Rivera, 1998; Rodríguez, 2006; Arellano, 2014). *Acequias* are one of the only federally recognized commons in the United States, and have long been heralded as a form of common-pool resource management (Ostrom and Cox, 2010; Cox and Ross, 2011; Raheem, 2015; Gunn, 2016). A high degree of mutualism and social capital informs their institutional design (Ostrom, 1991; Rodríguez, 2006).

As will be demonstrated throughout this thesis, the governance practices of *acequias* are highly relational. Such practices include, for example, methods for water distribution based on the aforementioned '*repartimiento de agua*' – a method which, refined over centuries of adaptation to a variable and arid landscape – roots water allocation in principles of equity, proportion, and need. This means that, contrary to systems of prior appropriation perpetuated by western water law, any scarcity of water is experienced equally between all users: each is expected to reduce their water

[1] The New Mexico-specific literature on *acequia*s complements research on collective water management, rural water governance, and water justice elsewhere throughout the world, demonstrating particular synergy to those studies centered on understanding the cultural politics of water in Latin America (e.g. Perreault, 2008; Boelens, 2015; Boelens et al., 2018; Vos et al., 2020).

use, in order to share the remaining water, down to the very last drop. Relationality is borne, also, through collective maintenance and celebration of the *acequia*: the annual *limpia* asks for all *parciantes* to engage in communal labor and cleaning of the earthen canals, while celebrations such as Día de San Ysidro (patron saint of farmers and irrigators) welcome the first waters of the spring flow with a *bendicíon de agua* and offering. Rather than treating water as a separate resource, *acequia* governance can be seen to emerge from a relational ontology, where humans, more-than-humans, water, land, and ancestry co-constitute each other through practices of reciprocity and collective care. Reflecting on the notion that "relationality with land is…an ethic of responsibility…and as an ethic of responsibility, relationality is something that is practiced…" (Tynan, 2021, p. 60), the shared practices of the *acequia* become a way to practice relationality, and also to '*sentipensar con la tierra'* (to think-feel with the earth; Escobar, 2019). This reflection on relational practice does not negate the reality of internal division and conflict amongst *acequia* communities – particularly as pressures from climate and development increase – but rather positions *acequias* as relational spaces through which conflict and discord can be addressed as mechanisms to yield generative possibilities (Rodríguez et al., 2023).

Concurrent to their relational and mutualistic nature, the *acequias* of New Mexico exist within the contemporary United States and the broader political-economic landscape of Western water rights, resource management frameworks, capitalism, and climate change. This includes, in particular, that within the greater political landscape of New Mexico, legally adjudicated water rights operate under a system of seniority and priority, following a 'first in time, first in right' determination of legal hierarchy. This process exists alongside but in contrast to existing water-sharing practices (Rodríguez, 2006; Perramond, 2016b), resulting in those water rights holders with the senior-most water right legally maintaining first and full claim to the use of water in a time of scarcity, shortage, or drought. Such a process is mirrored through managerial land-use frameworks which largely disregard locally-led processes of resource management (i.e. cultural fire practices) and plural knowledges (including those not only of the 'community' and the 'state' but also of Indo-Hispano communities with internally diverse knowledge systems). Hegemonic forms of water and land management have been spurred through processes of land (and water rights) adjudications – proceedings which have seen 80-92% of all historic common lands expropriated away from

acequia communities (Montoya, 2002), with the effect of water rights adjudications ongoing (Perramond, 2018).

Within this space, *acequias* as an enduring commons enact a form of territorial autonomy that persists alongside—and in dialogue with—dominant water and resource governance regimes. Through practices of relational autonomy, *acequia* communities continue to reproduce worlds otherwise: generating new, and continuing productive, forms of resource management through engagement with and navigation of structures of coloniality and power.

1.3 Research Focus and Gap

The thesis aims to contribute to our understanding of relationality in water governance practices, and the corresponding transformative potential that such relationality can hold for water (and land) management paradigms. The study is informed by 13 months of fieldwork practice within the autonomous and collective irrigation systems of New Mexico and relies on empirical material to bring forward a close examination of *acequia* governance: in particular, the central principle of water sharing – or, the process of water allocation that *acequias* engage in to maintain equitable water access during times of shortage or drought. From this space of inquiry, several guiding principles of *acequia* governance are seen to emerge, including concepts such as *querencia* (rootedness and reciprocity to place), relationality, mutuality, and *autonomía* (autonomy). This leads to understanding of how *querencia*, as a method and form of water governance, shapes and sustains *acequia* systems in the face of change – including the processes of kinship and relationality that are made through water sharing practices, as well as the adaptability, flexibility, contestation, and negotiation that occurs around water, land, and territory within the context of western water law and dominant resource management frameworks.

While hegemonic land and water management structures may impose a legalistic framework that negates the plurality and relationality inherent in *acequia* governance, the thesis explores how *querencia* shapes the mutualistic nature of water allocation, how it influences decision-making processes in times of scarcity, and how it contributes to a sense of collective responsibility for the stewardship of land and water – ethos that are brought forward through use of the irrigation system

as a space of autonomy for asserting alternative models of environmental management towards the wider territory.

In doing so, and by recognizing *acequias* as persistent systems, the thesis begins to address a critical gap in dominant legalistic water management models that fail to account for the role of mutuality and relationality in meeting the uncertain future (i.e. such as paradigms of water management that rely upon concepts such as prior appropriation, and static water apportionment even in times of drought). By centering a relational approach, questions emerge such as:

- How do our actions change when we understand land and water as a system of relationships and obligations?
- How do relational understandings unveil the multiple and complex histories of place, unsettle processes of coloniality, and contribute to pathways for justice?
- How do such practices respond to, and challenge, singular narratives of progress and development, instead yielding way for plurality and hybridity?[2]

By situating the research within broader debates about water governance, coloniality, and traditional knowledge systems, and by understanding *querencia* as a living practice that relates people to place, and place to people, the thesis explores the potential implications of relationally centered governance for creating more equitable, transformative, and just water management systems.

1.4 Research Questions

The thesis is informed by three guiding questions, which ask in sequence:

1. What is the nature of *acequia* water sharing and governance, and how does *querencia* inform relational practices?

[2] These questions are adapted and inspired by the work of Emily Vogler, for her course on *Critical Hydro-Spatial Practices: Art and Activism in the Terrain of Water*, at the Rhode Island School of Design (RISD), School of Landscape Architecture.

2. What is the structure of water management imposed by the State, and how does this influence *querencia* and water sharing practices over time?
3. How do *acequias* respond to projects/structures/paradigms which threaten to fragment *querencia*?

Followed by a discussion which ponders:

4. What is the role of *querencia* (mutuality, relationality) in meeting the uncertain future?

1.5 Core Concepts and Theoretical Framework

This research draws upon political ecology, decolonial theory, frameworks for just transformations, and concepts of relationality to examine water-sharing practices and *acequia* governance through lenses that attend to power, politics, ontology, and difference.

Two core concepts are central to the argument of this thesis: *querencia* and *autonomía*. While each term will be discussed in more detail in Chapter 4 (Conceptual and Theoretical Framework), I provide a brief introduction here, in order to situate the reader within the relational framework of *acequia* governance, and also to provide a framework for understanding the complex and dynamic ways in which *acequia* communities maintain territorial relationships in conversation with processes of coloniality and the power relations inherent in land and water management throughout the State of New Mexico.

Querencia—understood as a living, embodied, reciprocal relationship with territory that encompasses spiritual practice, cultural continuity, and environmental stewardship—provides the foundation from which communities articulate territorial claims and organize collective action.

Autonomía, drawing on Escobar et al.'s (2024) relational conceptualization, operates not as a static or 'complete' sovereignty, but rather as reflected through dynamic practices from which *acequia* communities strategically navigate state power structures while maintaining core relational values. *Autonomía* is informed through recognition of pluriversality—the notion that multiple worlds, and multiple ways of knowing and being, coexist simultaneously. Thus, *autonomía*, as used within this

thesis, is rooted in the generative potential of ontological encounters across difference. In doing so, the thesis contends that the relationship between communities and hegemonic power structures does not constitute inherent separateness, but rather that strategic navigation of such dynamics has the potential to result in hybridity, plurality, and even transformation—moving beyond binary frameworks of resistance or oppression, and generating new forms of governance and being that would not be possible without the relational interaction between, within, and amongst communities and differing spaces of power (Armijos, 2013).

The role of *querencia* in underpinning *autonomía* is fundamental, insofar as that *querencia* – far more than a romantic notion – informs intergenerational responsibilities of territorial care that extend across time, and challenge short-term development paradigms, severances to relationality with land, as well as individualized versus mutualistic stewardship decisions.

These processes unfold within ongoing structures of coloniality, which, in addition to their historical impacts, also manifest through contemporary adjudication and land-use processes, and shape whose environmental knowledge claims are legitimized within hegemonic decision-making processes.

Together, these concepts allow us to understand *acequias* as spaces of relational autonomy—spaces from which communities exercise self-determination in their territories through the relations, negotiations, and participation they establish with the state and other actors across scale (Ulloa, 2011). In doing so, *acequias* are highlighted as not merely irrigation institutions, but rather as institutional fulcrums from which communities defend *querencia*-informed approaches to territorial governance and water management, while strategically engaging with hegemonic environmental management regimes.

1.5.1 *Acequias* as Hydrosocial Territories: Theorizing the Hydrosocial Cycle

I draw upon the concept of the hydrosocial cycle to better understand the relationship between governance, water-sharing, and power relations, and the influence of each on territorial relationships. The hydrosocial cycle can be understood as "the process by which water and society

make and remake each other over space and time" (Linton and Budds, 2014, p. 6). The adoption of this framework enables examination not only into the ways that water is governed and shared between users across space and time, but also supports examination into water's role and agency in mobilizing power and producing social relations. The hydrosocial perspective is a framework that deliberately attends to water's social and political nature and "makes known the power relations embedded in hydrosocial change" (Linton and Budds, 2014, p. 171), recognizing that "flows of water are not external to power relations, but are intricately enmeshed in, and reflective of, them" (Budds and Sultana, 2013, p. 275; Swyngedouw, 2004).

Whereas the hydrologic cycle has functioned to sever 'water' from its social nature and inherent political consequences, a hydrosocial perspective re-elucidates the politics behind neutral/'natural' hydrologic framings, suggesting their limited foundation for decision-making (Linton and Budds, 2014). This perspective is particularly useful when engaging with the static apportionment of water rights in New Mexico (i.e. adjudication), a process which seeks to make water legible to the State and therefore administrable (Perramond, 2016a) – and, in doing so, has a tendency to negate the relational and place-based qualities inherent to *acequia* water governance, which exist outside of existent legal frameworks.

A hydrosocial framework is not wedded to a specific ontology of water, but instead accounts for diverse and interwoven relationships specific to distinct hydrosocial geographies/networks such as the *acequias* of New Mexico. This hydrosocial and socionatural perspective recognizes also the development of *acequias* as hydrosocial territories (socially, naturally, and politically constituted spaces), wherein struggles over territorial resources transcend materiality, and extend into control over discourses, 'water truths,' knowledge, and norms (Boelens et al., 2016). Employing a hydrosocial approach enables me to undertake a critical political ecology of water, recognizing that water is not simply a material respondent to sociopolitical influences, but—through internal and inextricable linkage—is itself agential in forming and shaping sociopolitical relations (Bear and Bull, 2011; Barnes and Alatout, 2012; Linton and Budds, 2014; Perreault, 2014). In this way, a hydrosocial framing decenters the simple materiality of water itself (H2O – which, for example in the State of New Mexico, could see the replacement of irrigation waters from that of the *acequia* to that of 'produced' water resulting from oil and gas extraction), and instead accounts for the

relationality between communities and water. The adoption of this framework supports me to explore the linkages between *acequia* water governance and broader territorial defense, by attending to how the interwoven symbolic, relational, and material attributes of the *acequia* system influence responses to change.

1.5.2 Power as Relational and Co-Constitutive: Towards Just Transformations

Drawing upon intersectional and relational approaches to power (Ahlborg and Nightingale, 2018; Rodríguez and Inturias, 2018), I understand power as manifesting through and across multiple sites of practice and encounter, including institutional processes, everyday practices, and territorial struggles. Within this context, power becomes particularly visible in instances where different nature value frameworks, governance regimes, knowledge systems, and ways of being come into communication with one another – particularly in the context of decisions over water management and territory (for example, recreational vs. traditional uses of stream-water). These are sites where multiple ontologies meet, and include, for example, the space between adaptive and static methods for water apportionment, discursive and legalistic models for dispute resolution, extractive and relational views of territorial stewardship, and recreational or reciprocal land use decisions.

Drawing on just transformations theory, I examine territorial conflicts on a spectrum of high power asymmetries to spaces of symmetrical power relations, recognizing that power operates across multiple registers simultaneously, and within these spaces, holds transformative potential (Rodríguez et al., 2023; Martin et al., 2025). For example, the institutional experience of an adjudication process trickles down to everyday water-sharing decisions, and in turn informs territorial relationships and response to water management regimes. How this process takes effect, however, is dynamic and evolving: from an initial space of institutionalized power asymmetry rooted in coloniality and hierarchies of western knowledge, communities may develop transformative responses, yielding way for more co-equal power relations and a higher integration or valuation of local knowledge, that in turn metamorphizes the initial preceding power structure. In doing so, conflict and tension is viewed through a generative lens, recognizing the ways in both resistance movements and points of contestation become catalysts for change (Rodríguez et al., 2023). Through this relational and situated approach to power, I aim to understand how *acequia*

communities practice *autonomía*—navigating, engaging with, and transforming hegemonic structures while maintaining (and evolving) *querencia*-based relationships to territory.

1.6 Situating the Literature: Water Governance, Political Ecology, and Those I am Thinking Alongside

Water governance, at its core, can be understood as the political choices regarding where and how water flows, the norms, rules, and laws that inform such decisions, and—crucially—whose voices contribute to, or are systematically excluded from, such decision-making processes (Zwarteveen et al., 2017). Water governance occurs at many scales and is a deeply political process (Bakker, 2003; 2012).

Within the water governance literature, several distinct approaches emerge. These include policy approaches designed to address perceived water security challenges (see Zeitoun et al., 2016; Agrawal et al., 2000); good governance initiatives focused on institutional development and re-scaling (e.g. Bogardi et al., 2012; Pahl-Wostl et al., 2013); and the well-critiqued efficiency-driven privatization and marketization of water resources—processes which, while couched in efficiency, transparency, and good governance, often fail to benefit those they purport to serve, instead serving to fortify distinct political and economic interests (Bakker, 2003; Budds and McGranahan, 2003; Budds, 2004; Harris and Roa-Garcia, 2013).

Critical political ecology approaches to water governance interrogate productions of scarcity and examine relationships between water and power (Mehta, 2003). Such literature has contested neoliberal patterns of access, distribution, and control (e.g. Swyngedouw 1999; Budds, 2004; Harris, 2009)—processes which often stem from normative and prescriptive governance recommendations to improve water provision yet result in dispossession, inequality, and exclusion. Political ecology approaches further illuminate the interconnections of power and social relations, demonstrating the ways in which power can be pursued through water and development to perpetuate, or reproduce, structures of inequity and oppression (Budds and Sultana, 2013; Boelens et al., 2018; Angel and Loftus, 2019). Such research recognizes that scale can be both socially

constructed and politically mobilized (Budds and Hinojosa, 2012), and offers critical examination into productions of water scarcity across scale (Mehta, 2003; Budds, 2016).

A host of contemporary scholarship has begun to center questions of culture, justice, and relationality within the water governance debate (Norman et al., 2012; Perreault, 2014; Jepson et al., 2017; Wilson et al., 2019). Such perspectives serve to bring forward the importance of recognizing multiple—and sometimes divergent—ontologies of water (Yates et al., 2017), while also attending to the relationship between water, power, intersectional difference, and vulnerability (Bridge and Perreault, 2009; Linton and Budds, 2014; Norman et al., 2015).

Concurrently, feminist political ecology (FPE) approaches to water governance have transformed binary narratives of disempowerment into calls for the incorporation of situated perspectives, and examinations into social and spatial difference (Ahlers and Zwarteveen, 2009; Sultana, 2009; Arora-Jonsson, 2011; Rocheleau, 2013). In doing so, such approaches have succeeded in bringing the body to the fore as a central scale in water security research, while introducing embodiment and emotionality into concerns of access, distribution, and control (Sultana, 2011; 2015; Truelove, 2011; 2019).

As Zwarteveen et al. (2017) state, "Overall, in water the term governance has mostly been used to normatively prescribe or help design particular institutional, organizational, and financial arrangements for making water decisions and regulating water. Much of the scientific foundation for such prescriptive governance recipes comes from *often ideologically informed speculations about what society or development should be, rather than from in-depth empirical understanding of how water governance actually occurs*" (emphasis added, p. 3). It is here that my research takes a stronghold, in exploring the multi-scalar, everyday, empirical reality of what managing, governing, and living with water means within the research context. In doing so, my research contributes to greater understandings of how particular water governance institutions function, and explores the linkages between relational values of nature and dominant resource management frameworks.

Whilst water governance literature has informed much of the central design of this study, the core ethos that underpin how and why I 'think' about water, emerge from both lived experience as well as from scholarly traditions that extend beyond water governance literature alone. Principally, Latin American decolonial theorists have helped to elucidate the ways in which the prevalent logics of modernity and coloniality systemically erase non-Western ontologies through specific configurations of power (i.e. Mignolo 2012, Walsh, 2007), and in doing so, highlight the role of ontological pluralism, subaltern knowledges and 'border thinking' in developing alternative futures that are responsive to local needs. In doing so, such literature demonstrates the ways in which pluriversal worlds are not merely imagined but are actively enacted through territorial practice – including what Escobar (2016) phrases as *'sentipensar con la tierra'* (thinking-feeling with the earth). These insights expose *acequias* as sites where alternative ontologies and relations with territory continue to inform resource governance practice. Nature values frameworks (i.e. Martin et al., 2025) inform an understanding of water beyond an instrumental value, while scholarship on relationality (see, for example, Tynan, 2021; Escobar et al., 2024) provides vocabulary for a reciprocal responsibility towards place. A core literary contribution of the thesis is the application of Latin American decolonial theory to the U.S. political-economic context.

Beginning in the 1970's, New Mexican *acequia* scholars have elevated the *acequia* from an object of cultural study, to a site and source of theory and praxis – documenting not only irrigation practices, but also how *acequias* function as repositories of cultural memory and worldmaking (i.e. Rivera, 1998; LaMadrid 2000; Arellano, 2014). Continuing this tradition, this thesis seeks to focus not merely on the potency of *acequia* culture, but rather to illuminate the immensely generative potential held within the ethos of *querencia*-informed governance. Political ecologists (i.e. Mosse, 2003, 2006; Mehta, 2014; Perreault, 2014; Perramond, 2016a) enable me to situate these local practices within broader structural contexts, examining the ways in which power relations and historical processes shape water justice across scales. Erstwhile, irrigation studies (i.e. Lankford 2012; 2013a) ground this analysis in the material realities of water distribution and allocation.

Methodologically, decolonial, feminist political ecology's attention to embodiment and situated knowledge (i.e. Rocheleau et al., 2013; Elmhirst, 2015; Zaragocín and Caretta, 2021) informs my

fieldwork approach, while development studies literature roots this work in my disciplinary tradition.

1.6.1 Points of Departure

While this research builds upon the rich body of literature listed above, it also departs from existing frameworks in two significant ways.

Firstly, existing *acequia* scholarship has predominantly focused on two trajectories: cultural studies that document *acequia* traditions as heritage worth preserving (Rivera, 1998; LaMadrid, 2000; Arellano, 2014), and political-legal analyses of water rights adjudication and land dispossession (Ebright, 1994; Perramond, 2016b, 2018). This thesis departs by centering *acequias* as active sites of contemporary governance innovation and ontological practice. Rather than asking how *acequias* preserve culture or engage in resistance practice, I ask how *querencia*-informed practices generate alternative territorial relationships in the present and future, by demonstrating *acequias* as dynamic spaces where communities actively produce pluriversal governance. This shift moves *acequia* studies from documentation and defense toward understanding *acequias* as generative political projects with lessons for broader water governance transformation.

Secondly, whilst a significant portion of water governance scholarship – particularly influential work on Latin American water governance (e.g. Boelens, 2015; Boelens et al., 2018) – have productively illuminated water conflicts as sites of cultural politics, and resistance to state and market control, this water justice framework typically emphasizes duality, with very little plurality existing between, within, and amongst 'communities' and 'the state.'

I seek to depart from this binary framing by theorizing *acequia* engagement with state power as relationally constituted encounters that can be generative rather than purely oppositional**.** This means taking seriously the transformative potential of ontological encounters across difference**.** When *acequia* representatives bring principles of *repartimiento* into state water meetings, they are generating new possibilities that would not exist *without* the encounter. Conflict and tension become generative and transformative rather than simply destructive (Lederach, 2015). This

departure is crucial because it moves beyond narratives that flatten the sophisticated political work communities do, and instead allows examination into moments of strategic engagement, selective adoption of legal frameworks, and creative hybridity as legitimate forms of relational autonomy.

1.7 Methods/About This Study

This study was formally developed through 13 months of ethnographic fieldwork practice, yet is also deeply informed through previous research and life experience within and amongst the *acequias* of New Mexico.

Two stream systems were chosen for the primary sites of inquiry — the Rio Chiquito and the Rio Fernando (Taos County, New Mexico), and their corresponding *acequias* of the *Acequia Madre del Norte del Cañon* (Rio Fernando), the *Acequia Madre del Sur* (Rio Fernando), the *Vigil y Romo* (Rio Fernando), as well as the *Acequia Madre del Rio Chiquito* (Rio Chiquito) and the *Acequia del Monte del Rio Chiquito* (Rio Chiquito). Research was also conducted within the *acequias* of neighboring stream systems, namely the Rio Hondo, Rio Lucero, Arroyo Seco, and Rio Pueblo (Taos County, New Mexico).

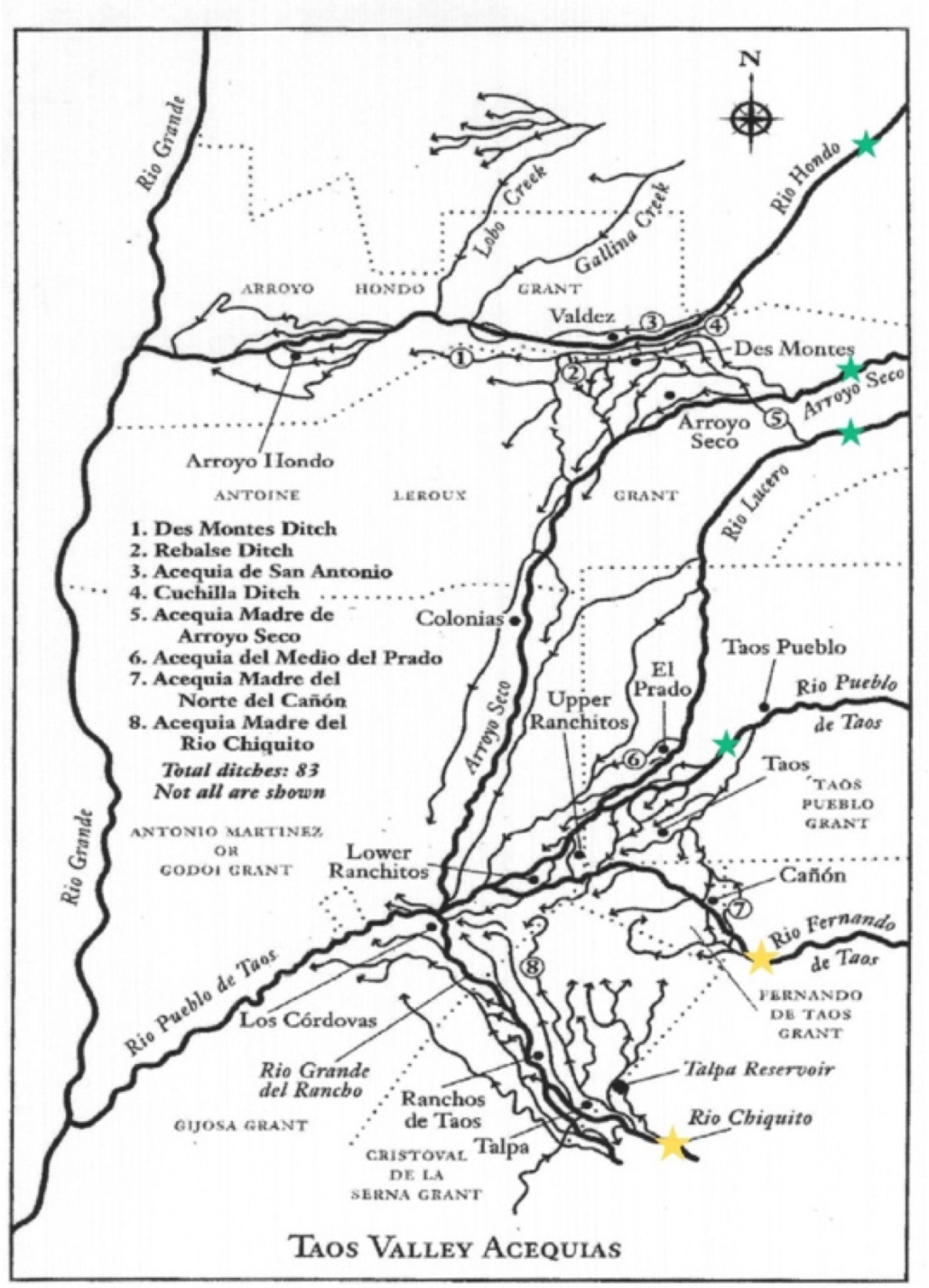


Figure 1.3: Primary (gold) and secondary (green) case study stream systems (and corresponding acequias). Adapted with permission from Rodríguez, 2006.

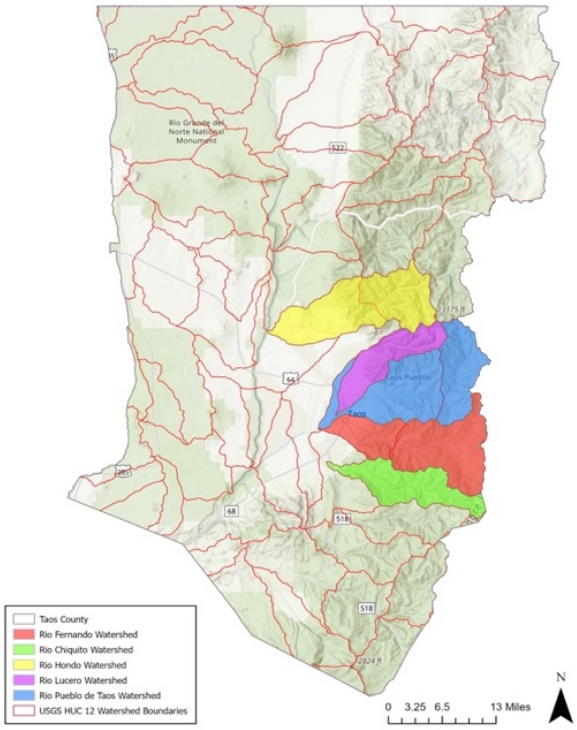


Figure 1.4: Taos County Watershed Map – highlighted watersheds indicate watershed research areas, with Green indicating the Rio Chiquito watershed, and Red indicating the Rio Fernando watersged. Watershed boundaries scaled to USGS HUC 12 boundary levels. Map developed by Del Medio Forestry, LLC.



Figure 1.5: Geographic positioning of Taos County, New Mexico, USA. Map developed by author.

The methodology of this research study relied on traditional qualitative methods including long form interviews (n.41), transect walks, site visits, meeting attendance, and participant observation. The research methodology was also deeply informed by principles set forward by feminist political ecology (Nightingale, 2003; Elmhirst, 2011; Sundberg, 2017). These include, namely, the empowerment of studying 'the field at home' (Rodríguez, 2014) by recognizing the intention of 'theorizing from where we stand,' (Rocheleau and Nirmal, 2015), while also centering reflexivity, accountability, and positionality into my research practice and design. In doing so, I negotiate(d) not only my own positionality and historically contextualized space-of-being, but also centered a deep process of trust-building – which, as any researcher familiar with the New Mexican context will understand – is not always given easily, particularly given cultural traditions of knowledge protection and political norms of absolute privacy (Rodríguez, 2014). By centering trust as the process, method, *and* outcome (Trott-Jaramillo, 2024), I was able to navigate the sometimes-bumpy terrain of being an insider-outsider, by recognizing the research process as a practice of reflexivity, accountability, reciprocity and co-learning. Often, this required questioning, how do *acequia* ethos of solidarity and care translate into my own research practice? And, asking outright, how is, and how can, my research of benefit to the wider community? The answers to these questions were often complex, and generally fluid, and consistently centered both a sustained commitment to the community as well as my own wellbeing.

Another aspect of the fieldwork that I wish to highlight was the role that engaging in *acequia* practices played. Throughout the fieldwork period, much of the research was conducted in the literal fields of northern New Mexico – bailing hay, cleaning ditch, digging out new *acequias*, and restoring old ones. It also required learning how to irrigate, how to prepare the fields for planting, how to harvest, and generally how to participate fully in the relational practices that constitute the *acequia* system. Although I myself am a *parciante* on a northern *acequia*, due to our domestic-reliance on the *acequia* waters, irrigation practice is limited.

1.8 Thesis Organization

The thesis is organized into eight main chapters. Chapter One, this introduction, lays out the background to the research study, introduces core concepts which inform the theoretical

perspective of the research, details the core thesis argument and 'findings,' and also serves to situate the research within a larger discourse of water governance, environmental management, territorial perspectives, and corresponding literature.

Chapter Two provides deeper historical context for understanding the unique political, cultural, and environmental landscape of northern New Mexico. This chapter includes discussion of current political-economic changes within the region, the impacts of climate change to water resources, and the contemporary status of water scarcity (natural and produced). In particular, the chapter details the history of land dispossession that accompanied the transfer of the territory now known as New Mexico into U.S. legal frameworks. This includes, for example, the history of territorial adjudication in the State, and the ways in which this process served to enclose the vast majority of New Mexican common lands to the U.S. Federal Government (and the subsequent consequences of this exclosure – including on resource management beyond water). This contextual background is crucial for understanding the role of *acequias* today in contemporary New Mexico, which function not only as critical sites of irrigation infrastructure, but also serve as one of the only remaining common territories for many New Mexican communities. In doing so, *acequias* become "vital symbols and conduits of history, culture, ecology, and spirituality, as well as a material component[s] of struggles for autonomy and self-determination in the wake of domination by the United States" (Trott, 2017, p. 3). Lastly, the chapter discusses specific cultural identities unique to northern New Mexico, and the roles that such identity formations play in environmental management.

The thesis then explores relevant bodies of literature, and the unique disciplinary interventions the study can make. Chapter Three presents a theoretical framework that guides the thesis, rooted in understanding the interplay between coloniality, pluriversality, *querencia*, and *autonomía* for the New Mexican *acequia* context. This theoretical framework gives rise to understanding the transformative and generative potentials of pluriversal governance approaches, a space where multiple ontologies meet.

Chapter Four discusses my methodological approach, informed by principles of feminist political ecology and ethnography, while chapters five, six, and seven explore the empirical findings of this research.

Chapter Five describes the governance practices of *acequia* systems, recognizing them as adaptive, dynamic, and highly relational. This chapter draws on ethnographic observations of water sharing practices, on-the-ground "field" work (i.e. participation in irrigation activities), analysis of *acequia* rituals (such as the annual communal cleaning of the ditch), and extensive interviews with farmers, irrigators, water managers, and *acequia* members. The chapter contends that practices of *acequia* water-sharing transcend mere resource management or irrigation design, extend beyond water's materiality, and instead represents a practice of relationality, reciprocity, and *querencia*.

Chapter Six unpacks the tension between the State's water management system and the mutualistic ethos of *acequia* water governance. This involves critical examination of western water law, including core tenets such as prior appropriation, the adjudication of water rights, static and quantity-driven water rights apportionment, and legalistic/judicial processes of communication. The chapter than investigates the ways in which these processes of water management influence *acequia* water governance, including the conversion of some communal norms towards more individualized/legalistic behaviors.

Chapter Seven takes a turn towards territory, arguing that *acequias* function as spaces of relational autonomy where communities navigate existing power structures through *querencia*-based practices, in order to engage in wider territorial protection that affects relationality between people, place, land, and water. Where many *acequia* communities have seen their traditional lands expropriated by the State (i.e. process of Spanish land-grant loss), water systems remain relatively intact. Therefore, by utilizing the political status of the *acequia* (recognized as a political subdivision of the state), *acequia* communities are able to advocate for wider landscape and watershed protections than would be possible as concerned citizens, alone. This exploration examines the role of *acequias* as material, spiritual, and symbolic channels for struggles for autonomy and self-determination over territory and culture, and situates the varying case studies along a gradient towards just transformation.

Chapter Eight, the discussion and conclusion, synthesizes the research findings, offers theoretical reflections, presents future questions for water governance and management, and concludes with a discussion of wider contributions from the study.

~

Thank you for taking a walk with me.

Ahora sí... nos vamos a la acequia!

Chapter 2. Context

2.1 Introduction

2.1.1 Statement of Chapter's Central Argument

Taos is a northern County, situated in the high desert and bound by the Sangre de Cristo Mountain Range – home and territory of Taos Pueblo, the Red Willow People. As de la Cadena writes, Taos can also be understood – beyond its territorial demarcations – as "a socionatural territory composed by relations among the people and earth-beings, and demarcated by a modern regional state government" (de la Cadena 2015, p. 5). This territorial notion of 'Taos' – as a geographically bounded place, and as a space of relation, has existed in-situ for at least a millennium – marking it (Taos Pueblo) as one of the longest most continually inhabited sites in North America, and a UNESCO World Heritage Site (UNESCO World Heritage List No. 492).

This chapter serves to set a contextual foundation for the empirical exploration to come. It is not a comprehensive review of Taos' history, nor is it an exhaustive investigation into its contemporary character, inter-ethnic relations, or changing climate. Much of that has already been done (see, for instance, Rodríguez 1987; 2006; White et al., 2023). Rather, the chapter provides the geographic, climatic, cultural, and political-economic context necessary to understand the conditions under which *acequia* communities navigate water, land, and identity. This includes the region's physical geography and history of aridity, the terminological and cultural frameworks through which identity is discussed within the thesis, an abridged history of land grant dispossession, and a discussion of contemporary pressures — from development and demographic change to a changing climate — that shape the landscape of this research. The chapter closes with a brief reflection on the conditions of 2026.

2.2 "A River Runs Through Here": Taos' Geographic and Environmental Setting

2.2.1 Physical Geography

Taos's environmental physical geography encompasses diverse ecoregions, and is characterized by high alpine mountains, desert plateaus, and the Rio Grande Gorge, a naturally occurring rift through which the Rio Grande (river) runs.

The County's eastern edge is defined by the Sangre de Cristo Mountains, the southernmost subrange of the Rocky Mountains. Their rugged peaks, alpine meadows, and coniferous forests form a semi-circle around the Town, and constitute the foundation of the region's multiple watershed headwaters. To the west, the landscape transitions into the Colorado Plateau, characterized by mesas, arroyos, piñon-juniper woodlands, sagebrush steppe, and desert shrublands – an environment influenced by both natural forces, as well as centuries of sheep grazing (deBuys, 1985). Bisecting these formations is the Rio Grande Rift, a tectonic feature extending from Colorado to Mexico, which has created valleys and basins along the Rio Grande — including the dramatic and aforementioned Rio Grande Gorge. Taos is the place where these systems meet. It is the confluence of the northern reach of the Sonoran Desert and the Southern tail of the Rocky Mountains. In this confluence, is a uniquely montane, arid, and — through its rivers and *acequias* — riparian environment.



Figure 2.1: Taos Mountain (Pueblo Peak), El Prado, New Mexico (Source: Author)



Figure 2.2: Sangre de Cristo Mountains in Summer (Source: Author)



Figure 2.3: Sangre de Cristo Mountain Range, encircling Taos (Source: Author)



Figure 2.4: Rio Grande Gorge, Taos, New Mexico (Source: Author)

Taos is home to more than 300 *acequias*. Within this physical geography, the *acequia* stream system functions to extend the wetland/riparian area, leading to what is known as Taos' 'green corridor' — or, the agricultural valley lands shaped by human irrigation patterns.



Figure 2.5: El Rito de la Lama Acequia in Summer (Source: Author)

The mountains, valley, mesa, and river each hold unique cultural and spiritual significance. Traditionally, cultural land use patterns utilized vertical swaths of land, ranging from the mountains to the agricultural valleys (and their corresponding riverine systems), presenting a traditional socioeconomic and geographic subdivision of land similar to the Hawaiian Ahupua‘a system.

Today, communities struggle with the fragmentation and loss of agricultural lands. This is driven by a constellation of interrelated pressures, including an increase in development pressure driven by a tourist-recreation economy, the out-migration of youth from farming families, and the impacts of climate change. As younger generations leave for economic opportunities elsewhere, older community members describe having fewer people to whom they can pass down traditional farming practices, impacting the intergenerational transfer of cultural and agricultural knowledge. Concurrently, family land parcels are increasingly subdivided into thinner and thinner strips known as *lineas*. When sold for development, these lineas become too thin to effectively cultivate, disrupting traditional irrigation rights, water flow, and access, while undermining the economic

viability of traditional agriculture. Together, these pressures compound one another—resulting in dramatic agricultural land loss that impacts not only *acequia* viability but also cultural heritage and knowledge systems.

2.2.2 History of Aridity

Taos has a dry climate. Perhaps this explains our seemingly collective fixation on water.

Despite its overall aridity, the elevation gradient of the region creates distinct microclimates: while the Town of Taos, and the low-lying mesas (at 6,969 feet) receive modest precipitation (i.e. 12 inches of rainfall per year), the high alpine areas, such as Taos Ski Valley in the Rio Hondo watershed (base elevation 9,200 feet, peak elevation ~13,000 feet) receive significantly more (20.5 inches of annual precipitation, and an average of 300 inches of snowfall per year) – much of which falls in the form of dry powder snow, leading to low snow-water equivalence (SNOTEL Powderhorn Station Observations; Taos Regional Water Plan, 2016; Rio Fernando de Taos Watershed Based Plan, 2019).

The region's surface water supply follows a bimodal seasonal pattern. In the upper watershed, most seasonal moisture falls as snow between November and March, accumulating as snowpack before releasing in phased spring melt. This high-elevation snowpack contributes the majority of surface water to instream flow during spring runoff. In the lower watershed, conditions shift toward semi-arid, with most precipitation arriving as rain during summer monsoonal events from July through September. These monsoons deliver large volumes of precipitation at varying intensity and duration. These seasonal patterns have long been understood by local communities, and are corroborated by data from regional SNOTEL monitoring stations and USGS gauging sites.

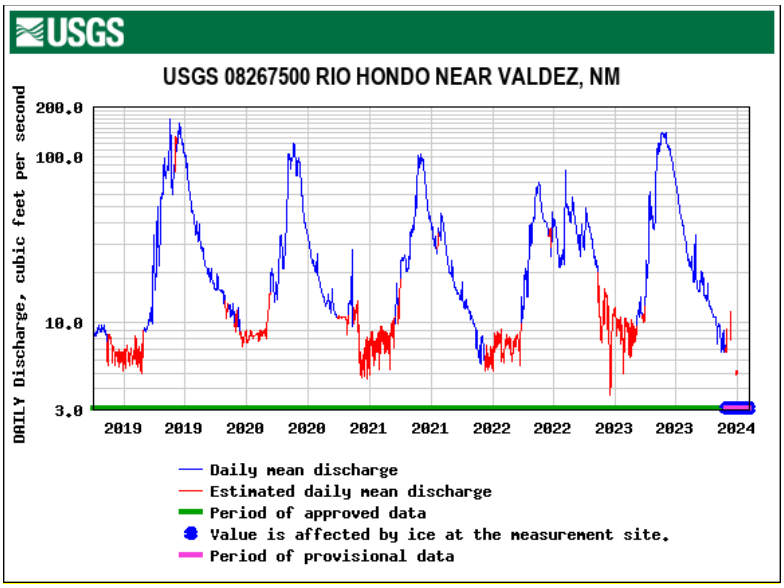


Figure 2.6: Rio Hondo Seasonal Flows: 2019 to 2024 — example of seasonal snowmelt impact on streamflow (Source: USGS Gauging Data, Rio Hondo Near Valdez, NM)

The region experiences pronounced diurnal temperature variation, driven by its high altitude and arid climate. Daily swings of 40°F or more are common across all seasons. In summer, daytime highs in the 80s/90s (degrees Fahrenheit) give way to nighttime lows in the 40s/50s, whereas in the winter, the bright desert sun raises temperatures into the 40s, while nighttime temperatures can drop well below 0F, and – in the alpine environments – below -30F (NOAA NCEI GHCN Daily Temperature Data, 2026).

Periods of extreme aridity are not uncommon to the region. Notwithstanding, contemporary drought conditions (and projections) rival even the most extreme periods recorded. Since 2000, New Mexico (and the US Southwest) has been under a Megadrought, considered to be the most severe in the past 1,200 years (Williams et al., 2020; 2022). Predictions indicate that severe drought conditions will persist until the end of the century. At the time of writing (February, 2026) Taos' year to date average precipitation is 61.7% below the 30-year average, which itself can be understood to be dramatically below historical conditions, considering 25 of these 30 years have been classified as Megadrought. These conditions are reflected both in telemetric data from regional monitoring stations and in community observations and oral histories, which describe periods of specific drought and corresponding impacts (for example, the drought season of 1996

and corresponding wildfires is often used as a community climate reference, as is the drought period of 2018, and corresponding streamflow reductions).

Thus, New Mexico's climate has long been defined by high variability — including extended periods of drought and general aridity, as well as periods of more abundant precipitation. These patterns are informed in part by natural climatic oscillations (such as the El Niño/La Niña phenomena, the Pacific Decadal Oscillation (PDO), and the Atlantic Multidecadal Oscillation (AMO)), however leading climate science also projects that these cyclical patterns will be amplified by long-term climatic shifts, with significant implications for water availability in the region (White et al., 2023, Ch. 28, Fifth National Climate Assessment).

2.2.3 Climate Context

Semi-arid landscapes, and indigenous and land-based communities, exist on the frontlines of climate change, globally. The U.S. Southwest, within which Northern New Mexico is situated, is of no exception. The region is recognized as of the most climate challenged areas of North America (Diffenbaugh et al., 2008; Liverman et al., 2013; Overpeck et al., 2013; Garfin et al., 2013; White et al., 2023), and New Mexico is noted as one of the fastest warming states in the country (White et al., 2023) (see figures 2.7 and 2.8 for a climate-data visualization of New Mexico as a global hot-spot in temperature anomaly, and Taos County as a micro-region of increased warming).

In this region, the most pronounced climate impacts appear in the form of rising median temperatures, decreased overall precipitation, transformations in precipitation form and timing (e.g. increasing presence of rain in winter, as opposed to traditional snowpack; extreme monsoonal rains following periods of sustained drought), and increased drought and precipitation variability. Additional observed and projected impacts occur in the form of changing snowpack amount, and runoff timing, a factor that is very important for sustaining gravity-fed irrigation throughout the growing seasons (Garfin et al., 2013, Conrad et al., 2022; White et al., 2023). The majority of rivers and stream systems in New Mexico are ephemeral, meaning their flow (although often spring-augmented) is largely dependent on annual precipitation and snowpack runoff. This is mirrored in the *acequias*, which largely rely on said stream systems to divert water for irrigation, although a small number utilize reservoir systems. Such impacts place increasing pressure on the

water resources of the high mountain desert of Northern New Mexico, and the communities and small-scale farming livelihoods that rely on them. Of the interviews conducted during my fieldwork process, concern over the changing climate and/or the corresponding lack of water availability due to drought and snowpack reduction was mentioned nearly unanimously as one of the primary concerns facing *acequias*. Quite simply, without water, the *acequias* (as irrigation infrastructure) do not run.

Additional climatic concerns facing *acequias* include wildfire risk as well as post-fire (and monsoonal) flooding. Significant wildfire activity has increased in the recent decades, driven in part by the impacts of climate change (White et al., 2023), as well as histories of fire-suppression and incongruent, ill-informed land-use management decisions by the State and Federal government (Johnson and Margolis, 2019; Roos et al., 2020). Fires in the region are growing larger and more destructive, and projections indicate that high-severity wildfire activity will continue in the coming decades, placing communities, economies, ecosystems, and water resources at considerable risk (Margolis et al., 2017; Haffey et al., 2018).

Importantly, the aforementioned climate impacts do not operate alone, but rather intersect with processes of political-economic transformation, which together augment the depletion of the region's water resources. Such processes include the commodification and privatization of water rights (Rodríguez, 1990a; Perramond, 2016b), an ongoing and legally intensive water rights adjudication process, an increase in development pressure and a corresponding loss of traditional agricultural lands, a persistent out-migration of farming generations, state-wide extractive industry and tourism dependence, and a loss of traditional land-based knowledge.

Together, these factors contribute to increased vulnerability and stress for rural agricultural communities and systems. In spite of this, however, I contend that it is worth remembering that by attending to the interwoven symbolic, relational, and material attributes of the *acequia* system, it becomes possible to recognize not only how people and communities adapt to climate change, but *also* how they adapt climate change to their hydrosocial worlds (Rasmussen, 2016).

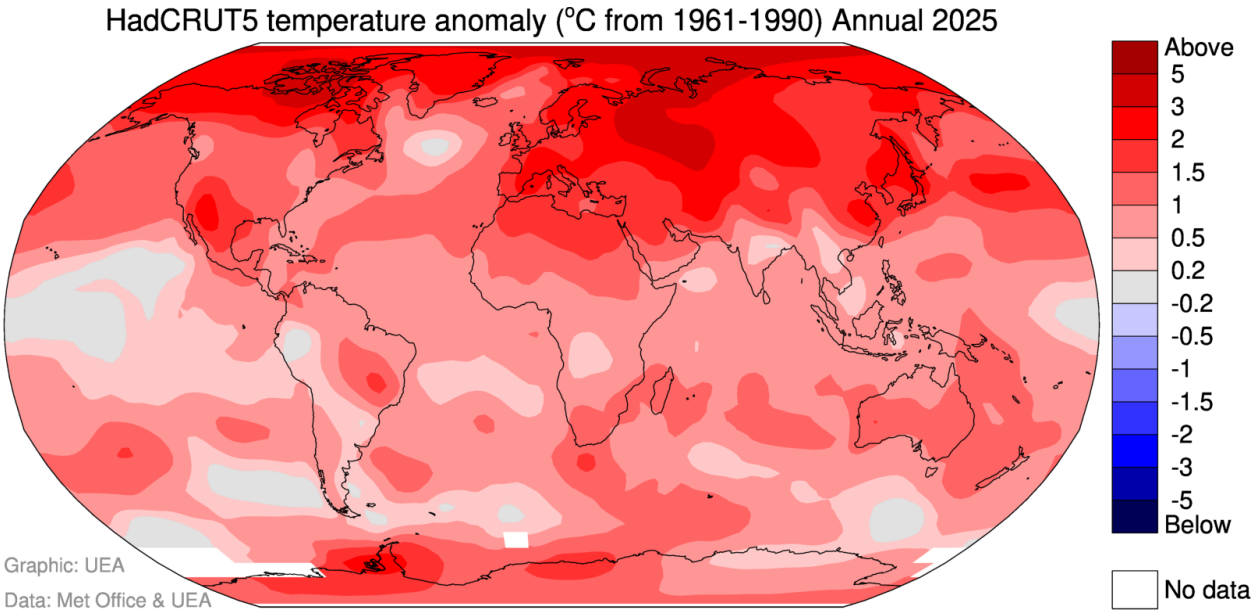


Figure 2.7: Global temperature anomalies (2025). New Mexico (and the US Southwest) is noted as a high anomaly region. (Source: University of East Anglia, Climatic Research Unit, 2025)

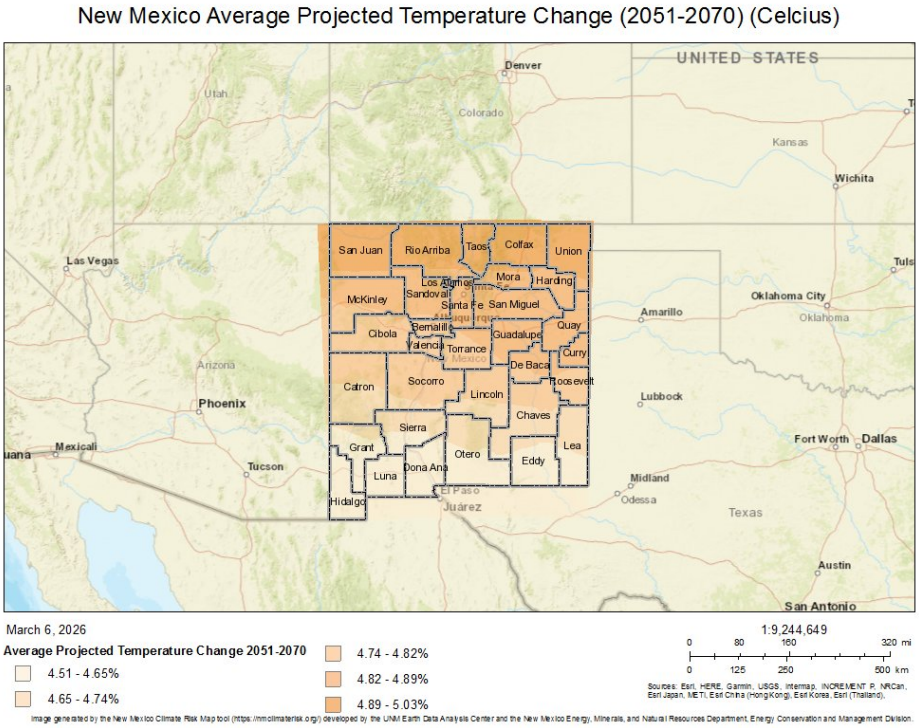


Figure 2.8: Within the already-warming New Mexico, Taos County (along with neighboring northern counties) is projected to experience the highest degree of increased warming. (Source: University of New Mexico Earth Data Analysis Center, 2025)

2.2.4 Water Use in Taos County

According to data produced by the Office of the State Engineer (Technical Report 56, 2020), in Taos, irrigated agriculture accounts for 86.3% of all surface water withdrawals, and 46% of all groundwater withdrawals.

While these numbers are likely-more representative for surface water withdrawals, given that the majority of surface waters are adjudicated (although not necessarily metered) within the County, the percentage figure for groundwater withdrawals is likely highly skewed due to the presence (and high reliance on) unmetered private wells to serve domestic use.[3]

In regards to surface water use, while the data relies on Consumptive Irrigation Requirement calculations per crop type, which assume static farm delivery requirements, fixed crop-water ratios, and predictable cropping patterns, this approach does not account for real-time decision-making by farmers and irrigators, water-sharing and reduction practices, or the fallowing of lands and reduction of harvests per season — all of which were documented throughout the fieldwork period as drought-adaptive water use responses. Moreover, these calculations also fail to consider surface water return flows and shallow aquifer recharge benefits of flood irrigation in the valley (see, for instance, Cruz et al., 2019; Fernald et al., 2020), which suggest that actual consumptive use is substantially lower than modeled estimates. These limitations underscore the gap between techno-managerial framings of water use (premised on efficiency, consumptive use calculations, and individualized allocation) and the relational, adaptive practices of *acequia* governance that this thesis examines. Nevertheless, irrigated agriculture remains one of the leading freshwater-use sectors in the region, underscoring the importance of understanding its dynamics.

[3] Under current New Mexico regulations, there is no requirement for private homeowners to connect to a mutual domestic water system rather than drilling their own well, and each domestic well permit guarantees the applicant one acre-foot of annual withdrawal. Notably, mutual domestic water systems and municipalities are not afforded this same guaranteed right and must instead acquire water rights on the open market. This regulatory asymmetry incentivizes the proliferation of private wells. In the Rio Hondo basin alone, the Office of the State Engineer estimates approximately 775 active private wells, accounting for just over 2,000 acre-feet per year in permitted diversions. However, because these wells are essentially unmonitored, actual pumping volumes remain unknown. While individual domestic wells may have been sustainable in a less populated landscape, the combination of increasing development pressure and the absence of metering or regulation poses a growing and largely unquantified challenge to the region's groundwater resources.

2.2.5 Interstate Stream Compacts

The majority of the state's waters exist in the northern, mountainous reaches, although the state is bifurcated by the Rio Grande, and also is home to major rivers such as the Pecos, the Gila, the Canadian, and the San Juan. New Mexico is party to eight interstate stream compacts, which include both the Colorado River Compact and the Upper Colorado River Compact, as well as the Rio Grande River Compact, amongst others. These compacts govern the allocation of New Mexico's water's across scale, insofar as that they constitute legally binding delivery obligations to neighboring states (i.e. Texas).

For *acequia* communities, the compact framework has direct implications, recognizing that *acequia* water governance exists not only in relation to state water law and adjudication processes, but also within an interstate and federal framework that is required to prioritize downstream delivery obligations, and continues to inform adjudication pressure. In 2005, these interstate obligations led to the development of New Mexico's Strategic Water Reserve, or, a 'pool of publicly held water rights dedicated to keeping New Mexico's rivers flowing to meet the needs of river-dependent endangered species and to fulfill water delivery obligations to other states' (Bunyak and Tsosie for the Utton Center, 2015). Water rights for the reserve are acquired through purchase or lease of water rights from willing sellers or lessors, and, importantly, cannot be acquired from an *acequia* or ditch association except through contractual agreement with the *acequia* commission – that is, individual *acequia* water rights holders are unable to sell their individual water rights out of the system to the Strategic Water Reserve without consent of the whole (ibid).

2.3 Shifting Ground: Tourism, In-Migration, and the Recomposition of Taos County

Taos County's economy has historically been rooted in agriculture, with more recent turns towards tourism-dependency, as well as mining activities. This shift has correlated with an increase in tourism-dependent service-industry jobs (restaurant and hotel work; resort employment;

recreational entrepreneurship and guiding). Concurrent to this economic change has been demographic change, largely driven by an in-migration of retirees, second-home owners, and remote professionals, coupled with the out-migration of younger residents seeking economic opportunity elsewhere. Together, these trends have produced a marked recomposition of the county's population — and, with it, its economic base, housing availability, land use patterns, and demands on public services.

Between 2012 and 2022, Taos County's overall population grew moderately, by 5.2% (from 32,775 to 34,475), but the composition of that population shifted dramatically. The under-5 population fell by 29.9%, with smaller but notable decreases among children aged 5–14. Meanwhile, the population aged 65 and older increased by 66.5%, with the most pronounced increases among those aged 75–79 (92.1%) and 80–84 (143.7%) (ACS 2022 Survey Data; Taos County Comprehensive Plan, 2025).

Demographically, the county is classified as 50.5% Hispanic, 40% White, 8% Native American, and 2.7% two or more races (ACS, 2022 Survey Data). Persons in poverty account for 17.2% of the population, and 32% of residents are over the age of 65. Significant wealth gaps exist, with a substantial portion of the White population comprising retirees or second-home owners.

These demographic pressures intersect directly with land use and housing affordability. As wealthy in-migration drives demand for new housing (including second homes), development and real estate pressure increases on agricultural lands—particularly as local populations struggle to afford housing in the County, while their primary asset may be their traditional lands. Moreover, although agriculture remains one of the largest sectors of water use in the County, it represents only 2% of employment by industry – underscoring the nature of the small-scale agricultural sector in which most farmers hold other jobs (and/or do not make a viable livelihood from farming).

Taos County encompasses 2,203 square miles, with a population density of roughly 15 people per square mile. The majority of the region's land area is forest or rangeland, with agriculture constituting the second-largest land use category (Taos Regional Water Plan, 2016). A significant

portion of the county is under Pueblo or federal control — including lands managed by the Forest Service and the Bureau of Land Management (Taos County Comprehensive Plan, 2025).

Outdoor recreation has dominated the tourism industry in New Mexico since the 1980s. This aligns with the shift from a more-circular agrarian economy to a tourism/wage-dependent labor force. This has incentivized the proliferation of out-of-state second home owners (42% of housing stock is classified as 'vacant', and occupied less than three months out of the year, with this number rising to 93.3% in areas such as the Taos Ski Valley), while also prioritizing outdoor recreation not only as a tourism agenda, but as a primary economic driver for the region. This is significant as it relates to the conflicts over land use seen later throughout the thesis, as well as notions over who gets to recreate (whose ontologies/visions of land use dominate) on public land.

2.4 Taos Pueblo: The Place of the Red Willows

The word "Taos" comes from the Tiwa (Taos Pueblo People's) language, and means Place of the Red Willows. The thesis does not discuss Taos Pueblo's geographic, hydrologic, political, or cultural characteristics in depth. While each of these attributes merits significant attention – this is a realm of research and study for Taos Pueblo scholars to reveal, if and when they should choose. Thus, while the specific nature of this thesis's engagement with Taos Pueblo communities is discussed in the methodology chapter, I intentionally leave this contextual section brief, aside from an important mention of Taos Pueblo's history of territorial sovereignty, as well as their constitutive role in the making of the *acequias*. I recognize, that to many readers, this choice may seem strange: indeed, as a dear Taos Pueblo elder likes to remind visitors, "you can't be *here* (Taos), without going over *there* (Taos Pueblo)!"[4] Nevertheless, there remains an important distinction in visiting and learning Taos Pueblo histories directly from, and as, the Tribe wishes to relay them, versus as relayed by myself, a non-indigenous researcher. Taos Pueblo maintains a high-degree of cultural sovereignty in regards to non-indigenous research presence (Rodríguez, 2014), and thus – quite simply – this is not mine to speak about.

[4] Taos Pueblo refers to both a people and a place. Geographically, the center of Taos Pueblo (Village) is 2.9 miles (4.6km) from the center of downtown Taos, Taos Plaza.

2.4.1 Territorial Sovereignties

Taos Pueblo, the northernmost of the 19 Pueblos in New Mexico, has a long history of territorial sovereignty and land reclamation. This is demonstrated most visibly through the return of Blue Lake, a site of spiritual, cultural, and ecological significance, appropriated by the United States Government in the late 1800s as a part of the National Forest System. In 1970, following a protracted legal and political campaign, 48,000 acres of land were returned to Taos Pueblo — a landmark moment in federal Indian law and one of the first instances in which the United States returned land to a tribal nation on the basis of religious and cultural significance rather than monetary compensation (Bodine, 1973, 1978; Rodríguez, 2017). Blue Lake provides the Pueblo with a continuous water source and remains integral to the spiritual, cultural, and physical identity of the Pueblo. This tradition of territorial assertion dates to the 1680 Pueblo Revolt, led by Po'pay, and coordinated amongst 19 Pueblos. Originating at Taos Pueblo, the Revolt succeeded in driving the Spanish colonial occupation out of northern New Mexico for more than 12 years, marking a significant de-occupation of indigenous territory against European colonization in North America (Aguilar et al., 2013). See, also, the 1847 Taos Pueblo Revolt and corresponding history of resistance against American occupation.

Today, Taos Pueblo leads forest and fire management processes that seek to reintegrate cultural burn practices into contemporary land use decisions, and is home to one of the county's largest watershed headwaters, the Rio Pueblo. Taos Pueblo has played a foundational role in *acequia* governance, informing centuries of water-sharing practices and shaping the ways in which the *acequia* system was adapted and constructed across the valley. The Pueblo's relationship to the *acequia* is not peripheral but constitutive — its water, land, and governance practices are inextricably woven into the hydrosocial relations that this thesis examines.

2.5 *Acequia* Communities and '*Nuevomexicano*/a' as a Place Based Identity

While '*acequia* communities' today encompass multiple ethnic and cultural populations, linked together through the common waters of the ditch, I use the term *Nuevomexicano* within this thesis to refer specifically to the demographic and cultural population of New Mexico that is culturally tied to the *acequia* – non-indigenous yet undoubtedly rooted in land-based culture, tradition, and Indo-Hispano ethnic heritage. As a researcher from New Mexico but not of *Nuevomexicano* heritage, I approach these terminological choices with particular attention to community preferences and self-determination.

As Trujillo (2009) writes, "issues of representation, identity, and non-identity are not new to academic and popular works concerned with New Mexicans. For the most part, this conflicted history has taken the form of disagreement over terms of racial/ethnic identity and assignment for the people descendant from New Mexico's pre-1848, Spanish speaking population. Nearly any academic work focused on northern New Mexicans and their communities must be preceded with a justification for the author's chosen racial/ethnic term for this population" (p. xiv). This thesis is no exception.

The terminological debate is well documented (Gonzales 1993; 2006; Lomelí, Sorell, and Padilla, 2002; Mitchell 2005; Nieto-Phillips 2008; Trujillo, 2009). Lane (2024) notes that, "scholars have devoted considerable attention to the fraught prospects of identifying New Mexico's Spanish-speaking peoples with a single, meaningful identity term" (p. 16), while Gonzales's pithily titled work ('whither the *Nuevomexicanos*?') explores "the career of a southwestern intellectual discourse" around this concept (2006). As Trott (2017) summarizes in her own discussion of the term, *Nuevomexicano* communities are those who have "variously been called Spanish or Spanish-American, Hispanic, Hispano or Indo-Hispano, Latina/o, Chicana/o, and Mexican or Mexicana/o, among other terms" (p. 12).

The terminology used within this thesis draws foremost on self-identification by my research collaborators, who variously use Hispano/a, Indian, Native, Hispanic, Chicano/a, and *Nuevomexicano*/a, as terms of identity reference. I once asked a friend what term of identity he preferred to use, to which I received a stream-of-consciousness reply: "*Chicano…too Brown Beret; Native? But not fully…Hispano? Nah…La Raza!*" — demonstrating the multi-faceted

categorization in which *Nuevomexicano* communities are so often moved into and/or defined. While today I find that Hispano/Hispanic is the most commonly used term when speaking to non-*Nuevomexicano* audiences, I choose *Nuevomexicano* for several reasons. First, it is used by scholars and *acequieros* I work with, trust, respect, and admire – and who themselves are of *Nuevomexicano* communities (see, for instance, Gómez, 2022). I trust their usage of this term as part of its evolving cultural significance. Secondly, the term *Nuevomexicano* centers the land and the territory: explicitly denoting a relationship to place, which has far predated the United States of America, or the corresponding introduction of English as a dominant language. While today, many people may call themselves "New Mexican," I distinguish between geographic residence and cultural identity. *Nuevomexicano*, as opposed to New Mexican, immediately connotates heritage intimately connected to the land through *acequia* culture: regardless of contemporary land claims or holdings. While I may say I am *from* New Mexico, I do not claim the identity "*Nuevomexicano*"—to me, this term carries the deeper cultural resonance of ancestral cultural belonging.

Importantly, *Nuevomexicano* is not a hyphenated identity—it does not define New Mexican communities in relation or opposition to another hegemonic state. If it did, "New Mexican-American" might be the most appropriate term. While New Mexican communities are culturally, ethnically, linguistically, and religiously distinct from other former Mexican regions of the U.S., such as the U.S.-Mexico Borderlands, there remains historic relation and migration between these regions. New Mexico has been called '*una zona fronteriza multicolonial*' (a multi-colonial borderzone) (Rojo, 2023; Terrazas y Basante y Radding, 2023), as well as a multi-cultural contact zone. I prefer to think of *Nuevomexicano* communities as encompassing, in their own way, a pluriversal 'cultural prism' (Gonzales, 2007, p. 4): distinct yet interconnected through long histories. Lastly, in regards to the term, Trujillo (2009) pragmatically notes that, "all members of the population it describes know and understand it, and I have never heard anybody object to being called *Nuevomexicano*" (pp. xv-xvi). The political categorization of racial/ethnic identity in New Mexico in regards to land and water is discussed in Chapter Six and Seven. The role of land grants and territorial dispossession in contributing to a culture of autonomy is discussed below.

2.6 Land Grants and Territorial Dispossession

2.6.1 Brief History of Land Grants (*Mercedes*) in Northern New Mexico

Spanish and Mexican land grants, known as *mercedes*, were established by the Spanish Crown and later the Mexican Government, to encourage settlement in the 'frontier territories' of northern New Mexico and southern Colorado through two distinct but interconnected systems of territorial governance: private grants awarded to individuals (*mercedes particulares*), and communal grants (*mercedes de comunidad*) made to groups of (generally poor) Spanish settlers for the purpose and political intent of establishing new communities — and corresponding defensiveness — against nomadic Indigenous presence. Concomitantly, communal land grants were also made for Indigenous Pueblos for the existing lands they inhabited.[5]

Communal *mercedes* ranged in size (from ~200acres to ~1.7million acres), and operated under fundamentally different principles of land tenure than private land grants or private land claims. Within *mercedes de comunidad*, the majority of territory—pastures for livestock, water resources, forest lands, hunting and fishing areas, and sites for gathering firewood and forest products—remained held in common for all members of the community and could not be sold. These common lands served not merely as economic resources but also provided the territorial basis for hispano and indigenous connectivity, *acequia* stewardship, and the complex web of relationships that connected communities to land, territory, culture, and place. In doing so, common lands represented a distinct form of territorial organization that privileged communal stewardship over individual ownership, yet also privileged Spanish settlement over indigenous sovereignties, thus operating as both a tool of colonialism and of collective communitarianism. Later, these grants would also come to represent a "scene of a collision between land regimes with radically different cultural conceptions of the land's purpose" (Montoya, 2002, p. 4), through the process of American

[5] See literature on the Pueblo Revolt of 1680 for a better understanding of relational differences in citizenship, coloniality, territorial acknowledgement/control, and labour enforcements for Pueblo tribes vs. nomadic indigenous communities and nations by the Spanish empire.

expansionism and corresponding capitalist frameworks of private landholding and commodification.

2.6.2 Mechanisms of Dispossession Following Treaty of Guadalupe Hidalgo

Beginning with the territorial expansion of the United States following the Mexican-American war (1848), the Treaty of Guadalupe Hidalgo — and the subsequent *Protocol de Querétaro* — stipulated protections for the legal rights, and existing property rights, of Mexican Citizens (of whom New Mexicans were now considered) and Indigenous Pueblos. As political historian Maria E. Montoya writes, "while the Mexican government saw protection for its citizens in Article 10, the U.S. government saw an intrusion into its legal system" (Montoya, 2002, p. 168). Consequently, the United States – in characteristic form – elected through congressional decision to reject the provision (Article 10) that would have specifically secured protections for property recognition, and ratified the Treaty without it.

Following this non-ratification, a legal gray area resulted, regarding 'Mexican' (i.e. hispano, indigenous) property rights – particularly those pertaining to common lands – that "Anglos sought to exploit [in order] to take control of extensive areas of good agricultural and forest land that Nuevomexicanas/os had believed would be protected" (Lane, 2024, p. 41). Thus, as territorial expansion continued, and as Anglo settlers consolidated more political power in the judicial and legislative arenas, "Anglo officials pursued multiple legal and extralegal avenues to open New Mexico's lands to additional settlement" (Lane, 2024, p. 41). Consequently, despite supposed treaty protections, the years following the cession of Mexican territory to the United States saw the majority of common lands appropriated by the United States and by private investors through processes of legal and illegal fraud. This includes the now-infamous 'Santa Fe Ring' – a "shadowy collective of attorneys, judges, and government officials" who tricked "many *nuevomexicanos* into giving up their lands by misusing power of attorney or claiming land as a payment for service" (Lane, 2024, p. 43), as well as the resultant expropriations from a clash of cultural values and governance practices regarding land 'ownership' – namely, the intersection between private property rights under U.S. judicial law and common lands under custom and Spanish/Mexican law — or, what Montoya (2002) deems as "opportunities for mistranslation, or partial translation, that

led to land loss, exploitation, political corruption, and colonial power relationships" (Montoya, 2002, p. 168). While in the century following Mexican cession, New Mexican communities lost close to 80 percent of their lands to external entities (Lane, 2024, p. 43), since this process, roughly 98% of total land grant claims in the territory now considered New Mexico have been expropriated (Garcia y Griego, 2015; New Mexico State Legislature, 2020).

A facilitating method for this dispossession – which parallels contemporary water rights adjudication processes – was the legal requirement to provide documentation of *Nuevomexicano* land 'ownership' deriving from Spanish and Mexican land grants, and to defend this documentation in English-speaking courts. Often, families or heirs were denied rights to their common lands (or individual land grant lands) due to lack of ability to provide documentation legible to the newly imposed U.S. judicial system: that is, titles, deeds, and other forms of legal recognition – despite having stewarded the lands for generations. As will be demonstrated in Chapter six, this process of dispossession is mirrored in contemporary times with regard to water rights adjudications: a process that is legitimized solely by its own logics.

In 1891 the Court of Private Land Claims (CPLC) was developed by the U.S. Federal Government in order to "speed up the land claims process and reduce delays to Anglo settlement" (Lane, 2024, p. 41). As Lane documents, "the CPLC rejected numerous *Nuevomexicano* land claims on the basis of technical and legal deficiencies, prioritizing a market approach to land that required strictly defined boundaries to render land as an exchangeable commodity" (Lane, 2024, p. 42). In doing so, the CPLC refused to recognize most community-held land grants, spaces of territory that most *Nuevomexicano* communities relied upon for grazing, fire-wood gathering, forest-product and herb harvesting (i.e. *remedios*), as well as *acequia* stewardship and resultant relationality with land, territory, culture, and place. As U.S. courts, predicated on individual property rights, failed to recognize communal lands, these same communal lands were thus strategically reclassified as public domain, and therefore turned over to the federal government to be either made available for Anglo-American homestead claims (a key facet of U.S. settler-colonialism), or to be reappropriated as national forests or other forms of federally managed landscapes (Lane, 2024, p. 43). In addition to the near categorical rejection of communal territories, the CPLC "confirmed

only a small percentage of individual land-grant claims, despite their apparently clear protection in the Treaty of Guadalupe Hidalgo" (ibid, p. 43).

2.6.3 Contemporary Consequences of Dispossession

Thus, when the United States acquired New Mexican territories following the Treaty of Guadalupe Hidalgo, the transition between fundamentally different systems of land tenure resulted in widespread dispossession of *Nuevomexicano* lands to the 'public domain' of the United States Federal Government, and to other private actors. This systematic process of dispossession resulted in profound political, economic, and socio-ecological consequences, that largely persist today. As Lane states, while those who perpetuated this dispossession (predominantly Anglo settlers and the U.S. Government) amassed tremendous amounts of land, wealth, and political prominence – those *Nuevomexicano* communities "who lost their lands…could no longer engage in subsistence agriculture and were forced to join the wage economy at its lowest levels" (Lane, 2024, p. 43). This transition resulted in increasingly racialized economic stratification within an emergent capitalist hierarchy, and, fundamentally altered whose knowledge claims over environmental stewardship would be prioritized in land use decisions.

Although beginning in the early 1900's, the transition from a subsistence, barter, and moral economy continues to take effect well into contemporary generations. As one *Mayordomo* relayed of his childhood:

> *"….you know, sharing with each other and with somebody who grows potatoes and somebody else grows beans, you know… that's the way it used to be. I mean my family raised sheep and so we always had a lot of mutton or lamb. Somebody else had chickens. Somebody else had, you know, cows and some have cows that they'd milk and share the milk. And so it was all, you know, a sharing, bartering type of livelihood. It was good. It was good times, Chyna. I remember, my parents, of course, used to heat their home with wood, and we'd go all the way to Carson [New Mexico]. We had a big truck and we'd load it full with the dry Piñon wood. And then sometimes my parents would get a load*

of coal and it would come from Antonito [New Mexico], because the train comes through there and we'd have to go pick it up."

The reclassification of communal lands into public domain demonstrates the ways in which a new era of U.S. coloniality began to utilize state power to facilitate the accumulation of natural resources through processes of dispossession (Harvey, 2003) – often under the guise of effective environmental management. While the imposition of U.S. property law became a tool of territorial control, effectively transforming indigenous and Indo-Hispano common lands into state-administered landscapes, it also paved the way for new forms of environmental governance (and thereby relations) that largely privileged technocratic land management practices over place-based traditional ecological knowledge (including severe policies of fire suppression within the National Forests, and legalistic water administration frameworks). Thus, through this 'power of exclusion' (Peluso and Lund, 2011), such frameworks served to dispossess communities of land and territory, while legitimizing new methods of territorial governance that prioritized colonial conservation (i.e. fire suppression; water conservancies), individual property rights, state-legible boundaries, and the commodification of territory.

As discussed above, land grant expulsion carries with it a form of cultural trauma, is rooted in the expropriation of common lands to private or government-controlled property, has resulted in the loss of 80-98% of traditional common lands from Hispano communities (Lane, 2024), and the loss of such a land base is described by many as one of the root causes for poverty, addiction, and violence in the region (Santistevan in Logan, 2012). In doing so, a fundamental rupture between land, people, and therefore relationality with place occurs.

This brief overview of land grant history in New Mexico helps to set the context for why communities care so deeply about their watershed territories, and also why development proposals that negate community visions of environmental management are often met with strong resistance. It is about the right to engage in territorial management decisions, to practice community visions of development, and to engage in access – and therefore relationality – with traditional territories (linked to *acequias*) that have been historically expropriated, and yet inform *querencia*. The contextual foundation also helps to explain the ways through which *acequia* communities

articulate territorial management over former common lands through the unit of the *acequia*, despite historic expropriations.

2.6.4 Historic Processes of Resistance

Resistance to this aforementioned process of dispossession and exclosure has been acutely visible through various movements at both local and regional scales, including – most notably – the actions of *Alianza Federal de la Merced* (Federal Land Grant Alliance). *Alianza*, led by the enigmatic (and eventually understood as schizophrenic) Reies López Tijerina in the 1960s, developed what Correia describes as an "oppositional politics of racialized territoriality from below" (Correia, 2008, p. 565), wherein claims to land (de jure and de facto) were merged with "new spatialized cultural and ethnic identities in efforts to challenge the dominant (Anglo) territoriality of state power and authority in New Mexico" (Correia, 2008, p. 565). In doing so, these movements articulated an alternative vision of territorial rights based on historic and cultural connections to the land, rather than an Anglo-dominated judicial determination.

Alianza strategically grounded its claims in the Treaty of Guadalupe Hidalgo and international law, while simultaneously cultivating a cultural-political identity that connected Indo-Hispano ethnicity to territorial rights. This opposition movement ran in direct response to the USFS's reinforced territorial jurisdiction over former land grant lands through the implementation of "plans, policies, and procedures predicated on the perceived cultural and racial shortcomings of Spanish-speaking New Mexicans" (Correia, 2008, p. 566). While the movement recognized and named the United States as a territorial aggressor, it also sought to link Indo-Hispano land claims to a "cultural nationalist rhetoric of Aztlan" whereby the entire bio-region of the U.S. Southwest became transformed into the cultural and political homeland of La Raza.[6] While the movement

---

6 Within the Chicano Movement of the 1970's, 'La Raza' (literally translated to 'the race') was used as a cultural term for the development of a Chicano political consciousness that embraced solidarity, power, and unity within the movement. José Vasconcelos' (1925) concept of "La Raza Cósmica" refers to an ideological framework that reframed mestizaje as a source of strength and unity, rather than inferiority. It has been used in New Mexico to refer to "la raza bioregionalism" – or, "a model of environmental stewardship based on the affective and material relationship of Hispanic and mestizo people with the landscape of New Mexico as a home place" (Trott, 2017, p. 21), while also drawing roots from the 1970's "La Academia de la Nueva Raza" (Academy of the New Humanity) founded in northern

continued to face significant state repression (including kidnappings, jailings, and bombings by the FBI), Alianza also fought against educational practices that marginalized Hispano history and identity, demonstrating how territorial struggle and land reclamation was inseparable from broader cultural resistance against Anglo hegemony (Correia, 2008). In doing so, these processes of resistance can be analyzed to link processes of land expulsion to a coloniality of knowledge and being.

While Alianza represented one form of territorial resistance through direct confrontation with state authority, contemporary *acequia* communities have developed different strategies for defending territorial relationships. Rather than rejecting state frameworks entirely, these communities engage in hybrid practices - maintaining self-determination through strategic engagement with legal and institutional structures, such as:

- Securing legal standing as political-subdivisions of the State
- Utilizing their legal standing to negotiate formalized 'percentage sharing' agreements within adjudication processes
- Re-gaining entry into traditional territories through *acequia*-based forestry programs
- Developing a statewide *acequia* commission for legal recognition of their political rights
- Asserting watershed protections through the Treaty of Guadalupe Hidalgo in response to Ski Valley development

Thus, while the vast majority of communal lands were expropriated through the mechanisms described above, *acequias* represent a crucial exception. As legally recognized political subdivisions of the state with specific water management authority, *acequias* provide communities with institutional standing that most other forms of communal representation do not.[7] In doing so,

---

New Mexico as a school for popular education rooted in Chicano consciousness-raising and local knowledge (see Trott, 2017; Montiel, Atencio, and Mares 2009).

7 The formation and legal recognition of 27 land grant councils in the recent decades have made important steps towards ensuring continued access and use of traditional lands. Unlike *acequia*s, however, who maintain direct authority over their infrastructure and water resources, land grant boundaries often overlap with federal jurisdictions (i.e. land grant territories existing on the same parcels of land as modern national forest boundaries), thereby resulting in land grant users needing to seek authorization to engage in specific land use practices, rather than maintaining superseding jurisdiction over their territories. Thus, while both land grant *concilios* and *acequia*s are recognized as

despite contestations over water rights and ongoing experiences of adjudication, this status enables contemporary *acequia* communities to work within existing legal structures as representative bodies, rather than individual community members who hold water rights – paralleling the ways in which "water users…become political agents/actors who, in the process of exercising their authority over local issues, claim their rights as autonomous (different) communities" (Armijos, 2013, 99).

2.7 Commentary on Contemporary Conditions: New Forms of Cultural Erasure

Lastly, I write this thesis in the time of Trump. Today, we are more than 365 days into his second administrative term. By the time this thesis is published, the world may look very strange. I hope, instead, it is beautiful.

The political present shapes this research in material ways. When researching this chapter, I sought out NOAA (National Oceanic and Atmospheric Agency)-generated climate projection heat maps to illustrate projected changes in average summer temperatures from the historic median. This is an exercise I have done many times before. What I received, instead, was an archived page from June 25th, 2025 – showing snapshots of projections that had subsequently been removed from the web (*is this a new wave of climate coloniality? Sultana, 2022*). Our publicly-available climate and health data is disappearing at alarming rates, and so are our people, from the streets. Our words are flagged in research: minority, Hispanic, and – my favorite – 'a sense of belonging.' Let us wonder, then, why *a sense of belonging* is a threat to this state of mind. There is a pithy lesson in here, about the same state apparatus that dispossessed communities of their territories now withholding the data communities need to plan for the climate conditions reshaping their landscape.

---

political subdivisions of the state, there exists a key difference in the ways in which each are able to maintain direct authority.

Yet, at the end of the day, *el pueblo salva al pueblo*,[8] and so we all must do our share.

My Amma often says, 'there are two types of poverty in this world: the poverty caused by lack of clothing, food, and shelter, and the poverty caused by lack of love and compassion. Of these two types, the second type needs to be considered first – for when we have love and compassion in our hearts, we will wholeheartedly serve those in need.' That is, when we hold love in our hearts, we will automatically reach out to our fellow neighbors to uplift them (ourselves) from despair. In decolonial research, there is no other (Armijos et al., 2024).

It is true that had this fieldwork been conducted in 2025/6, the conversations and resulting conclusions may have been very different. New Mexico is a bilingual state, overwhelmingly Hispanic and Indigenous in its demographics, and usually ranked second or third poorest in the nation. Statistically, the state has overwhelming rates of addiction, violence, unemployment and poor healthcare. There is a suicide epidemic, and Taos – like many rural mountain villages – is at the center. In January of 2026, Forbes bestowed upon it the title of 'the worst place to raise a family.'

Yet, we are a strong people, rooted in relationality to land. It is the severance of this relationality, through processes of coloniality (as demonstrated throughout the thesis), that has catastrophic effects. It is also true, however, that New Mexico is no stranger to endurance. We have succeeded, politically, in guaranteeing free childcare and college tuition to all. Far from the rugged individualism often portrayed in the mountain west (which exists here, too), New Mexican culture – and the culture of the *acequias* – is deeply informed by mutualism (*mutualismo*), and a relational ethos with one another and with spirit and with place.

Thus, when once contemplating on the concerns of the world with an *acequia*-colleague and friend, he turned to me and said "*el cielo se ya caido muchas veces aqui*…." And, it is true: the sky has fallen here many times before. Our *querencia* is what enables us to endure. This is also a part of the context.

---

[8] 'Only the people save the people'

Chapter 3. Conceptual Framework

3.1 Introduction

3.1.1 Statement of Chapter's Central Argument

This chapter lays out a conceptual framework for understanding land, water, and power relations in northern New Mexico through a lens of (de)coloniality, *querencia*, and *autonomía* (defined below). In doing so, the framework enables an intellectual understanding of racialized territoriality (Correia, 2008), or, the demonstration of whose knowledges and claims to land 'count' and are legitimized in territorial decision making processes: a process fundamentally underpinned through the colonial matrix of power (Mignolo and Walsh, 2018). Crucial to this conceptual framework is the understanding that "environmental conflicts are in essence conflicts about different meanings of nature and about identity" (Rodríguez et al., 2023, 64), recognizing the role of relational *acequia* ontologies in decolonizing the ontological occupation of territories (Escobar, 2020), and in shifting the coloniality of power, culture, and thought (Quijano, 2000).

Relationality, as a concept and practice, is woven throughout the thesis. Rather than operating as a separate conceptual 'category,' relationality informs and operationalizes the anchoring concepts of *querencia* and *autonomía* —recognizing, also, that even in respect to processes of asymmetrical power relations, environmental degradation, and coloniality, relationality is present too: it may just not be borne through reciprocal relations with territory (Tynan, 2021).

The interrelated conceptual anchors do not operate in isolation; rather, they work in concert to illuminate how *acequia* communities navigate asymmetrical power relations, assert alternative environmental ontologies rooted in *querencia*, and challenge/respond to processes of coloniality.

This framework serves to challenge and expand existing hydrosocial territorial frameworks through the inclusion of a decolonial and relational lens. Through this lens, the deep, place-based

relationalities and strategies through which *acequia* communities understand and govern water and territory are brought to the fore.

In this regard, it is important to note that *querencia* and *autonomía*, as the thesis's central analytical contributions, are the result of empirical analysis. While they serve as guiding concepts, they are equally practices — worldviews and world-making actions at the same time. They are, in this sense, a relational praxis. In this way, they do not exist as a pre-existent conceptual lens imposed upon the research; rather, they have been identified and named through the empirical analysis itself, and will be demonstrated and developed further in the empirical chapters that follow. Thus, the conceptual result of applying a decolonial and relational lens to the research, in the context of this thesis, is *querencia* and *autonomía*. Correspondingly, as concept-practices, they become the guiding lights of the analytical framework.

Lastly, and importantly, *querencia* and *autonomía* are not merely responses to asymmetrical power relations, but active strategies through which *acequia* communities shape those relations. Both concepts carry a material and political dimension — grounded in the concrete materiality of water and in claims to ancestral rights and territorial recognition. Together, these concepts explain alternative territorial logics and reconfigure the terms of engagement with state and colonial governance structures, operating not only as forms of resistance but as generative modes of world-making. Deeper discussion of the concepts will be provided in Section III, below.

3.1.2 Conceptual Graphic

The following conceptual graphic demonstrates levels of interaction between theoretical concepts and practical application.

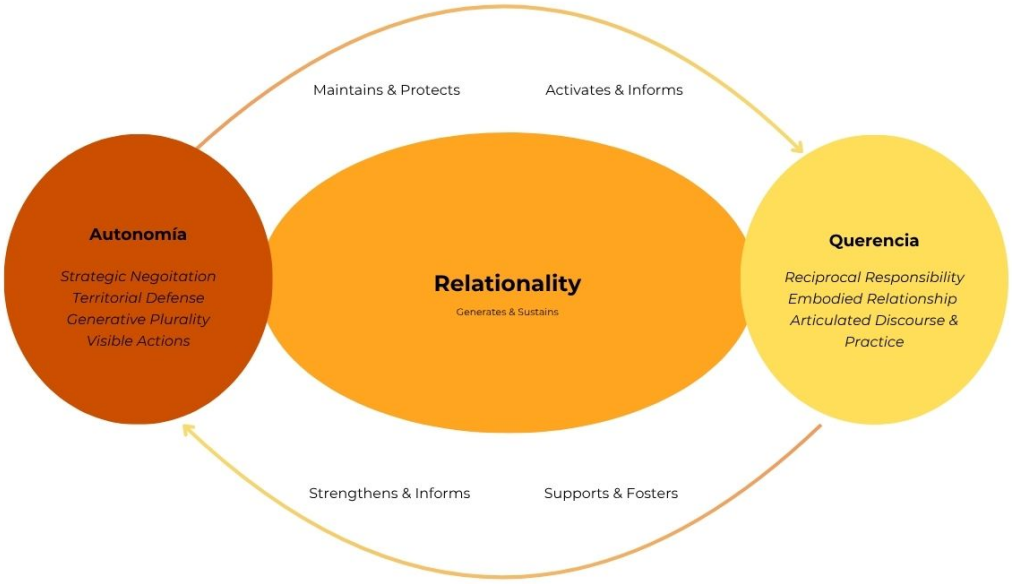


Figure 3.1: Diagram of interplay between relationality, querencia, and autonomía. All serve to mutually support and reinforce. Through a decolonial and relational lens, autonomía and querencia come to the fore of the acequia hydrosocial world. Input of external pressures acknowledged. (Source: Author)

3.2 Situating the Framework: Contributions to Water Governance Scholarship

3.2.1 Hydrosocial Theory and the Limits of Territorial Pluralism

The conceptual framework of this thesis is situated within the realm of water governance through synchronicity with both water justice frameworks and hydrosocial theory. As introduced in the opening chapter, hydrosocial theory posits water and society as inextricably linked, mutually co-constituting one another over space and time (Linton and Budds, 2014). By placing emphasis on socionatural assemblages, hydrosocial theory seeks to elucidate the material-social entanglements (or hydrosocial relations) that concurrently shape both hydrological processes and social relations (Loftus, 2009; Budds and Hinojosa, 2012). In doing so, hydrosocial theory attends to the relations

of power embedded within systems of water governance, including questions of access, meaning, and control.

This framework aligns with a relational reading of water, recognizing the ways in which relationships to place impact upon water governance decisions, and – simultaneously – the ways in which these same material systems (and networks of irrigation) influence social relations, power, and politics (Boelens, 2014). While hydrosocial theory has succeeded in illuminating the relationship between/within/among nature and society (recognizing these terms not as separate entities, but as entirely co-related), the notion of hydrosocial *territories* – defined as "socially, naturally and politically constituted spaces that are (re)created through the interactions amongst human practices, water flows, hydraulic technologies, biophysical elements, socio-economic structures and cultural-political institutions" (Boelens et al., 2016, 1), has worked to understand the ways in which processes of 'territorialization' around water relate to divergent systems of governance, and how such processes relate to concomitant struggles over "meaning, norms, knowledge, identity, authority and discourses" (ibid). Both realms of hydrosocial theory (hydrosocial relations, and hydrosocial territories) have supported the re-politicizing of water and nature, understanding the processes through which 'neutral/natural' renderings of water have historically served to uphold techno-managerial or good governance 'solutions' (Boelens et al., 2016; 2018) — and — in turn, specific political and ontological frameworks for managing and relating to water. These illuminations are particularly useful when examining hegemonic water governance frameworks, and the production of scarcity across scale.

The thesis framework's emphasis on relationality—encompassing reciprocal relationships between humans, water, land, and more-than-human worlds—extends this territorial approach while centering questions of power, and the ways in which water territories both reflect and challenge broader patterns of colonialism, epistemology, and political control.

Beyond Control: Toward a Relational Hydrosocial Territory

Prevailing definitions of hydrosocial territories and territorial pluralism (see Hoogesteger et al., 2016; Boelens et al., 2016; Whaley, 2022; Boelens et al., 2025) emphasize logics of domination, competition, and control. This is evidenced through the idea that territorial pluralism results from

(and produces) "competing politico-economic interests, sociomaterial fractures, unequal powers, onto-epistemological divergences…" (Boelens et al., 2025, p. 437), as well as that "overlapping hydroterritorial space- and meaning-making occurs through the encounters of the imaginaries of a multitude of territorial actors with *competing interests*" (Boelens et al., 2025, p. 437, emphasis added; Whaley, 2022).

In this same vein, territory, as utilized within current definitions of hydrosocial territory, is described as "…spatially bound, subject-built, socionatural networks that are produced by actors who collaborate and *compete* around the definition, composition, ordering and *control* of this networked space" (Boelens et al., 2025, glossary, emphasis added). Concurrently, seminal research calls for examinations into territorial pluralism seek to usher in new 'theoretical concepts and methodological tools' to "further the investigation into the power relations in overlapping hydrosocial territories, *to better understand how one hydrosocial territory can dominate over other hydrosocial territories*…" (Boelens et al., 2025, p. 446, emphasis added).

Thus, where Hoogesteger et al., position hydrosocial territories as being "conceived, arranged, and (re)created by actors as a means to gain influence over or contest water control" (page 91), this thesis understands hydrosocial territories as explicitly relating to, and being informed by, water users' history and relationality to place, which in turn forms its own affective territory: that is, there exist distinct hydrocosmological and bioregional territories that are themselves made up through territory and water's own agency, and the resulting relationality and *querencia* that emerges through human and more-than-human assemblages. Through this lens, 'territory' is not only a political category for control, but also a relational space inhabited by both humans and non-humans (mountains, rivers, ancestors), that is made up through its relationality and its own being (de la Cadena, 2015). Accordingly, 'land' and 'territory' are not *merely* geographic or geopolitical designations, but rather living presences that actively participate in the making and re-making of life, worlds, and community (de la Cadena, 2015; Tynan, 2021). This worldview responds to nature value frameworks (i.e. living with/as/from nature), but also to distinct hydrocosmologies,[9]

[9] It is common practice in New Mexican acequia communities to introduce oneself in relationship to time-in-place (i.e. generationality), land-lineage (i.e. from which mountains do you come, to which acequia do you belong), as well as both maternal and paternal family-lines (i.e., I am a parciante of the Acequia Madre del Rio Chiquito, but my

recognizing these territorial relationalities as those which "bring us into existence" (Tynan, 2021, p. 601).

This is not to say that conceptions of territory as spaces of political and discursive control over water management and meaning are false. *Acequia* users undoubtedly utilize cultural claims to gain material and managerial control over geographic spatial boundaries of territory, and, in doing so, assert specific environmental ontologies across scale (Hoogesteger & Verzijl, 2015). *Acequia* users also engage strategically with state systems through their practices of relational autonomy in order to uphold specific environmental claims and authorities that can be utilized to consolidate power, access, and control (Swyngedouw, 2014; Zimmerer, 2000). Yet, while prevailing definitions of hydrosocial territory (i.e. Boelens et al., 2014; Hoogesteger et al., 2016; Boelens et al., 2023) focus on an understanding of 'territorial pluralism' that sees multiple constituted territories as competing for domination within the same space, the thesis' framework moves toward an understanding of territorial pluralism that recognizes multiple ontological worlds in simultaneous co-existence and encounter with each other. The latter does not negate the former: this is a world where many worlds fit.

Thus, foundational approaches to hydrosocial theory (e.g. Linton and Budds, 2014) have succeeded in elucidating the inextricable linkage between water and society, and have pioneered an articulation of water's political nature. Concomitantly, predominant approaches to hydrosocial territory have underscored multiple and oft-competing relations of power in regards to water and territorial governance, however these approaches have lacked what I deem to be a true plurality: that is, a plurality that recognizes relational gradients of control, co-existence, and hybridity-generating encounters between (and within) ontologies and worldviews.

By applying a relational and decolonial lens to a hydrosocial perspective of *acequias*, this thesis seeks to address this gap in two ways. First, illuminating power relations of water and territory

---

grandfather's family is from Chamísal; or, I am a commissioner on the Acequia del Monte, and I have lived here since the 1970's. My family are originally farmers from Virginia). This custom responds to aboriginal introductory practices, which, as Tynan notes, "decentres the human and looks for relational ties based on Country (ancestral or lived) and more-than-human kin…[as] introductions serve to find connections within a relational reality where everyone and everything is related" (Tynan, 2021, p. 601).

through a decolonial analysis helps to understand coloniality's role in shaping and producing the manifold contexts in which *acequias* exist, as well as the ways in which such relations contribute to the coloniality of knowledge, power, and being. The application of this lens helps to historicize and re-politicize hegemonic water regimes, whilst also being attentive to the *acequia*'s own role as a space of coloniality/decoloniality, and internal power relations/dynamics.

Secondly, a relational framework helps to elucidate what lies beyond binary framings and static-power analysis, alone: this includes an understanding of the reciprocal, long-standing, dialectic relationship between community and their hydroscapes, incorporating both the material and political realities of water control, and also the relational ethos of reciprocity, responsibility, and respect that come forward through examination of *acequia* practices and articulated lifeways. This does not negate power relations, but rather situates them within a fuller picture of *acequia* political ontology and autonomy. Without such a lens, *acequia* logics risk being analyzed primarily through the logics of competition and control — rather than through a pluriversal lens attentive to their own ontological terms.

Through a relational and decolonial approach to hydrosocial analysis, *querencia* emerges as a core component of *acequia* struggle, production, and articulation, evidenced through *acequia* discourse, practice, and territorial defense explored in the empirical chapters. This positioning of *querencia* has significant implications for how water justice is understood within the case study context.

Lastly, the emphasis on territory as a conceptual and ontological space impacts upon relational water governance understandings, as it highlights the ways in which the '*acequia*' transforms into a space of world-making, as well as the *acequia*'s material and symbolic role in broader territorial (and ontological) defense (as examined through the case studies). Thus, the framework highlights the mechanisms through which the 'irrigation ditch' transforms into both an institution and a hydrologic conduit for the assertion of alternative environmental management(s).

3.2.2 Relational Water Justice

Foundational to an understanding of water justice is the recognition that it is historically mediated and inherently specific to distinct cultural and environmental contexts (Zwarteveen and Boelens, 2014).

Water justice scholarship has produced significant contributions across multiple contexts. These include political-economic analyses of neoliberalization and water rights in the Andes (e.g. Perreault, 2008; 2017; Boelens, Perreault, and Vos, 2018), feminist and embodied approaches to water governance in Southeast Asia – including the ways in which embodied water knowledge informs decision-making and community response, and how intersections of class, caste, and gender shape access, governance participation, and affective relations to water across scale (e.g. Sultana, 2011; 2020; Mehta, 2007; Truelove, 2021), and indigenous-led anti-extractivism and water justice struggles in North America (see Leonard et al., 2023). Aspects of this body of work have been translated into the *acequia* realm, particularly regarding the interaction between state water law and water rights adjudications (e.g. Perramond, 2013; 2017; Feldblum, 2025), and dismantling the binary of 'traditional' and 'modern' systems of irrigation (de Bont et al., 2018).

Whilst pioneering analyses of power, access, and control, reigning bodies of literature have often applied western-generated epistemologies to understanding rooted ontologies of place. It is only recently that rooted hydrocosmologies have intersected with water justice scholarship from a ground-up manner (de la Cadena, 2015; Ulloa, 2017; Leonard et al., 2023), opening space for relational and ontological approaches to water governance that move beyond distributional and procedural framings alone (see also emergent literature on new water justice movements: Boelens, 2022; Boelens et al., 2025).

The thesis' work aligns with relational water justice literature, particularly Ulloa's (2020) call for moving beyond participation toward recognition of "other ways of seeing the nonhuman." This includes examining how *acequia* communities represent and relate to water not merely as a resource to be managed, but also as an active participant in territorial relationships. This embraces a notion of "*water's territories*" —encompassing "not only territories of water (as being) but also...locating water as a political actor that is in permanent relationship with humans" (2020, p. 9). This relational understanding underscores a "posthuman" turn, recognizing the ways in which

humans and nonhumans “coproduce one another through relational ontologies,” as well as the means through which ‘non-human’ actors are related to as beings and political agents (De la Cadena, 2015; Elmhirst, 2015; Escobar, 2015; Ulloa, 2017; Zaragocín, 2018). Importantly, a recognition of multiple conceptualizations of water justice does not "sanction or romanticize local or traditional ways of life," but rather supports "an approach to justice as lived, which allows for plurality and embeddedness" (Roth et al., 2018, p. 50, p. 52).

Building on these relational and ontological approaches, the relational and decolonial territorial framework developed in this thesis contributes to water justice scholarship in several key ways.

First, it seeks to center epistemic justice—engaging not merely with whose knowledge is included within decision-making processes, but also whose ontological frameworks for understanding water-territory relationships are recognized as legitimate bases for governance (Sultana, 2018). In doing so, the framework seeks to move beyond an understanding of water justice rooted in procedural inclusion, towards ontological recognition, challenging frameworks that incorporate marginalized communities into existing governance structures without fundamentally altering the colonial matrices of power that position relational knowledge systems as secondary.

Secondly, the concept of *querencia* helps to illuminate affective, spiritual, and ontological dimensions to water justice analysis that are often marginalized within technical-institutional approaches, demonstrating how place-based relationality functions as a foundation for territorial governance claims (Armijos et al., 2024).

Finally, the framework expands water justice analysis to encompass "non-indigenous" yet land-based communities in the Global North, demonstrating how decolonial approaches can illuminate sophisticated counter-epistemologies and world-making projects beyond the contexts in which they have traditionally been applied.

Applying a relational and decolonial lens to a hydrosocial framework invites us to think about how communities and people relate to water within a context of coloniality, and also of pluriversality. It reveals *querencia* as a foundation, and as a means of relating to water. It also supports an

understanding of *querencia* as a practice, as a means of living with – and reimagining – colonial relations, towards more just futures.

3.3 Theoretical Framework: Decoloniality and Pluriversal Politics

Having situated the framework within water governance scholarship, I now turn to the decolonial and pluriversal thought that underpins the thesis's conceptual intervention.

Coloniality operates as an ongoing process, not a historical event. It continues to shape power relations, knowledges, and ontologies. It can be understood as operating through a matrix of power (Quijano, 2000), including the coloniality of knowledge and being, as well as through the paradigm of coloniality/modernity/rationality, or that construct that upholds a hierarchy of universalist thought to negate or subvert other systems of knowledge – including, in this case, relational or non-hegemonic ways and logics of governing water.

Similarly, it can then be understood, that *decoloniality* is also not "a past event, but a project in the making" (Maldonado-Torres, 2016, p. 29), representing "a decolonial turn or turns away from modernity/coloniality" (Maldonado-Torres, 2016, p. 29), rather than a singular, achievable event. This understanding positions decoloniality as "both an attitude and unfinished project that seeks to build the world of [the] you" (Maldonado-Torres, 2016, p. 23). This process of decoloniality is one that takes place in multiple, synchronous locations across space and time. I argue here that while the operation of the colonial project is alive, visible, and well underway in regard to environment and territory in New Mexico, so too are the counterbalancing forces of decolonial thinking, practice, and transformation that so often occasion *acequia* engagements across scale – although they may not be named as such. Thus, while processes of coloniality often involve far-reaching alterations of power, knowledge, and being, leading to what Maldonado-Torres terms in his fifth thesis as "the coloniality of power, the coloniality of knowledge, and the coloniality of

being" (Maldonado-Torres, 2016, p. 18; see also Quijano, 2007; Mignolo, 2007), it is precisely in these same locations that decolonial exercise can be seen to emerge.

Importantly, and this is something I seek to make clear not solely in regard to *acequia* response, but across all terminological uses of the decolonial concept, is the notion that decolonial thought, action, and practice are not merely reactionary responses to the process of coloniality. Rather, these practices are responsive to the seeds of their own selves, that sprout forth within, beyond, despite, *and in relation to*, coloniality. Often, social movements for transformation and justice are positioned in opposition to prevailing forces of oppression, extraction, destruction (coloniality) (Rodríguez et al., 2023). While experiences of domination are often fruitful catalysts for collective action (just as conflict can be a catalyst for transformation), the worlds that emerge (or, that are given space to breathe) I believe are existent and generating in their own right – while concurrently informed by the contexts from which they arise. As I will demonstrate through the case studies in this thesis, *acequias* communities are not simply resisting dominant governance regimes, but rather are articulating alternative means of relating to territory that are rooted in mutuality and *querencia* – that pre-exist and yet develop alongside, and within, a hegemonic context.

Following Escobar (2020), I approach territorial struggles as sites where multiple worldmaking projects interact. Thus, while coloniality can be seen to operate through environmental governance regimes, territorial defense can in turn challenge this same process of coloniality and therefore the logic of a 'one-world world' (Escobar, 2018) — instead, making space for pluriversal approaches to politics and territory through the intersection (and at times, collision) of these projects and worldviews (Escobar, 2008). In this way, *acequias* emerge as a 'locus of enunciation' from which communities may articulate difference towards mutualistic practices of territorial stewardship, which are often rooted in *querencia* and relationality (Mignolo and Walsh, 2018). In doing so, communities utilize the *acequia* as an institution to advance alternative visions of development that challenge the coloniality of knowledge, power, and being.

Understanding decoloniality as that process that seeks to delink from the colonial matrix of power, including hierarchies of knowledge and being, in order to relink, or endeavor, alternative and multiple ways of life and being (Quijano, 2007; Mignolo, 2010; Mignolo and Walsh, 2018), brings

forward, within the *acequia* context, the concept of (re)membering, or recognizing "philosophies derived from a land-centred culture and based on *very old pedagogies*" (Styres, 2011, p. 717, emphasis original). This includes the reproduction of plural knowledges (Rodríguez et al., 2023), while recognizing that these processes of re-relating (decolonizing) are rooted in material, spiritual, and relational histories. This requires, also, remembering the *acequia* as a hybrid space, one that emerged from a constellation of land-based *and* colonial forces, yet now represents a uniquely land-based institution rooted in place-based relationality. As Arellano writes, this process of (re)membering is both fundamental and embodied within the *acequia* realm:

> "What is happening…today began with memory, but we are on the verge of losing our memory. If we lose our language, we will lose most of our environmental history….Our memory has now assumed the form of the landscape itself. This is the essence of *Querencia*, if we lose either memory or landscape, we lose both. *El que pierde su tierra pierde su memoria* (he that loses his land loses his memory), and no amount of money or technological advances will help us recover that loss" (Arellano, 1997, p. 32).

Importantly, there is no decolonial 'universal.' Instead, there are questions and relations, and ways in which "different local histories and embodied conceptions and practices of decoloniality can enter into conversation and build understandings that both cross geopolitical locations and colonial differences" (Mignolo and Walsh, 2018, p. 13). Drawing on decolonial thought helps support research praxis (beyond theory) that is rooted in, and responsive to, alternative epistemologies that align with the context of the *acequias*. Whereas "western" concepts of environmental justice have often been transposed in universalist terms, a decolonial approach supports relational analysis that fosters a 'delinking' of totalizing systems of knowledge and power (Mignolo and Walsh, 2018), instead promoting pluriversal ways of thinking, living, and analyzing (Alvarez and Coolseat, 2018) —including the place-based practices of territorial stewardship and relational water governance that *acequia* communities enact. Indeed, "decolonizing practices can help transcend the Western ontological roots of environmental justice theories and inform a more radical and emancipatory environmental justice" (Temper, 2019, p. 1). This is fundamental within the *acequia* context, as specific notions of justice—particularly procedural inclusion—have been used to justify *acequia* participation in land management decisions. However, such participation often fails to fundamentally alter the power relations that continue to position relational knowledge systems as

secondary. In other words, incorporating *acequias* into the logic of the state does not constitute justice.

3.3.1 Pluriversal Decoloniality and Decolonial Pluriversality

> *"For us, the pluriversal opens rather than closes the geographies and spheres of decolonial thinking and doing" (Mignolo and Walsh, 2018, p. 15)*

Pluriversal politics has to do with the notion that there exists a world wherein many worlds fit. This inherently requires moving beyond the 'one-world-world' so robustly demanded by complexes of capital, modernity, coloniality – and recognizing the existence of other worlds, multiple worlds, and multiple ways of knowing. Within this space of multiple, there exists a pluriverse: both real and possible (Mignolo and Walsh, 2018; Escobar, 2020).

Escobar, in writing about pluriversal politics, reminds us that "*un otro posible es posible*" (another *possible* is possible) (Escobar, 2020). In putting forward such a call to "imagine possibility differently" through the relaying and accounting of those who are putting alternatives into practice (Escobar, 2020, p. x), this thesis responds through the telling of the *acequias*, and their version of *another possible* – inviting other ways to think about how we relate to land and water, particularly in the context of US Western Water Law, and intersecting challenges of climate change, political economic change, asymmetrical power relations and enduring systems, structures, and processes of coloniality.

Through the 'case studies' presented in the thesis, the analysis seeks to make visible the salient features of the moment (i.e. environmental racism, procedural injustice; but also increasing epistemic justice, interculturality), as they sit in relation to the *longue duree* of coloniality (Escobar, 2020). In many ways, this 'decolonial pluriversality/pluriversal decoloniality' is also about destabilizing dualisms towards a more relational ontology and epistemology: enabling the thesis to examine *acequias* as spaces of relational encounter, navigation, and articulation, rather than positioning them in binary resistance to the state. Moving beyond ontological dualism

(including that well debunked binary of 'nature' and 'society', or 'modernity' and 'tradition'), and towards a politics and ethos of plurality and relationality – includes also moving towards understanding relationality as "interdependence and care … [necessary] for ushering in worlds and knowledges otherwise less shaped by axes of domination" (ibid, p. xii). Importantly, decolonial pluriversality or pluriversal decoloniality (Mignolo and Walsh, 2018, p. 14) does not entail "a negation of Western thought" but rather accepts that while "Western thought is part of the pluriverse" it is not the center (ibid, p. 15). Similarly, within the *acequia* context of New Mexico, *acequias* – through processes of relational autonomy – engage and recognize hegemonic legal systems, but do not adhere to the logic that these are the only ways of knowing and being in the world; or, the only ways of managing water in the West. In other words, within the *acequia* context, a space of relational navigation and generation is seen to emerge, where new possibilities and ways of being are created that respond to contemporary conditions through rooted ethos and dynamic relation.

Through developing a conceptual framework rooted in a decolonial (or, a pro-relational) lens, the research reveals the ways in which *acequia* communities articulate alternative territorial relationships that challenge colonial logics, while engaging with processes of contemporary state governance, institutions, and structures of power asymmetry. Such practices, in turn, yield a form of relational autonomy (described in the following section), rooted in *querencia* – which, correspondingly, make way for pluriversal and transformative possibilities of territorial relationships and land management, including the recognition of relational knowledge systems as legitimate bases for environmental decision-making

By applying a decolonial lens to *acequia* governance, *querencia* and *autonomía* are revealed as decolonial and relational praxis — practices that enact alternative ways of relating to water and territory, that are embedded in place, and respond to the context of the *acequias*. Through this revelation, *autonomía* and *querencia* become core concepts used within the thesis to analyze, understand, and articulate relationality within the *acequia* context: it is both the process, and the outcome. Thus, I propose *querencia* to be not only a relational practice, but also a concept that helps us to understand the ontological and affective ground through which relationality, pluriversality, and relational autonomy emerge.

3.4 Conceptualizing *Querencia* and *Autonomía*

Two key concepts are central to the argument of this thesis: *querencia* and *autonomía*. While both terms have complex genealogies in a) New Mexican and b) Latin American cultural and political discourse, I employ them here as analytical tools that help illuminate the dynamic practices through which *acequia* communities maintain territorial relationships in contexts of ongoing coloniality, and asymmetrical relations of power.

Relationality grounds the interconnected practices through which *acequia* communities understand themselves and territory, including the notion that the 'land' is the first teacher (Smith, Tuck, and Yang, 2019). The relational concept extends beyond social relationships to encompass reciprocal relationships between humans, water, land, and multispecies worlds—including the entanglement of nature and politics, and humans and more-than-humans (de la Cadena, 2015; de la Cadena and Blaser, 2018). Relationality, in this framework, refuses Westernist separations of nature from culture, understanding 'environment and 'society' not as separate or externally related entities, but as inextricably linked and mutually co-constitutive (Castree and Braun, 2001; Loftus, 2009; Linton, 2010).

3.4.1 *Querencia*

Querencia, is a word used by local *acequia* users and keepers, and is often translated to a "love of place," yet encompasses far more than a cultural attachment to territory. As employed in this thesis, *querencia* refers to a deep, living, and multidimensional relationship with territory that informs identity, guides environmental stewardship, and shapes governance practices. Consequently, *querencia* is both a concept and a practice—a way of understanding one's relationship to place and a set of actions through which that relationship evolves and is maintained. Within the *acequia* context, this includes not only the spiritual or ontological dimensions of relationality with territory, but also the material, grounded reality of sharing and caring for water as a collective responsibility,

attuning to the natural environment and changing seasons through practices of irrigation, and the boots-in-mud reality of engaging in rural, arid, agriculture.

Querencia is used within this thesis as a guiding conceptual light that helps explain (but is also the result of) relationality.

Querencia, as a concept and a practice, emerges as the affective and ontological ground from which communities articulate their right to govern territory according to their own logics rather than those imposed by colonial systems of power and relation. In doing so, *querencia* becomes the foundation for relational autonomy (*autonomía*) to both unfold and take ground. The resulting forms of relational autonomy that emerge, rooted in *querencia*, are thereby also an assertion that communities possess legitimate authority to make decisions about their territories and their own 'futurity' (Smith, Tuck, and Yang, 2019). This notion responds to Arellano's (1997; 2014) assertion of an '*acequia* bioregionalism' (or, "*la raza* bioregionalism"), whereby *querencia* functions as a form of bioregionalism that intimately connects land to people, and people to their stewardship decisions. In doing so, *querencia* forms an ontological and material foundation for "subaltern practices of difference for the construction of alternative socionatural worlds" (Escobar 2008, p. 67).

In this way, *querencia* resonates with — though is not derived from — decolonial scholarship on alternative socionatural worlds (i.e. Coulthard, 2014; de la Cadena, 2015; Escobar, 2022; Ojeda, 2023). It remains a concept and practice rooted in the specific historical, material, and relational context of *acequia* communities in New Mexico, rather than an imported analytical category. As Arellano (2007) writes, *querencia* "is that which gives us a sense of place, that which anchors us to the land, that which makes us a unique people, for it implies a deeply rooted knowledge of place, and for that reason we respect it as our home" (Arellano, 2007, p. 50).

Accordingly, as *querencia* responds to and emerges from a pluralistic space such as New Mexico, it is not without tension. It can be romanticized, instrumentalized in service of exclusionary claims to territory, and deployed in ways that flatten the internal power dynamics and inequities that exist within *acequia* communities themselves. The thesis remains attentive to these complexities, while

honoring the concept and practice as a fundamental to New Mexican *acequia* cultures and relationality.

Where *querencia* describes an inward relationship with territory, water, and community, *autonomía*, to which I now turn, describes the outward practice of asserting and navigating that relationship in relation to the state and other actors.

3.4.2 *Autonomía*

Autonomía, as conceptualized by Escobar et al. (2024), refers not to a static or 'complete' sovereignty or independence from the state, but rather to a way of being, and also to a making of life and politics. Thus, while *autonomía* encompasses territorial and epistemic self-determination––that is, the right of communities to define (and enact) their (our) own ways of living, knowing, and being in relationship to territory, it also encompasses ontological politics – challenging fundamental western assumptions of modernity, capitalism, and development (Escobar, 2007) – all of which constitute the paradigm of modernity/coloniality. In this way, *autonomía* is about place, but it is also about consciousness.

Autonomía, importantly, recognizes and is informed by the existence of pluriversality or what Escobar et al. (2024, p. 127) also term "copresence" – 'a world where many worlds fit,' that are "not 'the same' yet not fully separate, either." Thus, *autonomía* is rooted in plurality, and the generative potential of pluriversal ontological encounters. Drawing upon ethos of Zapatismo, Escobar et al (2024) explain that *autonomía* is relational, moving beyond dualistic notions of separatism, and instead embracing an understanding of life (and worlds) as distinct, yet concurrently interconnected and interdependent. This corresponds with concepts (and *acequia* employments) of animist intersubjectivity (Endres, 2013), which see life and reality as shaped by relationships (and material experiences) between all beings.[10]

[10] See, also, concepts of inter-being (Hahn, 1987) and "vincularidad" or "the awareness of the integral relation and interdependence amongst all living organisms (in which humans are only a part), with territory or land and the

Understanding that life is co-constituted through relationships between beings has implications for how we understand (and enact) environmental governance, and correspondingly confers on place "a political and spiritual dimension" (Escobar, 2020, p. xvii). This framework, in seeking 'connections and correlations' serves to disrupt "the totality from which the universal and the global are most often perceived" offering instead examples and cases of different ways of being and doing, in regards to environmental governance, and in relation to water and the state (Mignolo and Walsh, 2018, p. 14). Examples of this interconnection in practice include ceremony, celebration, and community governance – as well as the material realities of cleaning the *acequia*, irrigating the fields, and utilizing the ditch, all of which will be detailed in the empirical chapters.

Through the assertion of alternative life frames, *autonomía* carries a political affirmation that communities possess legitimate authority over their territories, grounded in ancestral rights and long-standing practices of water governance that predate — and challenge — the frameworks imposed by the state.

The conceptual framework's attention to political ontology provides space for examining the relationship between/within worlds, particularly in regards to the experience of communities striving to "preserve their existence in their interaction with other worlds, under asymmetrical conditions of power" (Escobar, 2020, p. 25). In doing so, this type of 'political ontological investigation' helps to understand why and how environmental struggles – including over the use, management, and care of water – are also ontological struggles, recognizing tensions between different ways of making and viewing the world. This includes recognition, however, that these 'multiple worlds' are not isolated spheres which converge, but rather that there is authentic plurality in this world, right now as evidenced in the ways communities simultaneously engage with environmental frameworks in state-legible terms (mountains, natural resources) while concurrently defending the same spaces as living, sentient beings (de la Cadena, 2015; de la Cadena and Blaser, 2018). This dynamism plays well with the concept of *autonomía*, refusing

---

cosmos. It is a relation and interdependence in search of balance and harmony of life in the planet" (Mignolo and Walsh, 2018, p. 13).

binary separations or even static modes of engagement with 'the state.' (Armijos, 2013; Ulloa, 2017).

This understanding of autonomy as relational rather than absolute is useful for analyzing *acequia* politics, as it acknowledges the complex ways communities navigate multiple governance frameworks and worldviews, while maintaining (and sometimes omitting) core values and relational practices. At a fundamental level, *autonomía* reflects communities' desire for their environmental ethos – including ways of sharing and caring for water -- to be recognized as legitimate, and operationalized within governance realms. In this way, "increased autonomy should not be confused with rejection of state support" insofar as that relational autonomy enables communities to "transform state policies and regulations to their own interests," through tactical engagement rather than outright rejection of institutional frameworks (Armijos, 2013, p. 98).

3.4.3 Relational Autonomy

Together, these concepts allow us to understand *acequias* as spaces of *relational autonomy* — or, spaces from which a "collection of partial and locally situated processes" emerge, through which communities "exercise self-determination and self-government in their territories through the relations, negotiations and participation they must establish with the state and other local, national and transnational actors" (Ulloa 2011, p. 91). Fundamentally, the concept of relational autonomy is about the complex and dynamic praxis of sharing and negotiating power in a territory of plurality, as informed by current and multiple historic contexts. This praxis is never stagnant: it is in constant dialogue, evolution, and negotiation. The role of *querencia* in underpinning *autonomía* is fundamental, insofar as that *querencia* – far more than a romantic notion – informs intergenerational responsibilities of territorial care that extend across time, and challenge short-term development paradigms, severances to relationality with land, as well as individualized vs. mutualistic stewardship decisions. In this way, *querencia* is again highlighted as both a concept and a practice, informing environmental stewardship ethos, as well as organizing governance principles.

This constellation of theoretical concepts guide my analysis of territorial struggle in northern New Mexico. First, it directs attention to the ways in which coloniality operates through different

spheres of power, knowledge, and being – including seemingly neutral consultation processes that uphold a form of racialized territoriality that in turn delegitimizes *acequia* relationships to land. Second, it frames *acequia* communities not as passive victims of, or reactive respondents to, coloniality (and the land management practices that manifest as such), but rather as active agents engaged in practices of *autonomía*, that strategically enable communities to protect not just land and water – but also *querencia* and relationships. Lastly, the framework helps to position territorial 'conflicts' as ontological encounters where multiple worlds meet, recognizing the role of plurality in moving towards just and transformative futures.

3.5 Just Transformations

To operationalize the aforementioned conceptual anchors, I employ a Just Transformations framework (Rodríguez et al., 2023; Martin et al., 2025) within the final empirical chapter and the discussion, that moves beyond identifying conflict as inherently destructive and instead recognizes tension as generative—as spaces where new possibilities emerge (Rodríguez and Inturias, 2018).

The framework enables assessment of how progress towards transformation takes place with a focus on "power relations, dimensions, and scales of change" (Rodríguez et al., 2023, p. 7). The approach facilitates the mapping of case studies along a gradient, demonstrating movement of territorial management between spaces of asymmetrical and hierarchical power relations to spaces of plurality and more symmetrical power relations. Embedded within this analytical gradient are considerations of epistemic justice, recognition justice, and procedural justice, as these elements are fundamental to understanding how territorial governance processes move along the exclusionary-to-transformative spectrum. This analysis encompasses impacts on discourses, narratives, and worldviews, as well as material, epistemic, and structural transformations toward pluriversality.

As *acequia* movements increasingly articulate their ontological foundations in relation to global struggles for subaltern recognition (see, for instance, LaMadrid and Rivera, 2023), the framework proves particularly valuable as it helps to relate and situate locally-led processes beyond their

immediate geographical boundaries, which have historically been limited to cultural and political-economic analysis (see, for instance, Perramond, 2018; Correia, 2008).

3.5.1 Power Relations and Relational Autonomy

Power is fundamental to *acequia* autonomy. It is dynamic and multidimensional, operating through different forms, levels, and spaces (Lukes, 1974; Gaventa 2006; 2019) including visible/structural (Weber 1971), hidden (Giddens 1984), and invisible/internalized forms of power (VeneKlasen and Miller 2002; Mehta, 2025). The thesis seeks to underscore the overlapping, intertwining dimensions of power (and its change), as it relates to environmental knowledge and management in New Mexico, including the specific ways in which the colonial matrix of power endures and transforms systems of authority and knowledge in relation to the environment, which themselves influence understandings of self and being (Quijano, 2000; Lugones, 2010; Maldonado-Torres, 2016; Mignolo and Walsh, 2018; Mignolo, 2023).[11] Such an engagement with power helps to shed light on the ways in which communities negotiate for interculturality, epistemic justice, and procedural visibility within the realm of territorial and environmental management, as well as the ways in which claims and counter-claims over environmental-cultural authority are enacted in New Mexico.

In this way, the framework attends to different modes of power: where coloniality enacts power *over* territory and knowledge, *querencia* enacts power *with* — through reciprocal relations with water, land, and community — and *autonomía* enacts power *as* — the assertion that relational ways of governing territory are themselves legitimate forms of authority.

A decolonial framework makes these relations and enactments of power visible — but also makes visible the relational practices through which communities respond to, navigate, and reshape power. In the *acequia* context, relationality itself is a force that impacts upon power dynamics:

[11] Less attention is paid to gender and sexuality within this thesis, over other categories of race, language, culture, and ontology (understanding it all, however, as intersecting).

querencia and *autonomía* do not simply exist alongside structures of colonial power, but actively confront the matrix through the assertion of alternative knowledge systems, governance practices, and ways of relating to (and being with) water and territory. This fosters a decolonial understanding of power that attends not only to structural and political-economic dimensions, but also to relational, cultural, and discursive forms of power — including the narratives through which environmental authority is claimed and contested. The fuller application of this analytical framework, including the gradient of just transformations, is developed in the final empirical chapter and discussion.

3.6 Conclusion: Sharing Water, Sharing Power

In sum, through this framework, I look at relations of power, knowledge, and the environment through a decolonial lens, which reveals *querencia* and *autonomía* as central principles of *acequia* governance and response. Though this, pluriversality and relational autonomy emerge, demonstrating ontological encounters across scale, and also the ways through which, "adapting and shaping state policies…communities [are] able not only to increase control over their water resources but also to legitimize local ways of managing them" (Armijos, 2013, p. 95).

The conceptual framework outlined in this chapter brings a decolonial and relational lens to the study of *acequia* governance and hydrosocial territorial struggle in northern New Mexico. A decolonial framework helps to make visible both the relations and enactments of power that shape *acequia* territories, and the relational practices through which communities respond. Relationality, in this context, is not a stable or idealized condition — it is put into tension constantly, shaped by external pressures and colonial dynamics that are themselves potentially generative to *acequia* autonomy and revitalization.

Beginning from the contributions of hydrosocial theory — and identifying the limits of prevailing approaches to territorial pluralism in accounting for relational and ontological dimensions of territory — the framework develops *querencia* and *autonomía* as concepts and practices that expand how we understand communities' relationships to water, and how they enact and negotiate

power within and against structures of coloniality. In doing so, the framework challenges hydrosocial understandings of territory as defined *primarily* through competition and control, proposing instead a pluriversal understanding of hydrosocial territory — one shaped by *querencia*, reciprocity, and the co-constitutive agency of water itself, while remaining attentive to the material politics of water governance and enduring, ancestral claims to authority that *acequia* communities utilize to assert their right to govern territory on their own terms. Through this, multiple, synchronous, and interacting concepts of territory come into being.

Acequia systems are not to be idealized. They, like many other forms of community-governance, stem from "vernacular ('local', 'indigenous', 'peasant', often hybrid) water cultures' engagement(s) with nature's potentials, restrictions, and caprices" (Boelens et al., 2022, p. 1129), which so often are produced in "harsh, contradictory realities that include power inequalities" (ibid; Armijos, 2013). Yet, it is through this wily mixture, that *acequia* systems demonstrate a model for more localized and democratic forms of governing resources and commons within the context of water management in the US West. As Armijos (2013) demonstrates in the Ecuadorian context, communities have the ability to shape state policies toward increased autonomy, and in doing so, water management becomes a vehicle for self-governance. By operating and thinking simultaneously at local and global scales, these case studies exemplify how community-based transformations can contribute to the broader structural reconfigurations necessary for addressing sustainability challenges and power inequities, while attending to internal relations across scale.

Through this framework, *querencia* and *autonomía* emerge as both concepts and practices — ways of sharing water and ways of sharing power. At its core, *autonomía* is a way of negotiating the world. *Querencia* is a way of being in, and with, the world. The empirical chapters that follow examine how these concepts manifest in practice, with particular attention to what becomes possible when relational knowledge systems are recognized as legitimate bases for governance.

Chapter 4. Methods

4.1 Background to the Research

This research project emerged from the intersection of personal interest and academic curiosity about the *acequias* of New Mexico. Over time, and at times despite my best efforts, my research trajectory has brought me increasingly closer to home.

This is due, in part, to an unyielding curiosity about the intersection of land, water, climate, and community in northern New Mexico – recognizing an innate and enduring form of adaptive capacity contained within *acequia* governance practices and land-based knowledges of the region. This rooting-of-my-research has also been driven, however, by a responsibility I feel as a researcher to ground my research practice in a place where I am able to authentically deepen my exploration, commitment, and reciprocity to people and place – including through, but not limited to, the PhD. For me, this has meant gaining 'the right' to do research through reciprocal practice (Armijos and Walnycki, 2014), even in a place as close as home.

Prior to beginning the PhD, and following my master's, I spent four years living and working in northern New Mexico, engaged in a number of projects at the nexus of climate and agriculture. This period of time proved invaluable to me, both personally and professionally, giving me the experience needed to undertake the unknown work ahead.

During this time, I was privileged to develop a grassroots project called the 'Working Lands Resiliency Initiative,' which explored community climate resilience through an *acequia* based approach to vulnerability and capacity assessment (see Carr et al., 2015; Dixon, 2020). Approximately one year into the project, the world shifted with the Covid-19 pandemic, and I found myself – like many others – living in very different conditions than I had expected, before. I spent this time tucked into my family's then-abandoned rural mountain home, living alone in the at-times unforgiving northern New Mexican landscape, and tending to the *acequia* that I was raised on. Through this experience of isolation – of quite literally chopping wood and carrying water – I

was able to return to, and deepen, my own personal connection with (and questions about) the *acequia*. As the world re-opened, so too did my nascent research project, and accompanying this was a new awareness and reverence I felt towards the *acequia* systems. Thus, this time period that birthed the PhD afforded me not only an initiation into *acequia*-based research in the region (and an accompanying network of connection amongst *acequia* actors which would prove invaluable in my research moving forward), but also a deeper connection in my own individual relationship to the *acequia*, and to myself as a research partner.

4.2 Research Site

4.2.1 Choosing Taos

Building on this foundation of lived experience and professional engagement, I began the PhD process with a highly ambitious plan. I wanted to undertake a comparative study of community-based irrigation systems that shared similar water-apportionment genealogies in Morocco, New Mexico, and Spain – and include into this a parallel research thread that connected the *acequia* communities of Argentina to indigenous water systems of the US Southwest. Thanks to the good wisdom of my academic mentors and prospective PhD supervisors, I was encouraged to limit the study to one location.

My earlier forays into *acequia* research in Taos enabled me to understand that I was only scratching the surface of a much deeper inquiry into the nature of *acequia* governance and water sharing, and the role *querencia* played throughout. Understanding the amount of time that had gone into relationship and trust building in my work with New Mexico *acequia* communities thus far, and recognizing that—for me—a meaningful research project would require a similar, if not larger, degree of time and commitment in any location, I chose to deepen my inquiry into the New Mexican *acequia* systems as a method and form of relationality—although I did not have the words to express it at the time.

Although my research has been centered in Taos, it was – and is – informed by a larger discourse of *acequia* culture throughout northern New Mexico, water governance at a global scale, and questions of just transformations more broadly. Moreover, although born – and primarily raised – in the region, my positionality, specific childhood location, and linguistic/cultural background, deeply influenced the fieldwork process. More discussion on this will appear in Section V on positionality.

4.2.2 Taos as a Wider *Acequia* Site

New Mexico contains approximately 600-700 community *acequias* distributed across the state. Within this broader distribution, Northern New Mexico, and Taos in particular, represent a concentrated *acequia* landscape, wherein *acequia* density, active governance structures, and cultural continuity converge to enable deep ethnographic inquiry.

Geographic and Institutional Concentration

Within Northern New Mexico's already dense *acequia* geography, Taos functions as a political and geographic epicenter for *acequia* infrastructure and organizing (see Figures 4.1 and 4.2). The County hosts multiple interconnected watershed systems (Rio Pueblo de Taos, Río Hondo, Río Grande del Rancho, Río Fernando) that support dozens of active *acequias* with functioning commissions and *mayordomo* systems, while also being the geographic location of one of the first (and most longstanding) *acequia* adjudication cases in New Mexico—the result of which was the codified unification and organization of fifty-six of the Taos *acequias* (see: the Abeyta Settlement and the Taos Valley *Acequia* Association). The resultant concentration and organization of the region's *acequias* results in a nested research environment where multiple scales of inquiry become possible within a bounded geographic terrain – enabling examination of variation in governance, water allocation practices, and community relations amongst multiple *acequias* within one given location.[12]

[12] Taos is comprised of multiple micro-watersheds and distinct community cultures. The County's 2,203.1 square miles (5,706 square kilometers) provides a diverse terrain for examining geography, culture, *acequia* practice, and community relations.

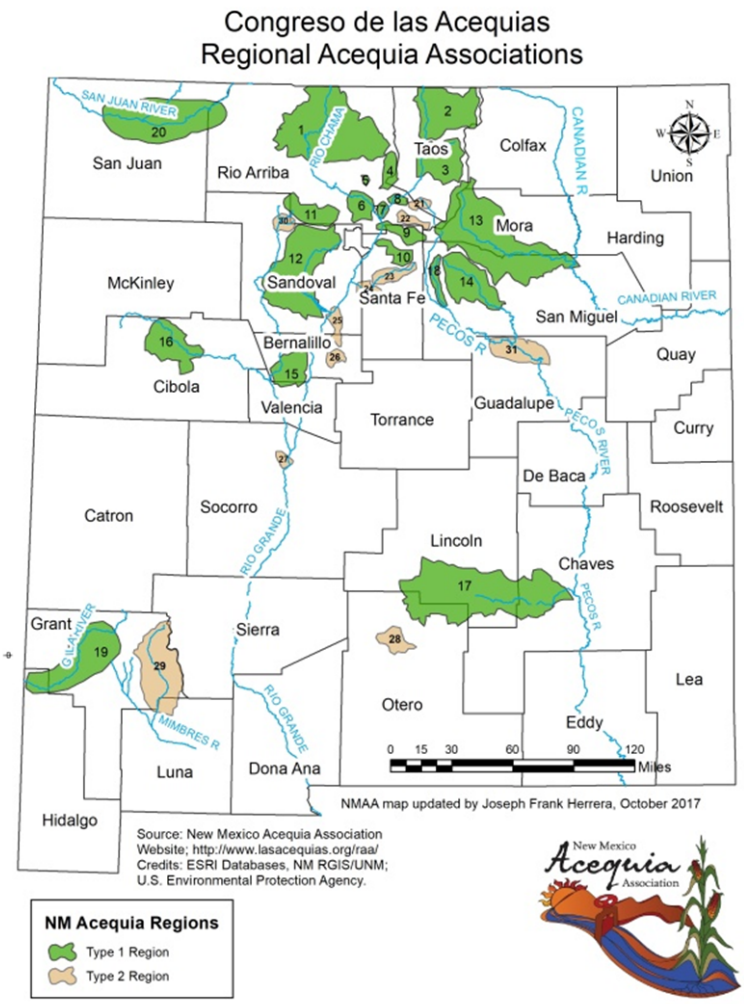


Figure 4.1: Regional Acequia Associations in New Mexico, demonstrating high level of concentration in the northern areas of the State, which corresponds with the State's mountain headwater geographies. (Source: New Mexico Acequia Association)

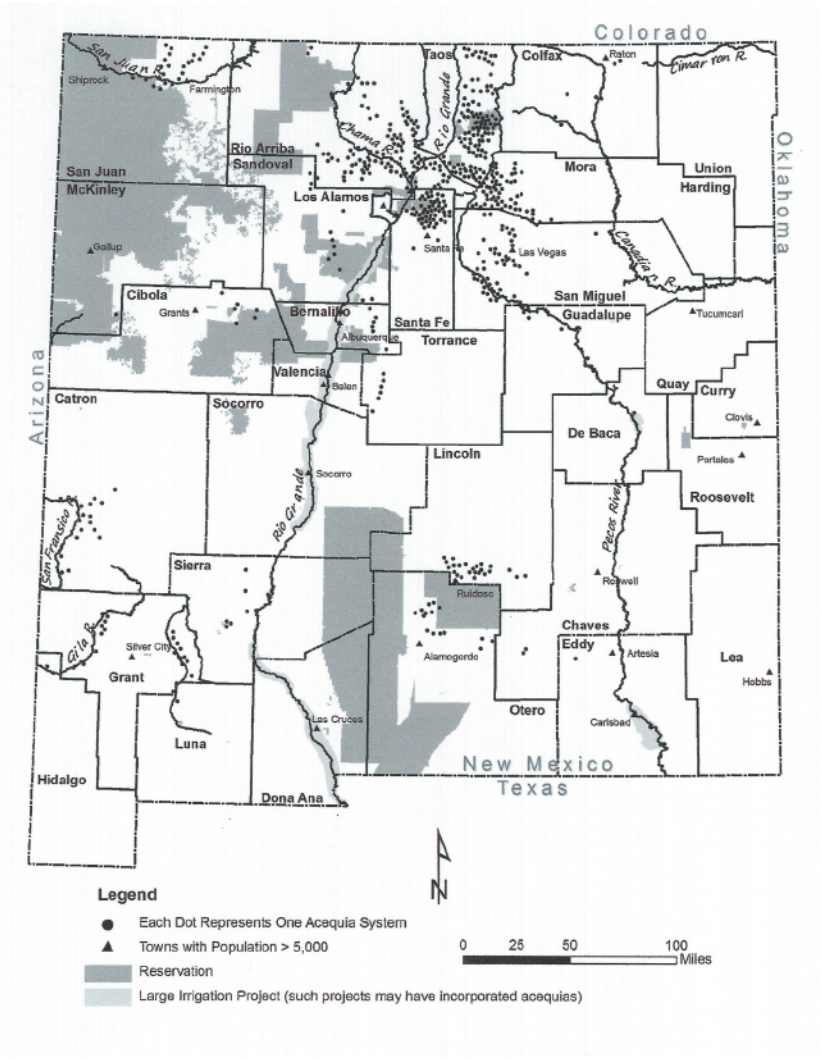


Figure 4.2: Distribution of Acequia Systems in New Mexico, highlighting a high concentration of acequia systems in Taos/surrounding areas. (Source: Henkel, 2014, Community-Based Water Systems: Preserving Livelihood, Ecology, and Community)

Lastly, thanks largely to the role the Taos Valley *Acequia* Association (TVAA) plays as a regional organizational hub – providing institutional infrastructure that facilitates research partnerships and community engagement – Taos benefits from decades of accumulated research, including emergent GIS mapping of *acequia* networks, and hydrological studies documenting groundwater/surface water interaction (much of which was necessitated by the adjudication process itself). This existing knowledge base enables new research to build cumulatively, rather than beginning from ground zero.

4.3 Selecting the *Acequias*

The initial case study *acequias* of my research design were the *Acequia* Madre del Rio Pueblo (Rio Pueblo) and the *Acequia* Madre del Cañon (Rio Fernando). These *acequias* run from two separate rivers (the Rio Pueblo and the Rio Fernando), which originate in different watersheds yet reach a temporary confluence near the center of Taos. The primary *acequias* of each stream system had been chosen due to the diversity of participants engaged in water-sharing practices (including indigenous and non-indigenous users), and their degree of collective irrigation: 1,200 acres.[13] Upon arriving in Taos to conduct my fieldwork, however, I began to understand the complexity of this initial decision.

Water sharing is a relational practice. Insofar as that water is shared across, within, and between multiple scales, users, watersheds, jurisdictional boundaries, and cultures, it became quickly apparent to me that focusing on a singular *acequia* from each stream system would yield a highly limited perspective on how water sharing actually occurs. In the case of Taos, while water sharing can be fraught at all scales, I began to identify particular tensions in regards to sharing water between different *acequia* systems on the *same* stream system. For instance, 'upper' *acequias* may hold priority over 'lower' *acequia* systems (mimicking frequent relations between top-end and bottom-end users, albeit at a larger scale), although sharing would also occur between users within each *acequia* system, and indeed between neighboring stream systems themselves. Thus, I felt it necessary to expand the scope of my research to encompass multiple *acequias* within each primary stream system – rather than limiting the research to singular/primary *acequias* themselves.

[13] The Rio Pueblo and Rio Fernando stream systems themselves collectively irrigate over 14,000 acres (5,665.59 hectares).

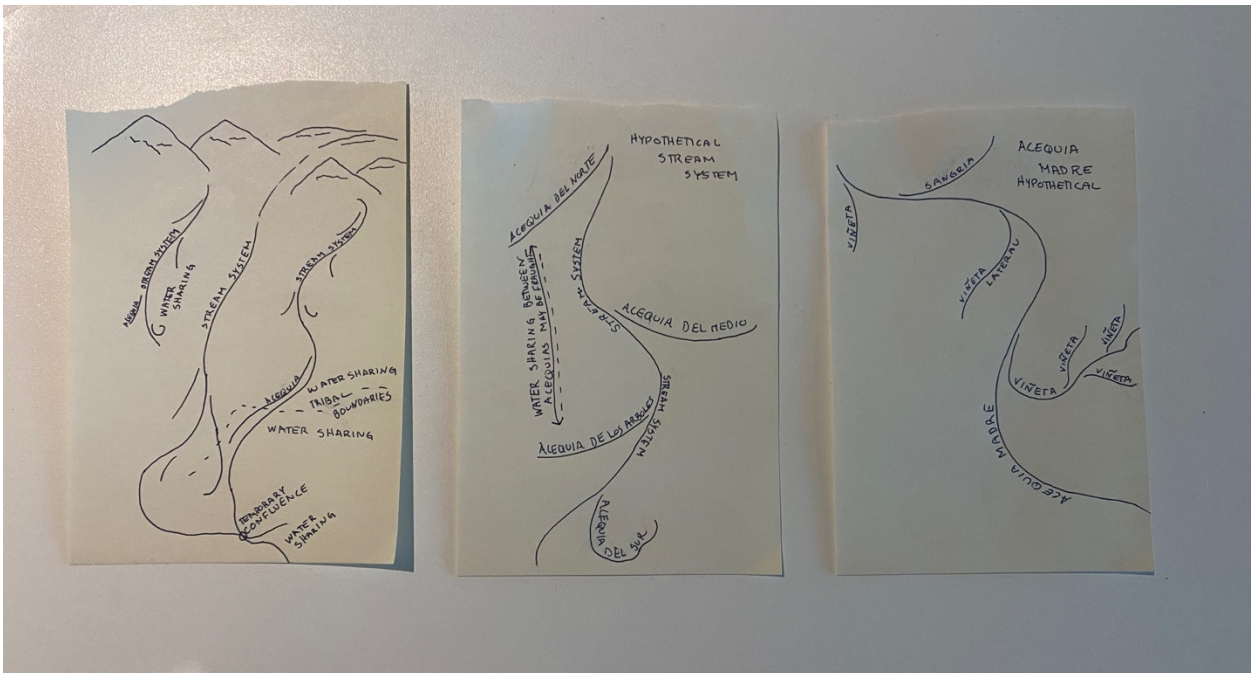


Figure 4.3: Hypothetical watershed, stream, and acequia systems - demonstrating scales of sharing (Source: Author)

Secondly, each *acequia* is a world unto themselves. While this might sound romantic, what it means in pragmatic terms is that within each *acequia*, and therefore certainly within each stream system, it is possible to identify multiple, sometimes contrasting, systems of water sharing. This reality underscored the necessity of examining *acequias* on differing stream systems, in order to gain a more transparent understanding of *acequia* governance practice in the region.

Lastly, and significantly, the reality of conducting fieldwork in Taos hit home. While the privacy of Taos Pueblo has been well documented (see, for instance, Rodríguez, 2014), what has received less academic attention but is no secret to anyone to the region, is the different but at times equally covert nature of New Mexico's *acequia* communities. Whilst perhaps more publicly documented and researched upon in both traditional academic research and also popular media (see, for instance, Neuwirth for National Geographic, 2019, or Romero for the New York Times, 2021), the nature of New Mexico's *acequia* communities remains – in my reading – both highly curated and relatively closed to those outside of the community: a stance that both protects and conceals the more nuanced, truthful, and messy realities of *acequia* governance.

One aspect of this reality is that not all *acequia* governance is transparent, clean, or tidy. Previous connections with several *acequia* commissioners along the Rio Fernando de Taos jump-started my inquiry into that specific stream system, which naturally and organically developed from there. Paralleling this, however, I received early warning from a number of *acequieros* that a specific *mayordomo* of one *acequia* I had intended to conduct research with would not be 'open' to conversation. Despite providing water to hundreds of *parciantes*, the *acequia* did not adhere to standard governance practices: *parciantes* were largely left in the dark about meeting timings, elections, and systems of water apportionment. When water was distributed, and to whom, was a mystery. Tensions were rising, and, naively, I continued to press on. Determined to fulfill my initial fieldwork goals, I repeatedly requested an interview – at one point even interrupting the *acequia mayordomo*'s enjoyment of a mutual friend's child's birthday celebration to see if he had received my calls. Despite my persistence, I was met with continued deferment. This repeated denial of interview requests – which was, in retrospect, highly good fortune – resulted in an initial sense of 'failure' on my part. After meaningful reflections with fellow *acequia* researchers, however, I relinquished some of my rigidity about 'how' fieldwork should be done – and began to speak to those who were willing to talk with me. In my good fortune, this resulted in a deep and meaningful relationship with the *mayordomos*, commissioners, and *parciantes* of the *acequias* of the Rio Chiquito stream system – to whom I owe a tremendous debt of gratitude and thanks.

And, thus, the Rio Chiquito and the Rio Fernando became my primary stream systems within which to concentrate my research, speaking to representatives and *parciantes* from all pertinent *acequias* along each river. [14]

4.4 Considerations: Taos Pueblo

[14] The inclusion of a focus on female *acequia* leaders led me to also engage in research on adjacent stream systems, namely the Rio Hondo, and the Rio Grande del Rancho. Interviews with statewide *acequia* leaders took me to the communities of Pecos and Santa Cruz, while participation in legislative activities and organizing work tethered a branch of my research to the capital city of Santa Fe. Towards the end of my fieldwork period, I opened my research beyond geographic domain, and was happy to speak with anyone and everyone about *acequia*s, while maintaining and fulfilling a core focus on the selected fieldwork stream systems.

As will be noted throughout the thesis, formal inclusion of Taos Pueblo is not included in this research. This is due to a variety of reasons, but most importantly, due to trust.

Academic research at Taos Pueblo is historically thin. Following a succession of extractive and materially detrimental archeological and anthropology studies on the Tribe, Taos Pueblo strengthened its position regarding the allowance of 'external' research at the Pueblo. This has resulted in, accordingly, an almost zero-research policy (see: Bodine, 1978; Rodríguez, 2014; Chacón, 2021). Some recent studies (Thomas, 2017; Trujillo, 2019; Chacon, 2021) have included short term interview data and/or theoretical research guidelines on how research *could* be done, however research remains largely closed to non-tribal members.

When beginning the PhD, I felt it appropriate to attempt to engage in research at Taos Pueblo. It felt incomplete for me to conduct research on water sharing and governance in Taos, without including perspectives from those who are the original and continual stewards of water in this land. Moreover, recognizing that *acequia* water sharing functions across tribal-to-non-tribal boundaries, including water sharing agreements and legal adjudications between Taos Pueblo and neighboring *acequias*, it felt vital to understand and bring forward this perspective.

4.4.1 Initial Approach and Ethical Framework

My initial plan was structured around several commitments: I would request to meet with the Taos Pueblo War Chief's Office, Tribal Council, and the Taos Pueblo Governor's Office to gain permission to conduct interviews or site visits within Tribal boundaries. I would also connect with local organizers at Taos Pueblo who were engaged in agricultural community organizing initiatives, as well as *Mayordomos* of the case study *acequias*.

Of primary ethical concern to my research were questions of reciprocity, trust, and respect. I desired for this research process to be contributive to the communities and people of Taos, recognizing that my positionality (below) would influence the ways in which I could or could not access certain spaces or forms of knowledge, particularly within Taos Pueblo. I committed to

abiding by the sovereign decisions and data-privacy recommendations of my indigenous colleagues, while also holding additional ethical concerns about working with indigenous colleagues outside of the War Chief's or Governor's Office purview – recognizing that the politics within Taos Pueblo (and within *acequia* communities at large) are complex, dynamic, and at times very tense. I committed to making every effort not to pursue interview or research opportunities which had the potential to disadvantage or endanger my research collaborators, adhering to the guidance of those who were more intimately aware of current political dynamics than I am. Lastly, I aimed to be cognizant of my role in conversations surrounding existing water-sharing and governance tensions, foreseeing it to be an iterative process of on-the-ground decision-making and the establishment of transparency and trust.

Pragmatically, I also recognized that it may not be possible to access Taos Pueblo due to continued Covid-19 closures to non-Tribal members.

4.4.2 Recalibration

Upon arriving in Taos, I followed the prescribed protocols for conducting research with the Pueblo. This included contacting both the Governor's and the War Chief's Office, requesting formal permission to conduct research on tribal land. This also included reaching out to local Tribal leaders involved in water and food organizing. My requests were largely met with customary response: silence, or deferment.

After some time, multiple conversations with community members and researchers, and one particular encounter with a Pueblo elder who had known me since I was a small child, it became apparent to me that 1) I would not receive formal permission to conduct research on water sharing at Taos Pueblo, and 2) that I could push and conduct several interviews with tribal members with whom I held personal acquaintance, but that doing so would erode nearly all of the trust I had established throughout both my lifetime, and perhaps my parent's lifetime. Lastly, I came to

recognize that a community's right to say no comes in various forms – even when functioning from a governance norm, rather than individual choice.[15]

At the end of the day, the decision not to pursue research with the Pueblo provided me with greater freedom to engage in genuine and authentic connections with both my personal acquaintances and fellow community members, without the barrier or suspicion of research being present.

I did, in the end, work in partnership with the Red Willow Center at Taos Pueblo, a youth-and-women-led agricultural and food sovereignty center, focused on revitalization of local food systems and farming techniques at Taos Pueblo. Through friendship with the then-director, I was able to participate in several days of farming alongside their youth apprentice program. The conversations and insights gained during this time were invaluable, and deeply enriched my own understanding of water's cultural history in Taos. Due to both the age of the youth participants, and the aforementioned concerns over privacy at Taos Pueblo, 'data' from these field days are not included in this research.

4.5 Positioning and Positionality

4.5.1 Positioning Trust as Both the Process and the Outcome

Taos has a long memory, and trust is something that is developed over generations. Particularly within a multi-cultural community that has, for at least the past century, been a locus of externally projected perceptions (be it through art, archeology, or anthropology) as well as land, resource, and labor extraction, there is an inherent wariness of the external eye. Trust, in this context, became both the method through which research becomes possible and, for me, the measure of its success.

[15] This is a complicated matter. Conversations with colleagues revealed tensions between Tribal Council's decisions and their own personal preferences – tensions which would inevitably be brought to the fore through research requests such as my own.

Positionality

I am a young, Anglo, female researcher. Although I was born in Taos, and am an *acequia parciante*, I do not come from a multi-generational Taos family, and was not raised all of my life in the region. Moreover, I am not Hispana, indigenous, nor do I have familial relations at Taos Pueblo. Furthermore, I do not have substantial connection with either of the dominant Taos churches. My upbringing was unique, insofar as that the majority of my developmental years were spent between New Mexico and Hawai'i – and my high school education was split between four locations. By the time I entered college, I had attended fourteen schools, and explored their corresponding social and cultural realities. I was college-educated on the East Coast of the United States, and my doctoral research was conducted as a member of a UK University. These demographic and sociopolitical indicators deeply inform the ways in which I am perceived and related to in Taos, as well as the ways in which I understand and relate to the *acequias*.

While significant reflexive research has emerged regarding insider-outsider positionality (see: Abu- Lughod 2008; Narayan, 2014; Bukamal, 2022; Yip, 2024), the questions of positionality that emerged during the research process are also questions I have grappled with all my life. They are questions that are related to legacies of colonization and dispossession, and to ongoing and unequal assemblages of power. These are questions that require me to 'stay with the trouble' (Haraway, 2016), recognizing that there is no 'other' in decolonial research (Armijos et al., 2024). In the end, all research relations are 'historically situated and politically bound' (Rodríguez, 2014, p. 50).

Throughout the research process, I sought to be clear and forthcoming about my positionality and reflexivity, while remaining attentive to my own perspectives and baises resulting from familiarity with the research context. I believe that conducting research in one's own home requires an immense amount of accountability in both the short and long-term. This therefore also necessitates great measures of honesty, transparency, and trust—understanding that the research is situated within a larger, ongoing, and iterative process of learning and unlearning.

In reflecting upon my positionality, I also reflect upon the writing of Dr. Sylvia Rodríguez regarding applied land-and-water research in New Mexico, that:

"Reflexiveness should become an explicit component of all applied research on land and water in New Mexico, such that the very political matrix of this research should be described explicitly in every applied report. This would call on individual researchers to acknowledge and analyze their own long and short-term roles in perpetuating and benefiting from the pervasive structures of inequality which so often occasion their research" (Rodríguez, 1990a, p. 314).

Through efforts of accountability, transparency, and trust-building I hope to always engage in respectful and meaningful research—for both myself and the land and community of Taos.

Positioning During the Study

During the period of study, I lived in the mountains of Lama, New Mexico, approximately 35 minutes from the center of Taos, 40 minutes to the Rio Fernando, and 50 minutes from the Rio Chiquito watershed. This meant that while I was directly living in the greater Taos area, I was not living in either of the primary *acequia* communities in which I conducted my research. Moreover, I was not actively living in either of the six primary watersheds of the Taos Valley—instead, residing further north. This enabled me to engage in both the research and community events with ease, but also to maintain a relative degree of privacy and distance in regards to my daily personal life.[16]

The rural nature of northern New Mexico cannot be overstated: unless one lives in the central area of downtown, it is nearly imperative to have a vehicle in order to get around. During the study, I utilized my personal vehicle, and also became accustomed to hopping in the back of many a pick-up truck while attending ditch cleanings, or traveling between locations on an *acequia* system.

During the research period, I would also stay with a friend who had a home in downtown Taos. This enabled me quicker and easier access to many events and public meetings, as well as to neighboring *acequia* communities. This friend, and their family – whom were of longstanding Taos lineage – broadened my daily interactions with members of neighboring *acequia*

[16] Taos County is classified as 'rural / frontier' in the US Census, with more than half the population living in areas that require a thirty-plus minute commute (by car) to the center of town.

communities, and provided a soft space for understanding and learning more about the questions that would arise throughout the process: including those regarding language, customs/mannerisms, viewpoints, and diverse *Nuevomexicano* worldviews.

4.5.2 Language

New Mexico is a bi-lingual state, and the only state in the United States to be so constitutionally. In institutional practice, this means that all documents (including voting ballots) must be provided in both English and Spanish. In daily life, this means that – particularly within the traditional and rural areas of the state – Spanish (and, in particular, the 'Heritage Language' or local dialect of 'Manito Spanish' / 'Traditional New Mexican Spanish' spoken in the region that combines Castilian, Tiwa/Tewa, and Nahuatl linguistics)[17] far predates the use of English, and is the most common vernacular within *acequia* communities. My Spanish is passable; however it is much easier for me to understand (hear/read) than it is for me to speak. Moreover, there is a language specific to that of the *acequias* that is embedded in landscape and rooted in ecology/cosmology, which defies language-study, alone. Although growing up in an *acequia* community helped me to understand some of the phrases and words used throughout the fieldwork, it was not uncommon for an interview initially conducted in English to switch entirely to Spanish half-way through, and then back again to English, at the interviewees discretion and comfortability. I relied on post-interview transcription to fully understand and decipher much of the language used.

4.6 Methodology

4.6.1 Introduction: Feminist Political Ecology

A core tenet of this research was informed by the methodological principles set forth in Feminist Political Ecology, namely, the concept of 'theorizing from where we stand' (Rocheleau and Nirmal, 2015; Cantor et al., 2018). For me, in practice, this concept is deepened by decolonial

[17] See studies on the region's unique linguistic history such as: Vergara Wilson, 2015; Romero for the New York Times, 2023.

notions calling us to *sentipensar con la tierra* (to think-feel with the earth) (Escobar, 2019), as well as philosophies of relationality and reciprocity in research practice (Tynan, 2021; Armijos et al., 2024; Rodríguez and Armijos, forthecoming). Each of these principles (theorizing from where we stand, thinking-feeling with the earth, and engaging in relational and reciprocal research practice) – I believe – align with, and respond to, *acequia* concepts of *querencia*, as both a concept and a practice.

Because methodology must belong somewhere, I trace the lineage of *how* I go about learning to 'do' research, to decolonial scholarship and feminist political ecology – recognizing that my learning/unlearning journey is still underway.

Feminist Political Ecology (FPE) is a grounded approach to research that centers questions of power, positionality, and the corresponding role of embodiment and emotionality in environmental governance (Hawkins et al., 2011; Truelove, 2011; Nightingale, 2011a; Mollett, 2013; Harcourt, 2019; Sultana, 2021). Through this lens, FPE attends to the ways in which environmental knowledge(s) and practice(s) are shaped by intersecting relations of gender, class, caste, race, and place – recognizing that who speaks, from where, and under what conditions fundamentally shapes both what is 'known' and what is 'possible' (Rocheleau et al., 1996; Elmhirst, 2011; Sultana, 2011). Rather than positioning the researcher as a detached, objective observer, FPE demands reflexivity about one's own situatedness within the very power relations being studied. For me, this meant grappling with my own positionality in relationship not only to the research 'subject' (*acequias*), site, and community being 'studied,' but also to the role and process of research and knowledge production itself. As Armijos et al., (2024) write, there is often "little exploration of the interaction between emotions, knowledge production, and power relationships *as an intrinsic part of the research process*" (Armijos et al., 2024, p. 167, emphasis added) – emphasizing the importance of attending not only to emotionality and embodiment as observable in 'the field' but also to emotionality and embodiment in oneself (myself), as well (González-Hidalgo and Zografos, 2020; Harcourt et al., 2023).

Theorizing from Where We Stand

FPE theory provides a foundation for intersectional analysis of socio-environmental relations relative to *acequia* waterscapes; a component necessary for effectively investigating the multi-

faceted dimensions of both vulnerability and resilience in the case study context. The research draws upon FPE theory which, while recognizing the individual as an agent of change, engages in critique around essentialist assumptions of environmental stewardship, responsibility, or vulnerability/resilience based on the lived experiences and cosmological connections of individuals to their waterscape (Agarwal, 1992; Resurrección, 2017).

This perspective facilitates the development of analytical and theoretical contributions through a process of discourse, observation, and deep listening, reflecting an ethos of doing research *with*, rather than simply about, the *acequia* communities of Taos (de Costa et al., 2015; Cadaval-Narezo, 2022). An FPE-driven mode of engagement corresponds with a desire to engage in ethical and reciprocal practice, strengthens the opportunity for contributive and meaningful research outcomes, and allows for the recognition of particular land-based knowledges that may otherwise be overlooked. The incorporation of an FPE perspective supports me to explore the power relations inherent in knowledge production and governance discourse (Sundberg, 2014; Harcourt and Nelson, 2015; de Costa et al., 2015; Dupuis et al., 2022), while attending to the everyday embodied realities of *acequia* users, and their resultant engagement in acts of agency, resistance, and self-determination (Harris et al., 2020). Furthermore, the application of FPE theory to understand and dissect power relations within, between, and among *acequia* users avails space for reflective and intersectional critique of the systems themselves: rather than glorifying or espousing *acequia* systems as fault-free counter-hegemonic solutions to global crises, I attempt, instead, to engage with them on honest terms.

Whilst my research engaged with questions of gender, it is not a gender-study. Rather, the ethos of feminist political ecology that are imbued in the research respond to a theoretical framework and ethical commitment to prioritize relationality and reciprocity, to remain attentive to power relations, and to build theory from the ground-up – rather than an exploration of 'women' or 'gender' as an analytical category. Thus, for me, the feminist aspect of feminist political ecology is about a way of doing, thinking, and being with the research that responds to an ethic of *querencia* and care – and, is deeply informed by decolonial studies.

This approach shaped every dimension of the research—from how I negotiated consent and built trust, to the decision to labor alongside community members in *limpias* and field work, to the

commitment to go beyond masculinist, binary logics of ‘community’ and ‘the state’ and try to see what emerges at the meeting point *within* worlds: in the space that is its own estuary of generative potential and plurality.

This approach enabled me to root into community, and also gave me permission to think as a "we"—acknowledging that “I” am not separate from the research process itself. As Armijos et al. (2024, p. 178) write, "in recognising the role of emotion in the process, we also acknowledged vulnerabilities from our own positionalities, offering a window into how power hierarchies can be inverted through the most basic of human capacities, sharing stories and emotion….In doing so, we actively respond to calls to decolonise knowledge production and change our position from *studying* the so-called "other," to the practice of *thinking with* and *feeling from and with* the other” (Armijos et al., 2024, p. 178).

Thus, ‘theorizing from where we stand’ became a methodological choice that rooted the practice of ‘knowledge production’ into the relationships, places, and responsibilities from which it emerged.

4.6.2 Listening to Place

Wisdom sits in places, and I believe we must, too. Feminist political ecologists have long argued that emotion and embodiment are not biases to control but dimensions through which socio-environmental knowledge is constituted (Sultana, 2021; Truelove, 2011). As noted above, central to the design of this research is the recognition that knowledge is not solely cognitive but is also produced through embodied, emotional engagement with people and—significantly, for me—with place. Approaching the research through the concept of *sentipensar con la tierra*—thinking-feeling with the earth (Escobar, 2019)—enabled not only theoretical grounding, but also supported the recognition of relationality to place as an essential dimension of the research process itself, including how one comes to know and understand the socio-environmental relationships that one studies—and—inevitably—becomes enmeshed in. Taking seriously the notion that places themselves are knowledge-makers (Basso, 1996)—that they speak, they teach, and they shape those who dwell within them—required me to soften into the research practice and engage in embodied listening, questioning not only how I myself, and the research process are shaped by

place, but also how this shaping in turn reflects in the knowledge that is produced. In this way, place seems to be my primary co-author.

4.6.3 Deep Hanging Out and "The Field at Home"

As is discussed in the subsequent section, much of my formal research combined semi-structured interviews, participant observation, 'field' work (i.e. participation in *acequia* activities), and deep hanging out (Geertz, 1998). When entering the field, I had little heard of ethnography, and considered it to be the private domain of anthropologists – not mixed-bag social science researchers like me. As time progressed, I realized however that – by intention or not – much of what I was 'doing' in the field could be categorized into a new form of reciprocal/relational ethnographic research practice, informed by principles of deep listening, while navigating, learning, and disrupting 'the field at home.' Rather than adhering strictly to methodological (i.e. ethnographic) norms, I began to view the research as though I were a 'waterist' (Lankford, 2013a), or, someone keenly interested in understanding the relational network of *acequia* irrigation through that same relational lens. Although it took me time to settle into this form of research practice, this method enabled me to establish the trust, consent, natural reciprocity, and organic life flow that would come to define and inform the types of relationships I felt were appropriate to create in the research context. This practice of relational inquiry – or, deep hanging out – supported me to understand, more deeply, how meaning is made, circulated, and contested within specific cultural contexts – including attending to how *acequia* governance unfolds as a living practice continuously negotiated through everyday interactions, seasonal rhythms, and historically accumulated relations.

The Field at Home

As Rodríguez writes on mutuality and 'the field at home' (2014), "Anthropologists traditionally defined "the field" in opposition to "home." The rationale for ethnographic fieldwork in small-scale exotic cultures held that being an outsider fostered objectivity and that simpler social structures were more clearly discernable than the complex ones anthropologists come from…." (Rodríguez, 2014, p. 56). While new waves of anthropology have worked to defamiliarize this assumption, particularly as the disciplinary turn towards engagement *outside* of the academy has

expanded what counts as legitimate field sites, in making a choice to study 'the field at home' I both internalized and experienced a palpable tension.

This included questions regarding my positionality, ability to do meaningful/rigorous research, and concerns over objectivity when conducting research in a place I was familiar with. Although important, well-meaning, and thought provoking – at many times these questions seemed to probe a deeper question of: how do you defend that your research is not 'lazy' and is actually meaningful, when conducting research in a place that is 'home'?

Humorously, was the converse question that many *acequieros* asked me during my fieldwork: why did I need to travel and study all the way in the UK, just to learn more about the *acequias* of New Mexico? This included probing as to 'why are *they*, over *there*, interested in *us*, over *here*?'

I have no simple answers to these questions, but recognize that mutuality and the field at home is not an easy proposition. It requires long-term accountability of a variety rarely seen in short-term research paradigms—sustaining relationships beyond the research project, navigating the vulnerability of being known and accountable in ways that are deeply personal, and accepting that one's analysis will be read, contested, and lived with by the community to which one returns – recognizing that "the very act of representation is…an exercise in power" (Rodríguez, 2014, p. 50). For me, this meant recognizing that my research in Taos was not simply about *acequias*, but also about my own implication in the histories, politics, and futurities of water governance in a place I do not leave behind when the fieldwork ends.

Reflecting on the words of Dr. Sylvia Rodríguez, I mirror that:

"My study of Taos investigates the place that has shaped me and others so that I may communicate my understanding to one or more communities of interest, and together we can create an intervention…The problems that animate me are shared by others …To put it another way, they are mutual problems, or problems of mutual interest— to which we bring a range of practical and theoretical perspectives. *In coming home to the field, I seek an inner ground where the organic and the traditional intellectual come together and where ethnographic skill can serve the practical needs of a mobilized community of action, as well as theoretical inquiry in a discipline*" (Rodríguez, 2014, p. 56, emphasis added).

4.7 Relational Conversations: From Fieldwork Interviews Towards a *Nueva Resolana*

Resolana — the relational New Mexican tradition of gathering in a sun-warmed, sheltered place to share conversation and counsel — "a means by which collective memory, language, and cultural traditions had sustained the spiritual essence of village life" (Romero, 2025) — offers a metaphor, and a method, for the interview approach that this research ultimately adopted.

4.7.1 Interviews: Sitting in the Shade and the Sun

During the research process, I conducted 41 long-form interviews with *acequia mayordomos*, *parciantes*, commissioners, elected government officials, state-wide *acequia* leaders, water policy experts, agriculturalists, and youth-organizers.

At an institutional level, this included speaking to representatives of the New Mexico *Acequia* Commission (established under statute to advise the governor, the New Mexico Interstate Stream Commission, and the U.S. Army Corps of Engineers), the New Mexico *Acequia* Association (governed as a statewide federation of regional delegations of *acequias*), the Utton Center for Transboundary Resource Management (statewide leaders on water law and policy), the New Mexico Environment Department, the University of New Mexico, the Taos Valley *Acequia* Association (representing 56 member *acequias* in the Taos Valley), and appointed advisors to the State's 50 Year Water Plan.

At a community level, this included speaking with Town Council members, County Commissioners, agricultural and water-policy NGO leaders, volunteers, and board members of citizen advisory groups.

I conducted interviews with all *mayordomos* (minus one) and the majority of all commissioners on each of the *acequias* of the two primary stream systems of my research (*Rio Fernando: Vigil y Romo Acequia, Acequia Madre del Cañon Norte, Acequia Madre del Cañon Sur*) and (*Rio Chiquito: Acequia Madre del Rio Chiquito, Acequia del Monte del Rio Chiquito, Acequia Antonio*

Maria Graham, Deposito Ditch). Interviews with a variety of *parciantes* also took place for each of these *acequias*, interviewing all *parciantes* within some smaller *acequias* (e.g. *Vigil y Romo,* n:8), and a sampling within larger *acequias* (e.g. *Acequia Madre del Rio Chiquito*, n:300+). In addition, as described above, I engaged in long-form interviews with *acequia* commissioners, *parciantes*, and *mayordomos* of neighboring *acequias*, including the *Acequia del Medio del Prado (Rio Lucero), Acequia Madre de la Loma del Ranchito de Abajo (Rio Lucero), Juan M Lucero & Lower Manuel Andres Trujillo Ditch (Rio Lucero), Lower Arroyo Seco Ditch (Rio Lucero), Dan Archuleta Ditch (Rio Lucero), Alamitos Ditch (Rio Fernando), Jose Venito Martinez Acequia (Rio Fernando), Acequia Abajo de la Loma (Rio Grande del Rancho), Cañoncito North (Rio Hondo), Cañoncito South (Rio Hondo), Des Montes Ditch (Rio Hondo), Acequia de Atalaya (Rio Hondo), Rebalse (Rio Hondo), Acequia Madre del Prado (Rio Pueblo), Acequia de Loma Abajo (Rio Pueblo), Acequia de los Lovatos (Rio Pueblo).*

It is important to note that in several instances, one *parciante* (or commissioner, or *mayordomo*) may also hold roles along other *acequias*, of other stream systems (e.g. a *parciante* of the *Vigil y Romo* (Rio Fernando), may also be a *parciante* of the *Acequia de Atalaya* (Rio Hondo), based on familial ties, land-holdings, and relations).

4.7.2 Sampling

Stakeholder identification techniques included referral, purposive, and stratified-random sampling. I additionally drew upon my network of agricultural actors, and prior community knowledge, to identify key elders and individuals to interview. I aimed to capture the viewpoints of diverse water users, including those who may have conflictual relationships and/or divergent water-management perspectives, enabling me to understand key drivers of change, influences upon water-sharing and allocation, and networks of power relations.

Interviews followed a semi-structured format, utilizing the initial research questions of my thesis as the guiding framework (see Appendix A). The nature of each interview changed, however, based on the relationship between myself and the individual. Approximately a quarter-way through my research process, I decided to revisit my interview procedure entirely. After following what I

considered to be the 'protocol' of my ethics review committee and institutional process, I was left to reconcile with the reality of the community relations I was integrating myself into. What resulted from this period of reflection was a revised approach, as discussed below.

4.7.3 Renegotiating Consent, Trust, and the Prioritization of Relational Conversations: Towards a *Nueva Resolana*

Consent

Throughout the research process, I began to develop a discomfort with the gap between what I perceived to be customary relations of the Taos community, and the formality of the institutional review process. This discomfort was highlighted through several encounters with interview participants, as well as through feedback from family and friends during the early stages of my research.

First and foremost was the issue of written consent. Although advised by my ethics committee to change my choice of verbal consent to that of written consent, I found this did not land well when arriving in Taos. As documented in Chapter Two (Context), the traditional communities of New Mexico have experienced multi-layered processes of coloniality and dispossession – the latter often occurring through institutionalized processes that did not respond to local context, language, record-keeping, or culture. This includes, for example, the tremendous expropriation of common lands from *acequia* communities and families – due, often, to a lack of paperwork legible to the state, through illiteracy in signing away titles and deeds to lands, and in illegal land-takings through the creation and imposition of debt-systems that had no bearing on resource-value realities (e.g. Montoya, 2002; Lane, 2024). In each of these instances, *paperwork*, *signatures*, and *legibility* to the state/colonial-structure played a role in widespread individual and communal dispossession. At a 'smaller' scale, similar processes continue to play out today through land sales, bail/bond operations, speculative real estate investments, proactive water rights acquisitions, disaster relief applications, and systemic de-education regarding citizen's rights. In lieu of this history, many (if not most) Taoseños are wary of paperwork and signatures: these items represent a colonial institutional structure which, thus far, has largely been used to disadvantage traditional communities.

Correspondingly, nearly each and every time I provided a copy of my consent form for an interview participant to sign, the atmosphere shifted. Sometimes it was palpable – changing, what I felt, was the entire remaining tone of the interview. Other times, the forms were brushed aside––noted, but left on the edge of the table, or later filed in the back-pocket of work jeans. In other instances, the form was signed, but not without questions as to what this obligated the interviewee to, and other-times, still, it was overtly denied. In very few instances was it ever readily filled out, and even in those rare occurrences, a moment of hesitation was felt: one elderly participant quietly kept the form aside for several weeks to review it, before signing it and mailing it back to me via paper-post. *This* was the weight of a signature. These experiences, although selfishly uncomfortable, also deepened my understanding of land-loss and coloniality: firsthand, I began to witness the ways in which different systems of knowledge interact, and recognized that even with the best of my ethical intentions, the worldview of my institution rubbed up against the worldview of many of my interviewees in a manner that did not produce a mutualistic outcome. Instead, it positioned me as an outsider coming to take and extract knowledge, rather than these 'forms' being seen a tool to protect the interviewee, as they were originally designed.

My discomfort erupted one day, during an interview with Clemencía Lucero: a *'pastora'*, a formidable shepherdess of indigenous Churro Sheep, and a commissioner on the *Acequia Madre del Cañon Sur* (Rio Fernando). After sitting down at her kitchen table to begin our discussion, I took out my 'paper forms' and the feedback I received from her went something akin to:

> *I don't give a shit what your University says, I am not signing any damn form. They need to understand that people in New Mexico do not want to sign things. I am happy to talk to you about your research, you can come here and we will share a cafecito or a margarita…you include this in your research, but there ain't no way I am signing a form….Will you get in trouble with them if I don't sign it? If so, you give me the number of your school, and I am happy to call them and explain. I will explain to them why we won't sign any forms.*

Blunt, but refreshing, our agreement allowed us to carry on for a three hour meeting, combining a recorded interview, transect walk, and field-survey, together. She never signed 'the damn form.'

Following this meeting, I still provided a printed consent form to each interview participant, but decided that they would make the choice themselves as to whether they wanted to sign the form or provide verbal consent: either way, a copy of the form was theirs for the keeping.

Trust and Centering Relationality as the Conversational Protocol

I met Estafinita, a prominent *acequia* artist, and a retired school-teacher for a cup of *chokola* one chilly afternoon. We had shared emails, then texts, back and forth. After finally agreeing on a place, and date, I entered the café with printed copies of my ethics form, research description, audio recorder, and consent sheet for her to sign. We sat down and began chatting, while waiting for the chocolate to arrive. Although friendly at first, I could feel the entire atmosphere shift as soon as the interview 'formally' began.

What began as a relational exercise soon transformed into an institutional process, both to her dismay and mine. We continued the two-hour interview, and concluded with a hug…but, I felt terrible afterwards. I felt I had relinquished my opportunity to meet this individual on 'human' terms, as what began as a normal and free-flowing conversation was soon transformed into something more-sterile and rigid —shaped, I felt, by the unspoken expectation that a 'research interview' should *produce* something, placing an unseen burden onto what might otherwise have been a natural meeting.

Following this, and thanks to the good-guidance of my supervisors, I began to take a more relational approach. On very few occasions after this stage did I conduct a single-interview with an interview participant. Instead, I developed a tiered and relational approach wherein I would reach out with the interview request, then meet with the individual on human-terms – often over a *cafecito*, in their garden, or out in the field – and spend time sharing conversation with one another in non-research terms. Following this, a more 'formal' interview would take place, where we would sit and record the conversation, using the semi-structured question format as the guiding baseline. Sometimes, this meant that I met with an interview participant three or four times while

we slowly engaged in the interview process. I found that this approach enabled me to center the relationality between us, first, and to develop trust as the central mechanism for our dialogue together. I was up-front and transparent about the intentions of my research from the initial stages of interview-request, and so, on occasion, our first meeting would also turn into a conversation that was recorded, however by and large these opportunities were simply moments to meet one another, and to share time exploring the joint-meaning we held for and with the *acequias*.

This transition enabled me to gather a deeper and more nuanced understanding of the *acequias*, than the initial curated or guarded response may have been. A component / unintended result of this approach was that I often was the recipient of contemporary life histories of many *acequieros*, who, over the course of several interviews, would share photos, land-logs, orchard records, and personal life histories spanning generations. This was not the initial intent of my research, but unveiled a depth of trust and understanding that greatly enriched my holistic and temporal understanding.

Thus, the interview process transformed over time from a static protocol into a more relational *nueva resolana*, and in doing so honored the relational epistemology that the thesis seeks to understand.

4.8 Women and Water *Pláticas*

4.8.1 ¡Que Vivan las Acequieras!

Historically, the front-facing façade of the *acequia* is highly patriarchal: the majority of all *mayordomos*, commissioners, and *acequia* leaders are men. Men have traditionally led visible field activities—irrigation, ditch construction, participation in *la limpia*—while women's roles have been positioned as backgrounded or supportive. This is not to suggest that women have been absent from *acequia* maintenance; indeed, women have maintained critical roles, including assuming primary responsibility for *acequias* during periods of war and economic outmigration when men were absent (Rodríguez, 2006). Rather, however, this visible gender difference signals the ways

in which the *acequia*'s social structure has been built around patriarchal norms of leadership and public authority. Today, however, an increasing number of women occupy outward-facing leadership positions within individual *acequias* as well as across regional *acequia* networks.

During the fieldwork process, I made a conscious effort to interview female *acequia* leaders, *mayordomas*, commissioners, and *parciantes*. This series of interviews took place across a variety of *acequias* – becoming its own process of sampling focused on women, rather than geography. The women I met with were from a variety of demographic backgrounds, but can be distilled largely into three categories:

First, several were young *acequia* commissioners, who came from established Taos families (both Taos Pueblo and *acequia* communities), and were increasingly taking on leadership roles in their family ditch-systems, or in properties that they themselves owned.

A second grouping was of decades-old 'newcomers' who were predominantly white, retiree-aged, Anglo women. This group of women had often been involved in their *acequias* for many decades, yet did not come from traditional Taos families. Often, this group of women (above retirement age), had moved to Taos in the late 60's or 70's as a part of a demographic influx to the region colloquially known as 'The Great Hippie Invasion.'

A third grouping is that of prodigal returnees: women (also often above retirement age), who returned to the Valley after periods of significant absence. Many of these women grew up within an *acequia* culture and context, but took on active roles along the *acequia* only after their return.

Lastly, small number of women – often artists and activists from the Chicano movement, built and established careers alongside the *acequias*. Parallel to this, a small grouping of young, Anglo women – who, like myself, grew up around the *acequia* context, have now taken on leadership roles. Concurrently, there is a growing population of newcomers within a fourth wave of movement to the area, often drawn to the region to engage in land-based subsistence and agriculture. Significant tensions exist between this last grouping of *acequia* members and traditional communities, as many newcomers are perceived to be economically advantaged over

the local community, and therefore able to afford land and water rights over those who would wish to return home, or buy their own property in their community of origin, but cannot do so due to economic reasons.

It is important to note that the two largest statewide and regional *acequia* associations (New Mexico *Acequia* Association and Taos Valley *Acequia* Association) are led by women. In addition, the New Mexico *Acequia* Commission is chaired by a woman, and within the legislative and electoral space, a significant portion of those leaders representing *acequia* issues are women. Thus, although the daily practice of the *acequia* is still significantly patriarchal, within alternative and larger spaces of organizing, women are shaping the agenda. Analysis of the role women play in *acequia* organizing – including what I deem to be a transition from resistance politics to politics of relationality – is discussed in Kamtam et al., 2025.

4.8.2 Plática Acequiera

The *acequia* community in New Mexico is tightly bound. The fluid-kinship borne through the *acequia* connects individual actors in a web of relations. Despite this, and although my introduction to many of the *acequia* women I interviewed and worked with was established through other female *acequieras*, a frequent conversation point that arose during our conversations was a desire to connect with other *acequia* women, more largely. In July of my fieldwork period, after nearly a year of conversations, myself and others decided to hold a '*Women and Water Plática*' (conversation), to facilitate greater connection, continuity, and conversation between women working in the *acequia* realm. The *plática* was an intimate space, held in the living room and patio of a young *acequia* commissioner. We brought food to share: *frijoles*, *arroz*, green *chile enchiladas*, *sandias*, *vino*, and *chapulines* (crickets). We shared stories and conversation, unearthing common ground in our collective yet unique life experiences. The eldest of the group was in her late 80s, the youngest was under five. We brought together women from Taos Pueblo, traditional *acequia* communities, Anglo women both born in Taos, and those who had made Taos their home. Our conversation flowed naturally, and centered on embodiment, emotionality, and the concept of *'cuerpo territorio'* – or, the ways in which not only is the body the first territory,

but also how the reality of the territory is experienced in the body – particularly for women and, in this case, mothers (Zaragocín and Caretta, 2021).

As a feminist methodology, *pláticas* are 'grounded spaces' that serve as a way to gather family, community, and cultural knowledge through the communication of thoughts, memories, ambiguities, and 'new interpretations' (Fierros and Bernal, 2016; Flores Carmona et al., 2019; Flores Carmona et al., 2021). Central to *plática* methodology is the recognition of all participants as co-constructors of knowledge, supporting each member to assess or theorize about their own lived experiences, together. This creates what Flores Carmona et al. (2018) describe as '*pláticas para desahogarse'* (translated literally to the 'conversational spaces to undrown')—better understood as spaces through which new 'solidarities and collectivities' are formed (Sultana, 2021).

The insights gleaned from the aforementioned conversations helped me to understand a more nuanced reality of the *acequias*, as well as to employ a focus on emotion and embodiment within the research space. These conversations reflected a focus on relationality, and, importantly, shifted a central focus of my research away from 'resistance' to looking more towards worldmaking and the sustenance of care. Several women reflected that this was the first time such a dedicated space had been created for *acequia* women to come together and share across demographics, and that there was a desire to continue such conversations.

Academically, the conversation helped spur the development of a women's research circle, rooted in reflexivity, accountability, and reciprocity within land-and-water based research in New Mexico. Today, we are generating conversation around a feminist moral economy of the future, rooted in our individual but connect research projects on land, water, and food in New Mexico.



Figure 4.4: Women and Water Plática, Ranchos de Taos, 2023. Acequia irrigated field in the background. (Source: Author)

4.9 On Fieldwork Practice: Laboring in the Campo at Home

4.9.1 In Meetings and in *Limpias*: Participation as Observation

Much of my fieldwork practice could be classified under what is generally understood as 'participant observation' – that is, the immersion of myself into the daily lives, rituals, practices, and routines of my fellow *acequia* community members – recognizing, as it were, that participant observation is an 'engaged, interactive, and political enterprise' (Lleweyn, 2007).

A core component of this practice involved attending official community events and meetings, particularly those related to land use decisions affecting the *acequias* (including, for instance, development expansion at Taos Ski Valley, or the Talpa Trails project. See Empirical Chapter 3 for more discussion). This also included attending smaller meetings by invitation of *acequia* officials – sometimes bending my role to encompass an observer or documentarian – and being cognizant of my part in shaping, and being shaped by, varying power relations.

A significant dimension of my role at community meetings also involved serving as a scribe—initially at the request of Filemon Martinez for a Taipa Trails Forest Service meeting record, and subsequently across various *acequia* governance contexts. While I took meticulous notes for my fieldwork diary, it began to be noted that the 'official' record of community comment for one particular land-use clash was falling extremely short (see the final empirical chapter). Utilizing my meeting diaries, I was able to provide an alternative record of participant concern, and submit this to the U.S. Forest Service on behalf of the community.

In addition to the work described above, I attended as many internal *acequia* meetings as possible. This included attending *repartos* (water sharing divisions/allocations), *acequia* commission meetings, *acequia* annual meetings, and *acequia* elections. Within these spaces, I was privileged to witness the diversity of *acequia* governance practice: both internally (how water sharing apportionment occurs, for instance), as well as how *acequias* respond to the 'external' – that is, how *acequias* respond to laws and regulations set forward by the state. This could include, for instance, the regulation that it is 'illegal' to hold a conversation about *acequia* matters between two or more commissioners without notifying the public of a special commissioner's meeting. While, in practice, this is supposed to lend itself to good governance and transparency, the reality is that this regulation is incongruous with the daily rhythm of the *acequia*.

4.9.2 "Field-Work" — Or, Irrigating Fields of Alfalfa Under the Full Moon

Scholars of community-managed water systems have increasingly recognized that embodied participation in irrigation/water/labor activities constitutes a foundational prerequisite for ethical and effective ethnographic research. As noted by Armijos and Walnycki (2014), in communities

where collective labor functions as a "precondition for accessing water services," legitimacy must be earned through physical contribution to communal work (p. 44).

Much of my 'fieldwork' research involved doing just that: working in the field, and laboring alongside fellow *acequieros*. This approach served interconnected purposes. On the one hand, it enabled me to gain firsthand knowledge into the practice of the *acequia*, and provided me with an ethnographic lens through which to understand and relate to the water systems. Perhaps more importantly, however, it enabled me to engage with reciprocity: participating in *acequia* activities, gaining knowledge along the way, and contributing my time and resources wherever I could. Prior to commencing my fieldwork, a primary and recurrent complaint I would hear from *acequieros* about the numerous research projects occurring in their communities, was the lack of time available for them to set aside from their busy irrigation seasons to participate in such meetings, and, correspondingly, frustration at the lack of compensation given in return. Although I did not offer monetary compensation for interviews, I felt that one way I could offer contribution was to participate in *acequia* activities and lend my physical labor to any and all endeavors I could find. Realistically, at the end of the day, I am sure that I learned much more from these experiences than my meager labor contributions equated to – but, I do know that it built a foundation of goodwill and trust between myself and my fellow community members, and enabled me to go about gaining 'the right' to do research in a meaningful way (Armijos and Walnycki, 2014). Lastly, such research practice contributed to the development of my own 'water literacy' – recognizing that irrigation is a "complex puzzle that unquestionably demands research" (Lankford, 2024), and that such research practice enabled me to go about 'co-puzzling' with my fellow irrigators and *acequieros* on very mutualistic terms.



Figure 4.5: Dusk –to– Midnight irrigation shift with a hired crew. Acequia Madre del Cañon Sur, Rio Fernando. Taos, 2023. (Source: Author)

4.9.3 Participating in the Seasons of the *Acequia*

My participation in fieldwork followed the seasonal rhythms of the *acequia*, extending across the full annual cycle of irrigation practice. In late winter and early spring, I attended *limpias* (the communal cleaning of the ditch) across multiple *acequia* systems, sometimes participating in several *limpias* over a single weekend, when weather conditions aligned. I worked alongside individual *acequieros* to clean their personal *linderos*—the smaller lateral ditches that carry water from the main *acequia* to individual fields – spending hours chatting in the cool spring sun. Spring preparation also involved controlled burns of fields and debris—connecting water management to broader traditions of cultural fire in the region (see Chapter Seven), and teaching me how to engage in these practices. Through the summer irrigation season, I participated in the daily and weekly labor of water distribution and use: attending *repartos*, walking ditches, adjusting headgates, and observing the intricate work of small scale, flood irrigation. This practice included, for instance, improving upon my own irrigation technique, as well as adapting to the continual cycle of water use through the season. On one occasion, I worked with a traveling ditch crew, irrigating fields by moonlight continuously throughout the night. In autumn, I joined in harvest activities – bailing hay and bucking bales – and through winter I attended commission meetings, annual gatherings, and elections that constitute the social life of the *acequia* during its 'dormant' months.

Through these practices, I gained detailed knowledge of irrigation practices, field and crop types, life histories, *acequia* governance patterns, and systems of land use and agricultural change. I also learned more about relationality between people and place, and my own embodied *acequia* experience.



Cuento: Repairing an Acequia as a Transect Walk

Cleaning, re-digging, or repairing a *venita* constitutes its own form of transect walk: one moves slowly along the top of the field, checking for leaks, re-excavating sections that have grown shallow, clearing leaves and grass, ensuring that the slope allows for proper water flow without flooding, and, in doing so, preparing rows for the crops to come.

Through this practice, one learns that both main *acequias* and lateral *venitas* must follow precise gradients to allow sufficient water flow without causing erosion or flooding, and achieving this requires patience, physical endurance, and careful attention to the land's contours. Too much slope will erode the channel network, while too little slope will hinder the water's flow (Rosenberg et al., 2020)

Knowing where to place a *venita* represents a form of ecological knowledge that cannot be easily abstracted from practice. It demands intimate familiarity with soil composition, land contours, seasonal weather patterns, and the dynamics of water flow. It also requires social knowledge: knowing your neighbors and their field-habits, whether they have a propensity to "divert" water in the middle of the night, or whether they might have a basement filled with art that could be flooded, should you accidentally fall asleep while your water runs. Thus, a great many calculations go into this seemingly simple act of ditch-digging—hydrological and relational alike.

Such practices—of cleaning the ditch, of repairing a *venita*, of learning to irrigate, and of attending *repartos*—deeply shaped the way in which I experienced and embodied my fieldwork research, and grounded my understanding of *acequia* governance in the material rhythms of water, soil, and collective labor.

Such practices also reminded me of the ways in which narratives, knowledges, and embodied experiences exist in relationship to specific ecological contexts (Harcourt, 2026), and, accordingly, how such embedded experiences open space for other forms of worlding, and different 'arts of noticing' (Tsing, 2015).

My positioning within spaces of *acequia* labor, such as the aforementioned 'transect walk,' also serve to reinforce my own embedded and complex subjectivities: including the contradictions between expert, learner, researcher, novice, and knowledge co-producer. Reconciling these

supposed ‘differences’ required, for me, a great deal of humor, honesty, and transparency: as well as ‘reflexivity, reciprocity, and interactive learning’ becoming part of the “method of finding [a] feminist response” to institutionally produced hierarchies, themselves (Harcourt, 2026, p. 193). In doing so, supposed contradictions lost their sharp edges, and instead melted into a more fluid process of co-becoming with and through the research process itself.



4.10 Archival and Document Research

Although archival research did not constitute a primary method of data collection, document sources did provide context and historical depth to my ethnographic work. I accessed materials through organizational archives—primarily the Taos Valley *Acequia* Association and the New Mexico *Acequia* Association—as well as through documents that community members shared from their personal and family records. These materials spanned both historic and contemporary periods, and included a range of archives: historical hydrographic surveys, orchard and agricultural surveys, older governance records, contemporary *acequia* bylaws, legislative documents, funding requests for *acequia* capital improvements, Office of the State Engineer records pertaining to water rights and administration, and letters of support and protest related to ongoing land use controversies, including the Talpa Trails project and proposed expansion at Taos Ski Valley (see Chapter Seven). Several participants also shared land deeds, maps, and family records that traced land tenure and *acequia* membership across generations.

Engaging with both historic and contemporary documents enabled me to trace continuities and changes within the *acequias*, over time. This included engaging with the Abeyta Settlement – or, the Taos water rights adjudication process. Several community members who had participated in the process shared their documentation, including hundreds of pages of legal text, testimony, and

supporting materials. By reading the Settlement, and supplementary materials, my understanding of the Settlement's impact on the region deepened: not only of the legal architecture that now governs (adjudicated) water sharing in the Taos Valley, but also of the extraordinary time, labor, and emotional toll that community members dedicated to the process. I also gained firsthand knowledge of the complex legalese that many *acequia* members are required to navigate in order to procure funding and/or protect their water rights.

4.11 River Basin Game

4.11.1 Two Trials and a Taos Adaptation

The River Basin Game (RBG), also known as the marbles game, is a participatory simulation tool developed by Professor Bruce Lankford in the early 2000s (Lankford et al., 2004). The game has been utilized across a variety of water-scarcity contexts to facilitate hands-on engagement with common-pool resource dilemmas, wherein participants first compete and then cooperate over water. It positions irrigators and watershed stakeholders as knowledgeable experimenters and governance experts, rather than passive recipients of external expertise. As part of my fieldwork, I collaborated with the Taos Valley *Acequia* Association and the Taos Soil and Water Conservation District to adapt the game for the *acequia* context, trialing it twice in 2023 with *acequia* leaders and community members.

The adaptation process proved revealing in unexpected ways. In many contexts where the RBG has been deployed, the competitive phase of the game—in which participants vie for limited water resources—generates tension and strategic behavior that the subsequent cooperative phase must then work to overcome. In Taos, however, the competitive framing did not resonate; collaboration was already the norm. This reflected a normative orientation toward mutualism and collective stewardship, challenging the game's assumptions and revealing how deeply collaborative logics are embedded in local water governance.

What emerged from this process was a tool that now belongs to the community. The adapted game has become an educational resource that TVAA can bring into school systems and public settings, introducing new generations and broader audiences to the principles of *acequia* water sharing. It

has subsequently been used in fire and land management workshops, public community meetings, and watershed management facilitation processes.



Figure 4.6: TVAA Board Members Trial the Water Sharing Game (2023) (Source: Author)

4.12 Data Analysis, Transcription, and Participant Identity

4.12.1 Thematic Analysis and Grounded Practice

Data analysis followed an iterative, grounded approach. All audio recordings were transcribed, with Spanish-language portions translated by the author with the assistance of native-Spanish speakers and/or Google Translate. Following the transcription, I used a combination of hand-coding and NVivo software to conduct thematic analysis across interview transcripts. Field notes and archival documents were coded by hand. Initial open coding helped me to generate a thematic grounded theory map—developed physically using sticky notes and pasted paper—which was refined through iterative review into the thematic categories presented in the empirical chapters. Triangulation and synthetization of data helped to identify convergent patterns and contradictions within the material. Of note, participant names have been changed to pseudonyms within this thesis in order to respect their privacy and identity. *Acequia*, stream, and place names remain the same.

Following in line with a feminist ethics of care that engages with ideas of relational, contextual, and accountable meaning making, it should be noted that the interpretation of data relied not solely on qualitative standards, but also on an intuitive, emotional, and embodied analytical thought process. This involved repeatedly returning to the context of the research space, and asking whether the results of the data interpretation would resonate with *acequia* communities, themselves. Thus, a measure of the authenticity of my research findings became the degree to which these findings would be seen as representative of my *acequia* co-collaborators lived experiences and corresponding hydrosocial systems — albeit imbued with my own theoretical perspectives. Rather than forcing local narratives into universalized boxes, the findings seek to acknowledge the messy, situated, and complex assemblages of everyday experiences, through processes of meaning-making, and co-developments of knowledge that attend to the unique realities of the research space. Thus, knowledge is understood as having been generated through relationships with people and place, rather than being positioned as 'discovered' through an external process of observation.

All interpretations of data are generated through a situated lens, informed by my own worldviews, understandings, and emotional/embodied experiences. Thus, while I endeavored to repeatedly engage in a practice of reflexivity regarding the interpretation and making of meaning of data, I recognize that these interpretations — as all others — are embedded within my own situated perspectives, as well as those with whom I sought to co-create.

4.13 A Note on the Format of This Thesis

Prior to embarking on the empirical chapters, I wish to make a brief note on the stylistic choices used throughout this thesis. First, as the reader will note, the thesis is written in a narrative format. Throughout the thesis, there are stories and memories embedded within the text. These sometimes function as an 'aside' – a contextual parenthetical, if you will, however in many cases they are also central to describing the overarching narrative and story that the thesis seeks to tell. Certain

paragraphs, indicated by the heading "*cuento*" demarcate a story: *cuento*, means 'tale' in Spanish, and can be translated to the same in English. *Cuentos* are also delineated with an alfalfa symbol – a reminder that the purpose of these stories is to root the reader, and the thesis, in the lived and embodied experience of the New Mexican *acequias*. The first empirical chapter, Chapter Five, is particularly heavy in its narrative description – which includes the use of images, stories, and memories to relay the relational practices of the *acequias*. This is a deliberate choice, in order to ground and root the empirical material in the *acequia* reality.

In keeping with a feminist, decolonial, and relational commitment, this approach to writing is also a methodological choice to maintain and enact the relational and place-based epistemology that this thesis explores. As water flows through the *acequias*, I hope these words do too.

While traditional academic writing emphasizes neutrality, 'objectivity', and a relative invisibility of the author, this thesis (for better or for worse) turns that ideal on its head. I write these stories as a commitment not to dilute the real-time experience into an analyzed presentation, but rather to allow the context to take a front and central space. It is my way of bringing the reader into the fields, into the ditches, into the *acequia limpias*, and into the icy-chill of snowmelt surrounding one's irrigation boots. I owe the *acequias* a story that is honest, that is empirical, and that is grounded in reality: the *acequias*, and their people, have given me so much, including a profound generosity of time, knowledge, and story-telling throughout the research period. These narrative styles, and these *cuentos*, are my way of relaying the stories, and the moments, as they were told to and experienced by me. I hope you will join me in them.



Chapter 5. Relationality and Water Governance Practices of the *Acequias* of Northern New Mexico

5.1 Introduction

5.1.1 Introduction to the Chapter

As a component of the overarching inquiry, this empirical chapter is centered on exploring the practices of *acequia* communities, as they relate to water management, water sharing, and relationality. In doing so, the chapter is divided into three parts. The first is an empirical explanation of *acequia* water sharing and governance systems. This includes a basic introduction to different *acequia* actors such as the '*mayordomo*' (ditch boss), or the '*parciante*' (water rights holder). The section also includes a broad overview of general *acequia* governance and water sharing structures, as they exist today. Discussions that pertain to the role of the State are discussed in the subsequent chapter. The same disclaimer applies for discussions of autonomy, territory, and an *acequia* political ontology, which will be elaborated upon in more detail later in the thesis.

The second portion of the chapter is centered on the relational practices of *acequia* communities, to maintain both the physical and cultural infrastructure of *acequia* systems. Such practices include *la limpia* (the annual cleaning of the *acequia*), celebrations of San Ysidro (patron saint of farmers), and even the act of irrigation itself. The nature of this section is that of a narrative description, drawing on ethnographic and empirical observations, the author's participation in *acequia* activities, as well as marginal historic context that attests to *acequia* cultural revitalization in New Mexico.

The intent of this section is to highlight the role of relational values (such as respect, reciprocity, and responsibility towards place) in constituting the *acequia* itself, as a living, hydrosocial space that is actively made and remade over space and time. Following Escobar (2019) I contend that

such relational practices inform *acequiero*'s ability to '*sentipensar con la tierra'* (or, think-feel with the earth).

Third, the chapter includes a brief case study on internal contestations around *acequia* water sharing and governance, and the processes of occurrence that emerge when practices of water sharing break down.

The topics covered in this chapter could constitute entire theses unto themselves — indeed, many manuscripts have already been devoted to the subject.[18] Thus, rather than trying to reinvent or establish a 'new' view of "the *acequia*," this chapter seeks to instead provide the reader with a grounded introduction to these fascinating, relational, and complex hydrosocial systems, from which to base the following analysis and discussion throughout the thesis.

5.2 *Acequia* Water Sharing and Governance

As introduced within the thesis, *acequias* are community governed irrigation systems that are both physical networks of water provision, and living, sociopolitical institutions. The term *acequia* refers to both the gravity-fed irrigation canal as well as the community of farmers and irrigators around it. While *acequias* primarily provide water for irrigation and—less frequently—for household use, they concomitantly serve a key role in maintaining ecological health and community relations. Thus, *acequias* as autonomous, communally governed irrigation systems, serve as agents of water distribution, of resource governance, and of community and cultural cohesion.

5.2.1 *Acequia* Governance

Acequias can be understood as 'democratic' institutions, wherein the governing bodies and members of the *acequia* are determined through an electoral process. A *Mayordomo*, or ditch boss,

[18] For fuller accounts of *acequia* ritual, governance, culture, and practice, please see: Rivera, 1998; Rodríguez, 2006; and Arellano, 2014.

is elected by the *acequia parciantes* (*acequia* members, water rights holders) and is responsible for overseeing most daily aspects of *acequia* operations. These include, but are not limited to, the distribution, allocation, and apportionment of water, the physical infrastructural maintenance of the system itself, the mediation of community conflict over water rights, and, increasingly, applying for grant funding to support *acequia* operations and infrastructural repair, representing the *acequia* in legal matters (with the state, or others), negotiating water bylaws, and discussing water sharing arrangements with other community water systems (be it other *acequias*, tribal water resource departments, mutual domestics, or municipalities).

Supporting the *Mayordomo* are two-to-three *comisionados*, or commissioners, who function as the secretary, treasurer, and – if human capital allows – an *acequia* chair or president. Duties may include collecting ditch fees, ensuring compliance with the Office of the State Engineer, enforcing property liens for non-dues paying members, and/or representing the *acequia* in adjudication proceedings or implementation plans. The commissioners are also elected by the *parciantes* of the *acequia* and support the general governance of the *acequia* as a whole.

Term limits and election regularity is determined according to each *acequia*'s bylaws, but commonly elections are held every one-to-two years. Despite the relative frequency of election, it is also common for elected positions to be held by the same individuals for many consecutive terms. As one *acequiero* described,

> *"you know sometimes the commissioners don't get along with the mayordomo, or the mayordomo don't get along with the commissioners, but they're elected positions…so you can't just get rid of 'em because you don't like them, you gotta wait two years and figure out how to work together for at least two years. But that's the process…and it was the first form of democracy in the United States because everyone got to vote on who was in charge of the water. And we still live by that rule here…" – Parciante of the Acequia Madre del Rio Chiquito, November, 2022*

(Most) *acequia* elections operate under a one-person-one-vote rule (see deLara, 2000, for an exception to this rule). This means that regardless of acreage, water rights holdings, or seniority on the ditch, each *parciante* is afforded an equal electoral vote. In addition, any member can run for an elected position – the criteria being that the individual must be in good standing with the ditch (does not carry overdue fees, etc), be a *parciante* of the *acequia* (be a water rights holder, and therefore member of the *acequia*), and – commonly – be over the age of 18. While the *comisionado* structure provides a legally recognized decision-making base for the *acequia*, major decisions affecting the *acequia* are typically voted on at community meetings –- and/or by a paper mail-in ballot. Many of the more legalistic aspects of the *mayordomo* and commissioner's roles are relatively new introductions, dictated by the Office of the State Engineer.

As Rivera (1998) writes, "as is still the case today in most villages of the upper Rio Grande region, these ditch associations were the only form of local government in the dispersed agricultural *jurisdicciones* (jurisdictions). Thus, the powers delegated by custom and circumstance to the early *mayordomos* likely were very broad, particularly in the absence of a detailed role description or a formal set of ditch rules and procedures for *mayordomos*" (Rivera, 1998, p. 56).

This legacy is noticeable today: while today's *mayordomos* perhaps have fewer community-wide responsibilities than those of times prior, they still often serve as far more than ditch-managers. *Mayordomos* are frequently responsible for resolving community disputes, for modeling behavior, for distributing water in times of scarcity and plenty alike – and, increasingly, in representing their *acequias* in legal battles to maintain their water rights—processes that have often taken many decades to clear (e.g. Pojoaque/Tesuque's Aamodt Settlement, 1966-2013; Taos Valley's Abeyta Settlement, 1989-2016 – implementation ongoing). Thus, for many *mayordomos*, the commitment to the position is a commitment for life: regardless of their formal elected standing.

Many *acequieros* recount the *mayordomos* of their youth as powerful, booming figures — equally as firm as they were wise. Due to the significance of the role, it is not uncommon for *mayordomos* to be respected elders in the community, and to have learned the trade from those before them.

As Rodríguez, 2006, writes,

"a good *mayordomo* must know and uphold the customary repartos on his ditches, as well as on the river as a whole. He must be fair and evenhanded, possess intimate knowledge of local topography and hydraulics, and be able to deliver the water despite adversity or conflict. He must command respect. The authoritarian nature of the position is counterbalanced by the fact that *parciantes* in good standing on a ditch elect the *mayordomo* and the commissioners. The *mayordomo* is both a leader and an equal among peers. *Mayordomos* are still respected, and the position carries status along with responsibility. They exert less power, however, and are less feared than in the old days when nearly everyone farmed for a living. State statute has spread the *mayordomo*'s former power among the commissioners…The variety of *mayordomos* is as diverse as the ditches themselves. Some are adept and fair; others are inept or self-serving. *Acequias* and their *mayordomos* have always had to adapt to local conditions shaped by larger forces. These days, officers are as preoccupied with defending their *acequia* rights in court as with dividing the water or maintaining their ditch" (p. 8)

A Note on Gender

Noting the use of 'he' in the paragraph above, as well as the masculine ending of '*mayordomo*', it is worth stating that during the fieldwork period, it was not uncommon for me to communicate primarily with men who held elected *acequia* positions — what Dr. Sylvia Rodríguez refers to as the 'hydropatriarchy.' Although I actively sought out conversation with female *acequieras*, *mayordomas*, and *comisionadas* – these conversations happened through active intention, rather than by default. Traditionally, *acequia* governance and labor has remained a male-facing domain. Periods of disruption to this norm have historically occurred (e.g. when men have been absent from the community through military conscription), and today more women are found holding elected positions within the *acequia*, irrigating their own fields, or asking for water during the weekly *reparto*, than ever before. Thus, while "the patriarchal face of *acequia* culture is pervasive and undeniable" (Rodríguez, 2006, p. 8), demographic change within *acequia* communities at large has begun to contribute to a visible shift, even if not-yet widely recognized:

During one *acequia* election that I was present to observe, a woman was nominated to be the *mayordoma*. In response, she herself exclaimed "is a woman even allowed to be a *mayordomo*?" Other women with whom I spoke—mostly decades-old 'newcomers' to the *acequias*—recalled their early experiences of asking for water and being told to return with their husbands, instead. A young female *parciante* I interviewed recounted her own experience of revitalizing her family's *acequia*:

"then there's also sometimes, like, you know, the sexism that exists. Like, if anytime my brother and me are together on a project, people defer to him, assuming he's the one in charge, whereas in 2019, I was the one in charge" – Parciante of the Acequia de Atalaya (Rio Hondo), February, 2023

Thus, while nearly all male *acequieros* I interviewed spoke openly about welcoming more women into the commission, an enduring gender norm is discerned.

In addition to their voting responsibilities, *parciantes* of an *acequia* are expected to participate in communal labor and upkeep of the *acequia*, and often pay a nominal fee towards *acequia* maintenance and/or a *mayordomo* stipend (e.g. $5.00 per household).

5.2.2 *Acequia* Water Rights

Acequia water rights are traditionally allocated based on land ownership and historic use. While the imposition of the U.S. legal system has codified water rights through processes of adjudication, *acequia* water rights are traditionally tied to the land, rather than the property-holding individual themselves. This means that, unlike modern water rights systems, *acequia* water rights generally cannot be severed from the land, although contemporary times see transformations and contestations of this rule. While water rights are contemporarily measured in acre-feet, *acequia* water distribution generally operates via time-based allocation (See Figure 5.1). This means that time is used to measure water distribution, rather than volume. Thus, each *parciante* receives a certain number of water rights 'hours,' which more-or-less correspond with their related irrigable acreage. Moreover, a time-based allocation means that although on paper *parciantes* are entitled to volumetric standards of water (e.g. 3 acre feet)[19], or perhaps more traditionally, a measure of *surcos* (i.e. Perramond, 2024), in practice, the volume of water one receives as a *parciante* varies greatly throughout the seasons. For example, during peak spring runoff, a *parciante* may receive

[19] Acre-feet (per year) is the standard unit of measurement for water rights within the western United States. This corresponds, literally, to the amount of water it would take to cover one acre of land with one foot of water (in depth). Roughly, it equates to 325,851 gallons or 43,560 cubic feet of water.

double, or even triple, the volume of water in the time-period of irrigation they are allocated per week, then they will during the late summer or early fall season. This also means that there is more flexibility in water distribution itself: in times of peak spring runoff, for example, excess water may be sent down the ditch to keep the streambed wet, as individual laterals are already delivering their maximum capacity of water, based on the physical capacity of the ditch.

Summer Water Schedule 2024 El Rito de La Lama Acequia
April 1st through November 1st

DAY	TIME	HOURS
[redacted] Tues**day**	1:55am -	
Thurs**day**	- 7:05am	53hrs 10’
	7:05am - 7:25am	20’
	7:25am - 7:55am	30’
	7:55am - 8:25am	30’
	8:25am - 9:15am	50’
	9:15am - 9:30am	15’
	9:30am - 9:45am	15’
	9:45am - 10:30am	45’
	10:30am - 11:15am	45’
	11:15am - 12:15pm	1hr
	12:15pm - 12:45pm	30’
	12:45pm - 1:45pm	1hr
	1:45pm - 2:28pm	43’
	2:28pm - 2:45pm	17’
	2:45pm - 4:45pm	2hr
	4:45pm- 6:45pm	2hr
	6:45pm - 8:45pm	2hrs
	8:45pm -10:45pm	2hrs
	10:45pm -	
Friday	-1:45am	3hrs
	1:45am - 2:33am	48’
	2:33am - 3:27am	54’
	3:27am - 6:39am	3hrs 12’
[redacted]	6:39am - 8:39am	2hrs
	8:39am -10:46am	2hrs 07’
	10:46am -11:49am	1hr 03’
Friday		
[redacted]	11:49am - 6:34pm	6hrs 45’
	6:34pm - 7:49pm	1hr 15’

Figure 5.1: Water Schedule – Summer 2024 (El Rito de la Lama Acequia – author’s personal acequia). Note: this particular acequia follows a stagnant time structure, due to household dependency on water hours. Most other acequias follow a more flexible structure, wherein the water-schedule is pre-determined on a week-by-week basis, rather than for the full season. It can

also be noted that one primary landholder receives the majority of water on this acequia, due to its unique configuration. Parciante names redacted. (Source: El Rito de la Lama Acequia Association, Author)

Such systems of time-based water apportionment, rather than quantity-based measurements, stand in contrast to static volumetric delivery requirements modeled throughout much of the U.S. West (see Chapter Six). I contend that the time-based nature of the *acequia* delivery system helps to foster and sustain relationality, particularly in a water-scarce context where conflict, rather than cooperation, appears to be the static-delivery norm. The delivery of water via a time-based apportionment system requires, amongst other relation acts, negotiation between users in order to achieve fair distribution; discretion and intimate system familiarity on part of the *mayordomo* and commissioners regarding water delivery sequencing; ongoing responsiveness to changing conditions of weather and water availability, as well as a deep attunement to water's rhythm and timing, by both water-users and decision-makers, themselves.

Water, in this sense, is not abstracted, nor is its flow dictated by the human schedule. Rather, distribution (and human scheduling) adapts to water's flow and timing. Examples of this can be derived from those *parciantes* who receive water from 2:33am-3:37am; or, from the frequent expletive that accompanies the sudden realization that one must go 'change the water' in the middle of the night. Irrigating for hours under a full moon, negotiating with one's neighbor to see if they will open your headgate while you are at work, delivering water to a field next-door, or hosting a seed-planting party on a Saturday morning, because by that afternoon the water will have arrived, are all activities made possible through a time-based delivery system that is impervious to the demands of a digital calendar. Such activities become choreographies of relationality, through the establishment of a deep-time awareness, as well as a respect for the agency and animism of water, itself. These refinements also serve to cultivate attunement to changing seasonal and climatic conditions: processes of reading and relating to the landscape that may not be as visible through mechanized systems of water delivery, alone. This does not negate the need for adaptation to a dramatically changing hydroscape, however it does underscore the social role of the *acequia*, in producing relationality.

5.2.3 Water Sharing

In addition to the governance mechanisms outlined above, one of the defining features of *acequia* water governance is the principle of *repartimiento de agua*, or water-sharing. In literal terms, this concept refers to the equitable apportionment of material water resources between *parciantes* on an *acequia* — a principle of resource management that is particularly salient in times of scarcity. In a more subtle manner, however, this concept also refers to the relational manner of sharing in governance and decision-making around water resources, as well as the material realities of water itself. As one *acequiero* recounted,

> *"when we're sharing, we're not only sharing water, we're sharing space. We're sharing ideas, culture, land, air…what the mountains are about" — Commissioner of the New Mexico Acequia Commission, November, 2022*

Such an account of water sharing frames the process as relational, rather than merely distributional, emphasizing both the material and ontological foundations of the custom, as well as its role in developing and continuing *acequia* logics, enactments, and ethos of *querencia*.

The custom of water sharing, while posited to originate from the Islamic Right of Thirst (Rodríguez, 2006; Arellano, 2014)[20], has been refined throughout the centuries to accommodate conditions of both abundance and drought, as well as the distinct hydrocosmologies of indigenous (Tiwa/Tewa/Keres) and Hispano *acequia* users (Rodríguez, 2006).

Within *acequia* systems, water-sharing is based on principles of equity, proportion, and need, and is divided by time (Rivera, 1998; Rodríguez, 2006). In principle, this means that water is shared evenly between users based on the aforementioned considerations, down to the very last drop. In practice, this also means that water sharing negotiations are fertile grounds for unveiling contestations, relations of power, cooperation, and claims over identity and corresponding legitimacies of water resource use.

[20] The Islamic Right of Thirst dictates that all living creatures have a right to water, while the Islamic Right of Irrigation gives all users the right to irrigate their crops (Rodríguez, 2006).

Water-sharing occurs at many different scales, including between water users on the same *acequia*, between different *acequias* on the same stream system, and—in the case of Taos—between indigenous and non-indigenous users along interweaving river systems and across adjudicated jurisdictional boundaries.

> *Repartimiento de agua is how community acequia systems operate in times of water scarcity. Custom originally arose out of conflict and the ongoing elastic process of negotiation and reconciliation itself, of meeting year after year to divide the water according to agreements forged in crisis long ago. Acequieros believe that water scarcity should be shared equitably among irrigators with decisions made locally about distribution. This is in contrast to the concept of priority calls which can allocate all available water to the most senior user.*
>
> *(Rodríguez for the New Mexico Acequia Association, 2016).*

As a part of the *repartimiento de agua (*or, colloquially, the *reparto*), water is allocated to individual *parciantes* via a rotational schedule. The nature of the *reparto* varies per *acequia*: for some, the water schedule is set early in the year, and maintained throughout the irrigation season (see prior figure). For others, the *reparto* is a weekly ritual, wherein those *parciantes* in need of water are required to attend in person and ask the *mayordomo* and/or *comisionados* for water allocations, face-to-face, prior to the week's distribution being set.



Cuento: Rio Chiquito Reparto

I recall one *reparto* that I attended for the *Acequia Madre del Rio Chiquito*, sometime in July of 2023. It was a Tuesday morning, and the *reparto* was scheduled to begin at 7am. I arrived there quickly, perhaps by 7:03am, and was surprised to find that the *reparto* was already well underway. Accordingly, most of the water had already been assigned. Pickup trucks filled the community center parking lot, and a group of men (with one woman present) had formed a circle to discuss their needs and shares. The *Mayordomo* leaned over the back of a truck, reading and ordering the names that had been written in pencil on a piece of lined paper by those asking for water – a newer rendition of the '*papelitos*,' or customary small slips of paper with an individual's water time written on it, that one would carry around as proof of legitimate water use—a useful tool in avoiding water miscommunications and conflicts (Rivera, 1998). Everyone who was in need of water that week had come to put their name on the list; accommodations were made for those who could not attend but who had sent word that they would need the water, either through prior communication with the *Mayordomo*, or through a proxy. Once the list was filled, the *Mayordomo* began to create the schedule: *Jose, Carlitos, Maria, Dennis, Juan Pablo, George, Jeremiah,* and so on. The *Mayordomo* knew everyone's location on the ditch by heart. Understanding the weekly requests of the *parciantes* enabled him to then craft a schedule that would be proportional, geographically ordered, and most efficient.

This particular *acequia* had been trialing a new method of water scheduling to address increasing drought conditions and water scarcity. Under the new method, the water distribution was split into two sections. The first (uppermost) section ran from the mouth of the Canyon to the half-way point of the ditch, known as the *Morada*. The second (lower) section ran from the *Morada* as far down as the water could reach. Some years this meant the water crossed the highway separating Talpa from Taos; other years, it barely reached the road (See Figure 5.2).

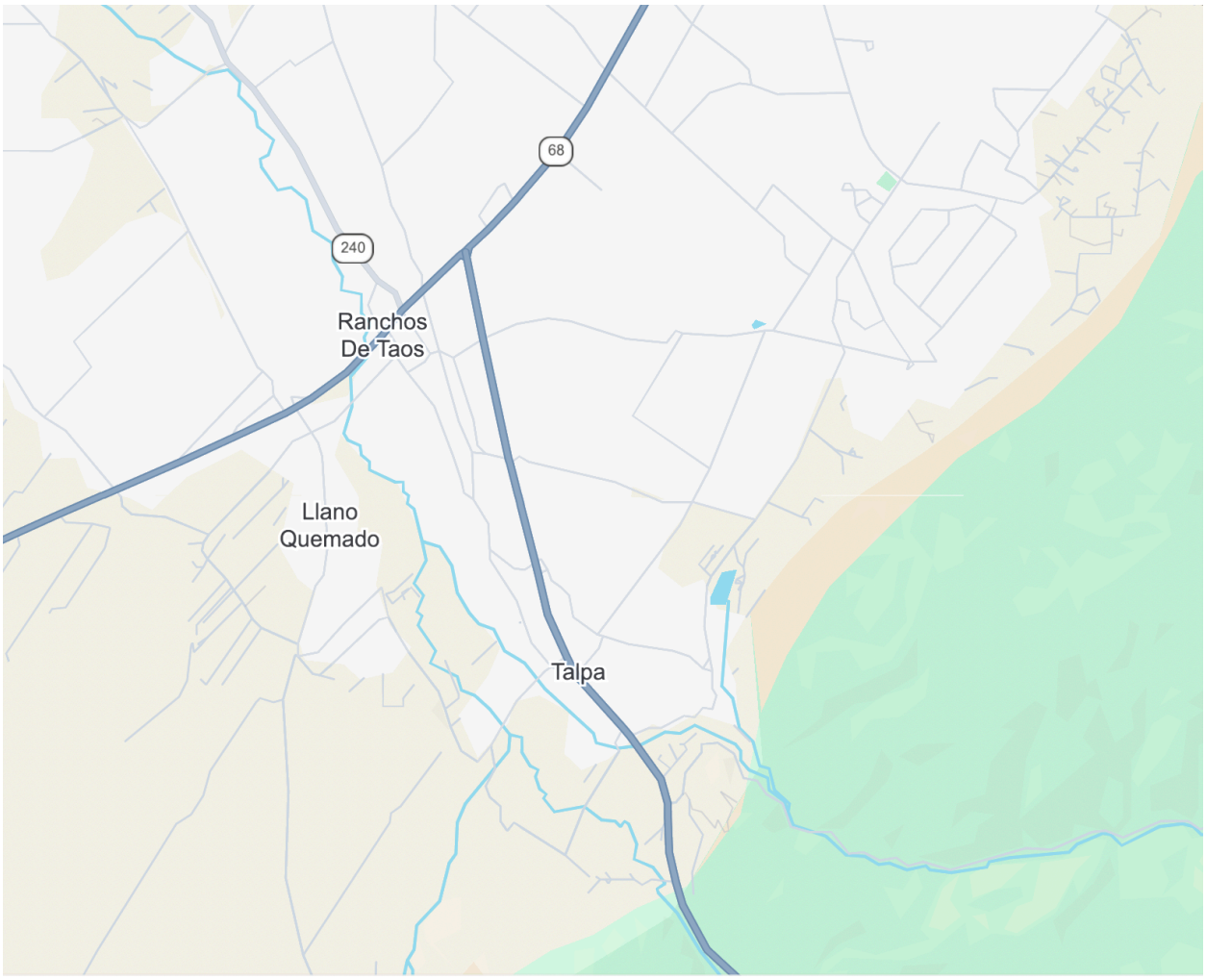


Figure 5.2: Highways of Talpa and Taos; water historically runs past HW68, however in arid years, water does not cross this road. (Source: Google Earth; Author)

In addition to dividing the water into two sections, the *acequia* had also decided to distribute water from the bottom-to-top. This meant that the bottom-most user would receive water first, and water would then sequentially be allocated in geographic order to *parciantes* upstream – upending traditional inequalities between top-end and tail-end users.

Each week, the section of the *acequia* receiving water would alternate. For instance: Week 1, water would be distributed from the Canyon to the *Morada*; Week 2, the *Morada* to the end of the ditch. This transformation in the *acequia*'s allocation method was an adaptive mechanism to reduce the amount of conveyance loss (or, the water lost while 'wetting the ditch' — the process by which material water is absorbed into the dry dirt prior to it smoothly running downstream). The process also ensured some reliability for downstream users, and increased the overall time that *parciantes*

received water, rather than 'losing time' while water traveled further distances. Such adaptations, developed by the *acequias* themselves, demonstrate the dynamic and elastic nature of water sharing processes as they meet and respond to changing conditions of drought and water availability, as well as the continual and evolving role of the *acequia mayordomos* and decision making trials.

During this particular *reparto* I attended, the water was divided amongst the *parciantes* into six and twelve-hour allotments for the week. Six hours were given for those with orchards and gardens, twelve hours were given to those with fields.

Contrastingly, that same day, a commissioner from the *Acequia Madre del Sur* (Rio Fernando), shared with me that by that time of year, he had decided to stop apportioning water to the big fields all together, because he didn't feel it was productive to try to irrigate them, when there was not sufficient volumetric push behind the water to truly spread water across the entire field and thus make a full irrigation difference. This resultingly meant that the fields would need to rely on summer monsoon rainfall, and/or sacrifice a second cut of hay – demonstrating the variation in decision making processes between different *acequias* and stream systems.

Such allotments varied greatly from my own, where I receive two hours of water per week, on a pre-determined rotational schedule, throughout the season (Figure 5.1). Such allotments also can be understood to vary greatly from apportionments of the past, wherein nearly everyone's livelihood relied on agriculture.



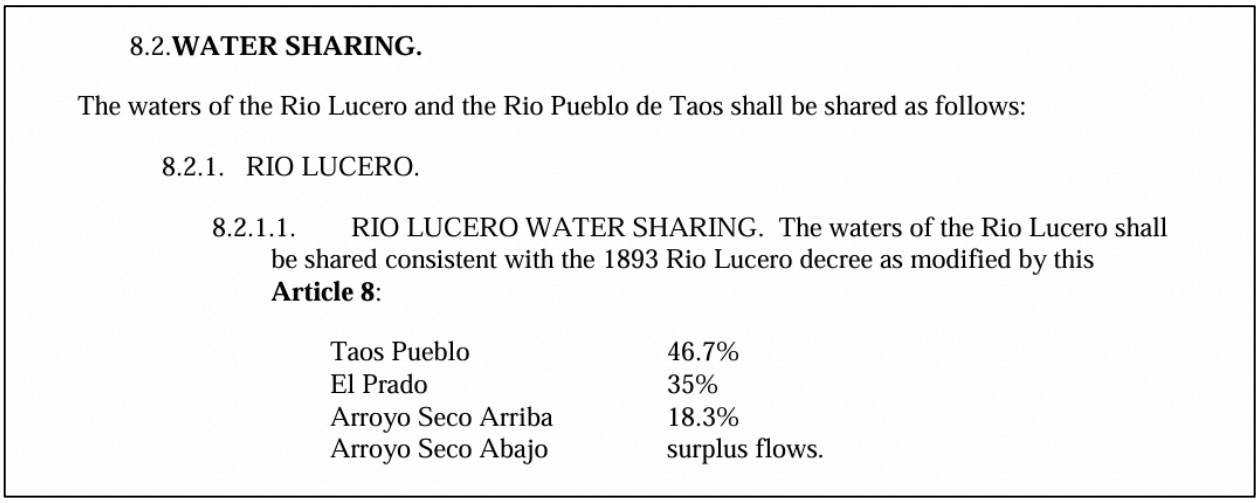
5.2.4 Equity, Proportion, and Need

One of the defining features of *acequia* water sharing is the ability to accommodate not only abundance and different hydrocosmologies, but also conditions of drought, and/or scarcity. The standard principles for allocating water in a time of shortage respond to considerations over proportion, equity, and need: this means that all water users are expected to proportionally reduce their shares to accommodate for all other users; those reductions should be shared equally amongst *parciantes* (and users should experience equity in their water allocations); and, lastly, that water distribution is allocated based on priority needs (Hurd and Mayagoitia, 2020). In times of extreme scarcity, it is this last point that I have found to be instrumental in informing the allocation of the first two, as water is not merely reduced to a simple trickle flow for all users in order to maintain a guise of *equality*, but rather water is distributed based on *equitable need* — the specifics of which vary ditch by ditch. Sometimes, this means all users share equally and each receive a drop; sometimes this means that some user's needs (i.e. water to support agricultural livelihoods; home gardens; livestock) are prioritized over others.

> *"… even though there's no water, everybody still gets the same. Whatever comes out of it….So it's the two thirds, and one third…Whatever comes out" –*
> *– Commissioner of the Acequia del Monte del Rio Chiquito, February 2023*

Types of sharing agreements vary greatly in whether they are upheld through custom or through codification: some *acequias* develop written sharing protocol within their bylaws, or through a shortage sharing agreement between ditches (e.g. *Canjilon Acequias* Water Management Agreement); other *acequias* operate based solely on principle and custom (e.g. lacking formal codification, but upheld through tradition, as documented orally and/or through *acequia* records); others still follow statues that provide the legal basis for them to govern the apportionment of water 'fairly' amongst users, and/or are required to share water through adjudicated settlement decree (e.g. The Abeyta Water Rights Adjudication between the *Acequia Madre del Rio Lucero y del Arroyo Seco* and Taos Pueblo). Some sharing agreements date to periods of Spanish Territorial Law (e.g. Rivera, 1998); others have been dynamically forged over time. In the case of the Abeyta

Water Rights Adjudication (the adjudication and settlement process between the United States of America, Taos Pueblo, the State of New Mexico, the Taos Valley *Acequia* Association and its 55 member *acequias*, the Town of Taos, the El Prado Water and Sanitation District, and the 12 Taos area mutual domestic water consumer's associations), *acequia* officers were required to provide oral testimony in court regarding water sharing practices, in order to uphold and quantify sharing customs. Examples of the transformation of customary water sharing agreements into State-recognized structures are included, below.



8.2. **WATER SHARING.**

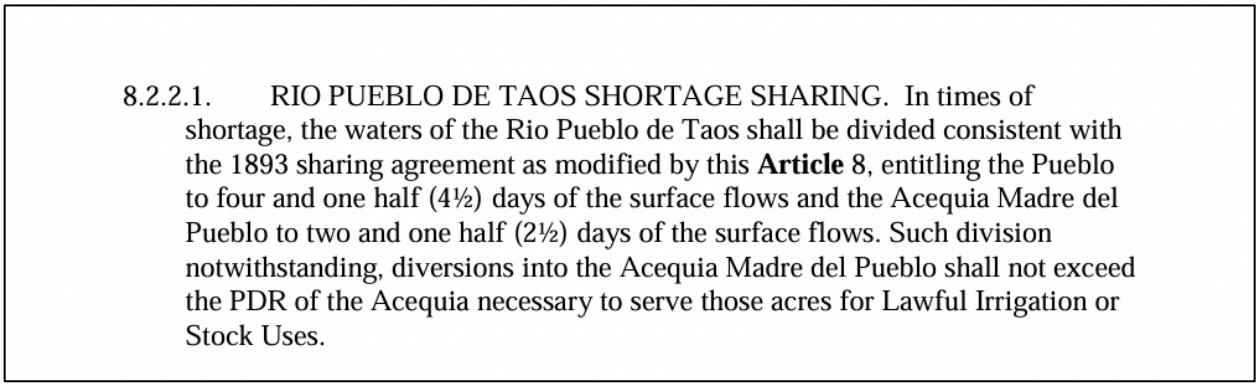
The waters of the Rio Lucero and the Rio Pueblo de Taos shall be shared as follows:

8.2.1. RIO LUCERO.

8.2.1.1. RIO LUCERO WATER SHARING. The waters of the Rio Lucero shall be shared consistent with the 1893 Rio Lucero decree as modified by this **Article 8**:

Taos Pueblo	46.7%
El Prado	35%
Arroyo Seco Arriba	18.3%
Arroyo Seco Abajo	surplus flows.

Figure 5.3: Abeyta Settlement Section 8.2 – Water sharing divisions as percentages of volume flow shared between entities. (Source: Abeyta Water Rights Adjudication Settlement Agreement, 2016)



8.2.2.1. RIO PUEBLO DE TAOS SHORTAGE SHARING. In times of shortage, the waters of the Rio Pueblo de Taos shall be divided consistent with the 1893 sharing agreement as modified by this **Article** 8, entitling the Pueblo to four and one half (4½) days of the surface flows and the Acequia Madre del Pueblo to two and one half (2½) days of the surface flows. Such division notwithstanding, diversions into the Acequia Madre del Pueblo shall not exceed the PDR of the Acequia necessary to serve those acres for Lawful Irrigation or Stock Uses.

Figure 5.4: Abeyta Settlement Section 8.2.2.1 – Rio Pueblo de Taos Shortage Sharing Agreement, divided by time and days. (Source: Abeyta Water Rights Adjudication Settlement Agreement, 2016)

Moreover, water sharing agreements do not always include all *acequias* in a stream system, leading to discord amongst *acequias* and *acequia* members (e.g. in the case of the Rio Fernando, where a

water sharing agreement exists between three 'upper' ditches, but does not include the lower sister ditches – a 'codification' that has been deemed illegal by the District Attorney, but has not yet been resolved — *fieldwork notes, Special Meeting of the Vigil y Romo Acequia on Water Sharing, December 12th, 2022*).

Need as the Greatest Determinant?

As a component of the three principles of water sharing (proportion, equity, and need), need appears to inform the prior three the most. What constitutes a priority need is flexible, based on the *acequia*'s makeup and history, but can include, for example, domestic gardens that provide food for families, fields belonging to those who depend on agriculture for their livelihoods, and water and pasture for livestock. This is not a fixed formula but a relational negotiation, responsive to the particular circumstances of the community in any given season, and is determined by the *mayordomo* with input from the *acequia parciantes* and commission.



Cuento: Acequia Madre del Arroyo Seco Reparto

I recall one *reparto* that was held in late July, along the *Acequia Madre del Arroyo Seco*. This was not one of my primary case study stream systems, but I had been invited by a friend to attend, so I willfully joined. The *reparto* was held on the side of the road: there was a dusty turn around spot, where trucks and vehicles were parked. We had arrived there early and were some of the first to form the *reparto's* circle. As more *acequieros* arrived, I began to recognize a few familiar faces. I greeted those I knew with *un abrazo* (hug) and a smile, and at times awkwardly explained my place: "I am just here to watch and observe, I want to see how the *reparto* goes." For those who didn't know my research, this was generally met with a look of confusion: why would I want to

spend my Wednesday afternoon gathered in this dusty turn-around, under the hot New Mexican sun? The *Mayordomo* was late, by about 30-45 minutes. Small-talk had quieted down, and speculations had reached their limit. "*I don't think we are going to get any water this week, might as well go home*" one *parciante* muttered. "*You got animals?*" another asked. "*I have my sheep down at [a neighbor's] field, you know, so I gotta ask for water for that…*" I had begun to take refuge under the shady branches of a nearby tree, when the *Mayordomo* drove in. He had driven in the early hours of the morning to attend to a family emergency nearly 7 hours away. After more than 14 hours on the road, he had still essentially managed to make it back in time to divide that week's shares — underscoring, for me, the significance of, and commitment to, the *reparto*.

"Look, I'll make this quick: if you ain't got animals, you need to go home.
There isn't any water for you this week."

What the *Mayordomo* meant by this, is that those *parciantes* who were in need of water to a) provide drinking water for their animals, or b) to irrigate the fields from which their animals would survive, would be prioritized over all other *parciantes* that week, due to late-season minimum flows.

I was surprised by the abrupt decision – and also by the immediate response. No one complained or argued; there were a few disgruntled sighs…but, mostly, people scuffed their boots and walked away. Some stayed and chatted with their neighbors, or made small-talk away from the group. The remaining circle grew tighter, and as the friend I had attended with didn't have animals, we lingered only until we couldn't hear the conversation anymore, before walking back along the *acequia*, lingering in the cool tall grass as we went.



5.2.5 Sharing with Nature / Sharing as Nature

Along other *acequias*, I frequently witnessed the prioritization of water for those with home gardens, income-generating fields, or to support orchards in duress. These observations are supported empirically (e.g. Rosenberg et al., 2020), yet appear less-often to be formally written as prioritization rules. Interestingly, an entity which often seemed to be disregarded from water sharing agreements, was the river itself.

During a discussion with one *parciante* of the Vigil y Romo *acequia*, he recounted a reprimand he had received years prior for leaving water in the river during a particularly dry season:

> *"It was pretty easy to ask for water and everyone got what they wanted, but when there was less water it became more contested. We asked for more water from [the acequias upstream] and basically they gave us a little more water, but it was so little….It was just a trickle coming down the river.*

> *We could basically open our head gate and take the entire river. And we did that for a day. And then—and I remember this very distinctly—[the mayordomo] and I had a conversation at the head gate, and we sat there, on the head gate, watching the river, just barely cresting over the weir. And we said 'well, is this right to be taking this entire river into our acequia?' Not only that, we realize there's two other acequias below us that aren't receiving any water from the river because, you know, we take it all…but we also realize that the river is, you know, a riparian system with trees and vegetation that is serving a valuable ecological function…and we didn't feel right about depriving the river of its own water. And the third part about it was that there was so little water getting into our acequia…we could barely even get it onto the land. It was just enough to maybe water a little bit at the very beginning, but it just wasn't useful. So we made the decision to shut the head gate.*

And so within hours, by the end of the day, I get a call from [an irrigator upstream] saying, 'you know you shut your head gate. You know, there's water in the river. You know, that sends a bad message to the folks upstream that are letting the water down to you.' And I'm like, 'well, there wasn't enough even to use' and he said, 'well, you gotta keep it open anyway, because that's what we do.' And I told him, 'well, we made our decision, you know, to shut it for the reason I just explained.' And he, you know, didn't agree with me."

— Parciante of the Vigil y Romo Acequia, personal interview, 2023.

While seemingly antithetical to the general relational nature of the *acequia* system, the emphasis on using water for irrigation – rather than allowing it to run down the river itself – can be understood in at least two parts. First, this phenomenon can be understood as a relatively modern introduction to *acequia* norms. Insofar as that water rights in New Mexico operate under a 'use it or lose it' paradigm of resource management, *acequias* are mandated to put their water to 'beneficial use' (NM State Constitution, Article XVI, Section 2). While many advocate for riparian habitat to be included in any definition of beneficial use, under the doctrine of prior appropriation, which governs the State's water code, the environment is often discussed as the 'newest user,'– and thereby legally recognized only after water appropriations are provided to tribal nations, *acequia* associations, cities, industries, and interstate compact flows. Recognizing that New Mexico's paper-water allocations far exceed any material ('wet water') reality, this means that in-stream flows are often de-prioritized, unless there is a legal obligation to maintain riparian flows resulting from endangered species habitat requirements (Van Note, 2021). Moreover, this water-debt means that many *acequia* users face immense pressure to continually demonstrate the active use of their water rights (if an *acequia* user is deemed to have forfeited or abandoned their water right through non-use, the water right is eligible to be usurped by the State to satisfy another demand — see the following chapter for an introduction of 'water banking' to counter this paradigm, as well as the 1/3 and 2/3 rule of sharing).

Secondly, despite the appearance of riparian mistreatment, one *parciante* explained to me that through his worldview, he understood the *acequia* not as taking water away from the river, but rather as a functional component of the entire riparian ecosystem, itself. Through the *acequia*, *parciantes* are able to slow and spread the mountain water across the valley, widening the water-footprint beyond the narrow riverbed itself. Thus, by actively irrigating, and diverting water from the river into the *acequias*, some *acequieros* viewed the *acequia* as an extension of the river itself — as a natural part of the riparian ecosystem — and felt they were best-using the water by maintaining it in the valley, rather than letting it run down the river where it could be appropriated by others (including municipalities, industries, developers, etc). The material-impact of this phenomena is visible through satellite imagery, creating an extended wetland – often labeled as a "green-belt" — that runs through the heart of Taos, and provides a stark visual contrast to the otherwise arid-desert environment of the high mountain valley.



Figure 5.5: Taos 'green belt' or irrigated agricultural acequia corridor (visible as the dark green contrast amidst the desert brown). Without the acequias, this green belt would cease toe exist. (Source: Google Earth, Author)

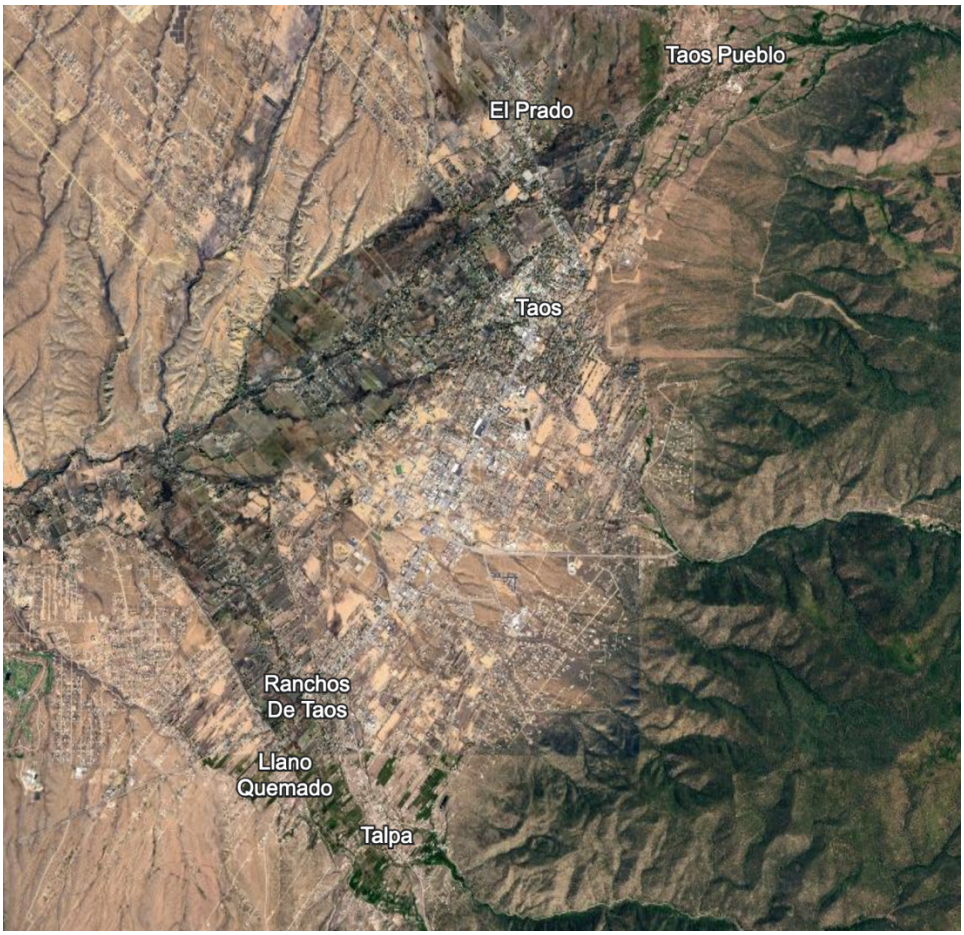


Figure 5.6: Close up of the green belt. (Source: Google Earth, Author)

Lastly, following the *acequia dicho*: "*para nos, para vos, y para los animalitos de dios*" ("for us, for you, and for God's little animals") another *acequiero* shared that:

> *"[the animals are] here so, I realize that we're sharing a lot more than I thought…because that system is there and [the animals] depend on that system because they know it's a reliable source for them. Not only that, but the flora and the fauna, you know…The wild choke cherry trees that have just bred for years after planting…the wild hops…everything that they used to put on their hedge rows and everything that comes naturally, all the wildflowers on the acequia banks. That creates a teeming system for pollinators and insects and a lot of that is homes for rodents, mice. It just…It's an entire ecosystem and it's*

supported by the existence of that acequia. You sever that, [and] that extension of that river no longer exists. And your ability to spread the water through the land and recharge the aquifers… becomes…Gone. It's gone. It's…It's extinct."

— Commissioner for the New Mexico Acequia Commission, November, 2022

Thus, a seemingly small inquiry into the repercussions of a shut headgate reveals a plurality of values and life-frames, specifically linkages between living *from, with, in,* and *as* nature (Pascual et al., 2023). *Acequias*, on the one hand, appear to uphold cosmocentric worldviews, wherein intrinsic and relational values of nature converge (IPBES, Methodological Assessment Report on the Diverse Values and Valuation of Nature, 2022). Concurrently, it is evident that instrumental values, which relate to nature as a capital resource, also have the authority to influence *acequia* behavior. This evidences the notion that values, or the implementation of values, have the capacity to shift and evolve both alongside and in response to changing conditions.

5.2.6 Scales of Sharing

Throughout my observations, I perceive that sharing usually works well between members of the same ditch; is more challenging between upstream and lower ditches on same *acequia*; and appears most fraught between *acequias* within the same watershed boundary (this observation does not include tribal and non-tribal water sharing agreements, as that is out of the direct purview of the study – see: methodologies, and limitations). As demonstrated in Figures 5.7 and 5.8, sharing occurs across and between many different scales.

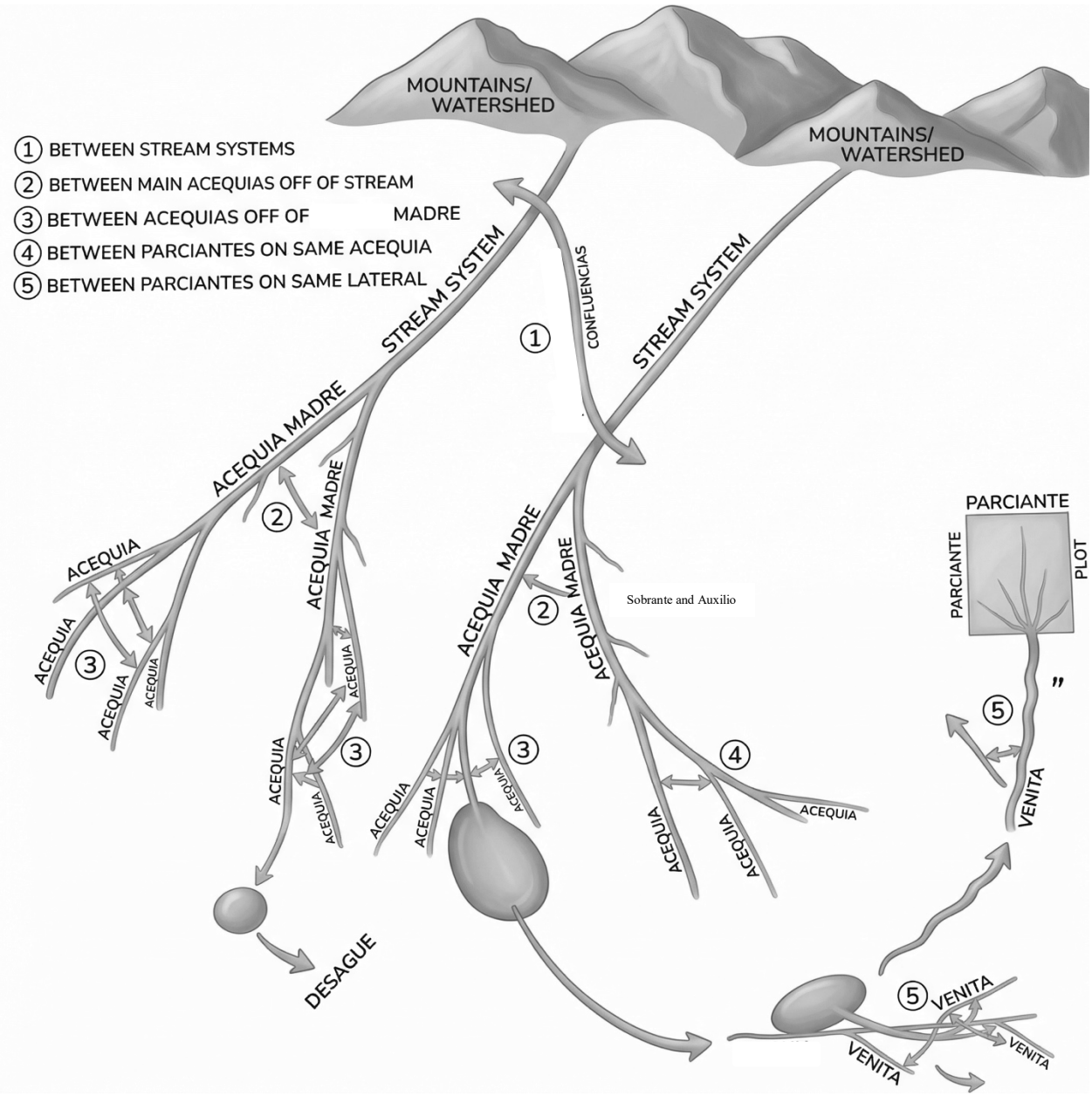


Figure 5.7: Schematic depicting different levels of sharing within acequia systems. Note that sharing between community groups (i.e. tribal vs. non tribal jurisdictions), as well as sharing with non-acequia entities (i.e. a municipality) are not depicted. (Source: Author)

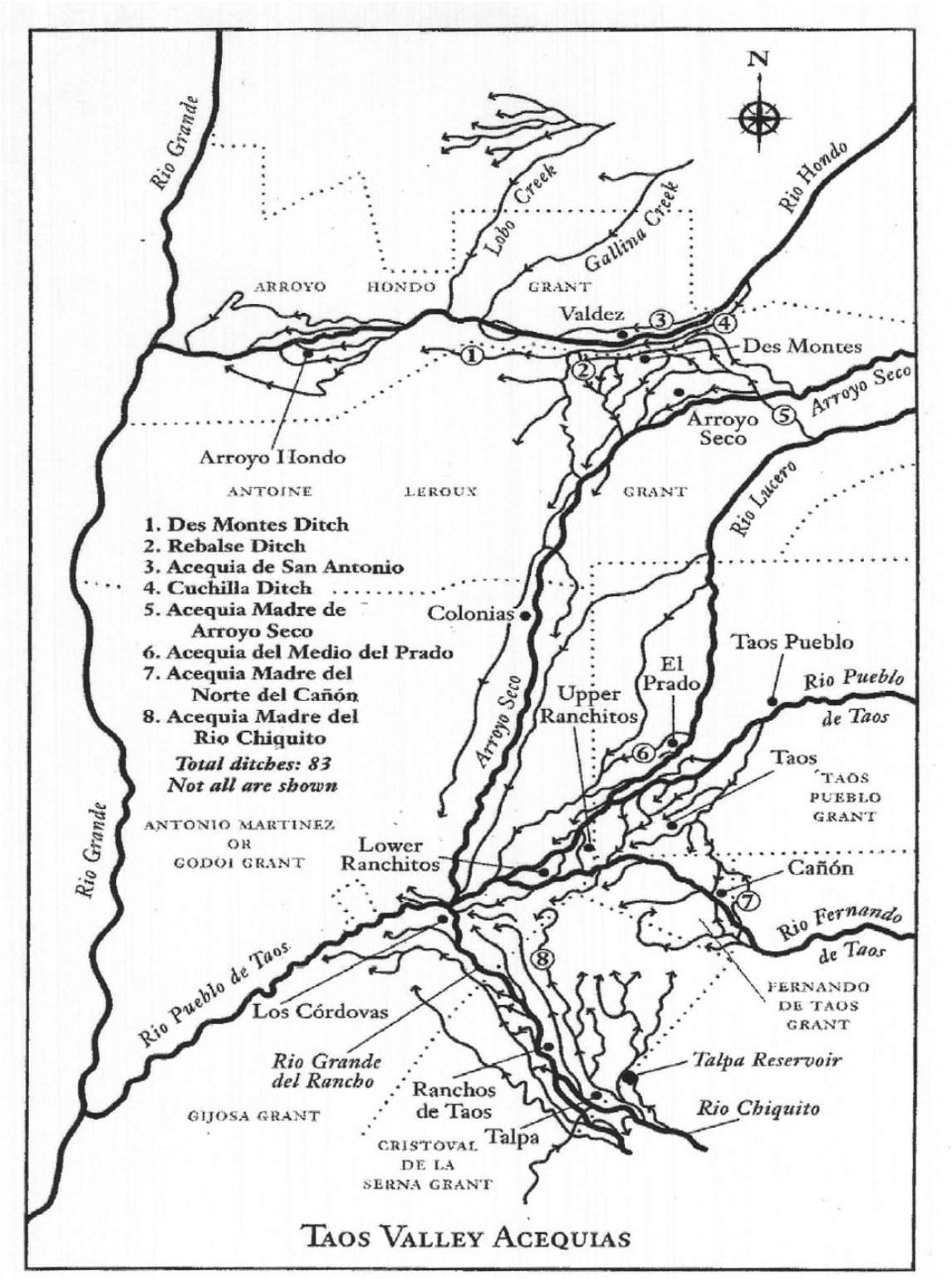


Figure 5.8: Map of Taos Valley Acequias. Note that many more acequia branches exist in Taos than are depicted on the map. The map provides a visual indication of the complex network of acequias, within and between which sharing occurs at many different scales. (Source: Rodríguez, 2006; reprinted with permission).

In addition to excluding specific details regarding tribal and non-tribal sharing agreements, my research also did not include examination into interbasin water sharing in the region, however as with the case of the hand-dug canal that provides a transmountain, interbasin delivery system in the Mora Valley (Rivera, 1998, 11), it is historically a tricky business. As Mock (2023) writes, "without a doubt, shortage sharing can be a fraught business, sparking inter- and intra- ditch feuds that span generations, leading at times to folkloric levels of conflict. But in the end, the gravity of *acequias*, with their historical and physical ties that bind *parciante* to *parciante* and community to community, has for centuries outlasted droughts and dam-breaks, floods and fistfights" (Mock, 2023).

Sobrante and Auxilio Rights

In addition to the water sharing practices listed above, *acequias* also incorporate principles of '*sobrante'* as well as '*auxilio'* water rights. Sobrante rights are water rights that are granted to sister ditches, generally off the same river or *Acequia* Madre, when there is surplus of water available. Contrastingly, *auxilio* water rights are special dispersions of water, as determined by the *Mayordomo*, during times of extreme scarcity, in order to avert disaster. The principles of '*sobrante'* and '*auxilio'* water allocations exemplify complex and dynamic forms of relationality, underscoring the ways in which water sharing practices transcend a commodified notion of water, and instead demonstrate a commitment to mutuality that rises above individual or competitive need. Such a commitment can, perhaps, be traced back to the foundational concept of *querencia*, highlighting the ways in which respect for the *querencia* of another fosters an understanding and actionability of water as a shared resource that belongs to the land, not the individual.

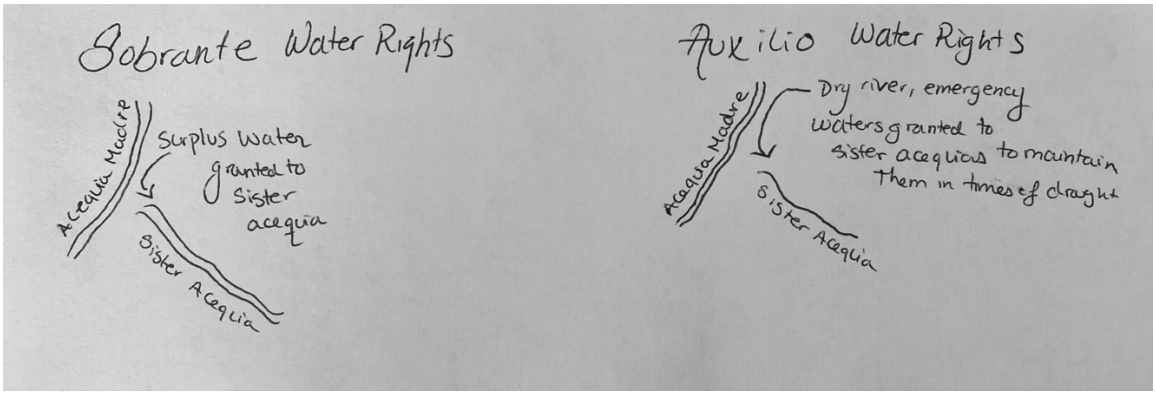


Figure 5.9: Figure demonstrating sobrante and auxilio water rights; these types of agreements are generally pre-determined, based on previous drought and abundance scenario experience collated over the centuries. (Source: Author)

5.3 Relational Practices of the *Acequia* Systems

5.3.1 Relationality With Oneself, With the *Acequias*, With Territory, With Each Other

In *acequia* communities, relationality is borne through, and reinforced by, practices and ritual (Rivera, 1998; Rodríguez, 2006; Arellano, 2014; Trott, 2017). Rituals such as the *limpia* (the annual communal cleaning of the *acequia*) function as embodied expressions of relationality, reinforcing, as Rivera (1998) suggests, a 'sacred covenant' between community members and their shared water resources. In doing so, the collective act of ditch cleaning can serve to strengthen relational bonds between *acequia* members themselves, between humans and the environment, within multi-species relationships (humans, and more-than-human beings), as well as the relationship between water, land, people, and spirit. Such relational ritual forms part of a living cultural and ecological heritage that concurrently adapts to changing conditions, and fosters a deep sense of *querencia*: a profound and loving rootedness to, respect for, and reciprocal responsibility towards, place. The hydrosocial relationships that are borne through such practices also serve to position *acequias* as significant social, political, and spiritual centerpieces of Northern New Mexico communities (Rodríguez, 2006): what many refer to as 'the lifeblood' of the community.

> *"…You know…the acequias have been around for hundreds of years. That's kind of the glue that has kept the community together. People say it's the church, but it's not. It's the acequias that keeps it. That's the only form of governance that was here…"*
>
> – *Mayordomo of the Acequia Madre del Sur del Rio Fernando del Cañon, October 2022*

Relationality is visibly expressed in many aspects of *acequia* systems and communities: be it engaging in the annual *limpia*, meeting for a *reparto* early on a Tuesday morning to discuss the week's water allocations, teaching younger generations about the practices of the land and how best to irrigate, to understanding the contours of the soil, the moisture content in the snowpack, tasting the rain in the air, and understanding animal cycles as influenced by the moon. Relationality is about neighbors helping neighbors: many hands bailing hay, traveling from field to field until

the sun goes down. Many hands, plastering a home: water to wet the *adobe* and *alíz* to smooth the walls. Relationality includes legacies of *mutualismo*: of *los hermanos penitentes* and societies of mutual aid. Relationality also includes conflict: centuries of negotiation bound up in our shared waterways.

The central role of relationality (albeit often described by other names) in shaping *acequia*-culture and socio-ecological resilience is documented within the literature. This includes Rivera's (1998) analysis of reciprocal relationships between irrigation and community, which fosters a subsequent ethos of water sharing that endures even within competitive water environments, Rodríguez's (2006) examination of the interconnected social, ecological, and spiritual dimensions of *acequia* culture, and Arellano's (2014) conceptualization of *acequia* practices as living links that maintain traditional knowledge and community bonds across generations, cosmo-space, and time.

Acequia systems exemplify how water and society are co-constitutive, as their communal management and shared labor produce distinct hydrosocial relations and cultural practices. Moreover, both the *acequia*'s physical infrastructure (e.g. *compuertas*) and governance structures (e.g. *repartos*) serve not only to distribute material water resources, but also generate a collective identity and responsibility amongst *acequia* community members towards their shared water resources, illustrating how hydrologic and social processes are both inherently intertwined and mutually reinforcing (Linton and Budds, 2014).

Querencia is intimately tied to these hydrosocial relations, as the shared stewardship of water resources and territory serve to foster a deep and enduring connection to the land and subsequent collective cultural identity that is both rooted in, and respondent to, the rhythm and practice of the *acequia*.

Thus, here, *acequia* practices are understood as relational processes that inform, and are informed by, a deeply seeded and inextricably relational sense of *querencia* between water, people, and place. Such practices can be seen to constitute a worlding, or "an ongoing bringing forth of the world through the process of living itself" (Escobar et al., 2024, p. 9). As the past is brought forward and re-worked through such actions, these practices constitute an "active retrieval in the

present" of relational values (such as responsibility, reciprocity, and respect) that become a way of knowing, being, and doing (Escobar et al., 2024, p. 15). In this way, relationality is expressed through practices, and is informed through value systems. This is not to negate the immense and complex injusticies, unequal relations of power, and continual contestations that occur within *acequia* systems, but rather also to understand such processes as equal aspects of relationality itself: relationality holds both the 'bad' and the 'good.'

The following section of this chapter now turns towards an empirical exploration detailing relational *acequia* practices.

5.3.2 Relational Practice: *La Limpia* (Communal Cleaning of the *Acequia*)

The *acequia limpia*, as alluded to before, is a characteristic ritual performed every spring along and within the *acequias* of the high mountain desert of Northern New Mexico. A communal effort, *la limpia* requires all *parciantes* to participate in the cleaning and repair of the *acequia*, in preparation for the spring snowmelt runoff. The *limpia* typically occurs in the early spring, before the irrigation season begins, however with the impacts of climate change, many *acequias* are re-thinking the timing of their efforts (see 'changes to *la limpia*'). Beyond its practical purpose, the *limpia* serves as a community ritual — much like the enjarre (annual plastering of the Church), or the *matanza* (communal harvest meal) — the *limpia* nourishes community relationships, environmental wellbeing, and cultural tradition, alike. Concurrently, the *limpia* also provides a chance for the intergenerational exchange of knowledge, for the telling of stories, for the *mayordomo* and *comisionados* to gauge *parciante* engagement, and for newcomers to make their faces known.



Cuento: La Limpia

"Vuelta!" I could hear Victór yell, as we moved on to another section of the ditch. The morning was bright, and I began peeling off the layers of woolen clothing that I had thrown on top of my Carhartts, mistakenly having dressed for the frosty-morning chill.

Together, we worked in groups of 5-6, shoveling and raking dried leaves and twigs from the earthen *acequia* bottom. Some *parciantes* worked ahead of us with clippers, trimming back branches that posed the most threat, in an effort to reduce the hazardous path of the *Mayordomo* in the months to come. Patches of ice persistently clung to rocks, and we decided to leave the leaves that were frozen in these embankments, alone. *"They'll wash out with the first run of the ditch."* Together, we worked for many hours, as the morning transitioned to afternoon, and as the sun made its arc through the sky. Slowly, we travelled from our designated starting point along the *acequia* until the very end.

"Ah, look at this — a woman! Female power, eh!" I peered up from behind the branches of budding chokecherry (*capulin)*, to see Dolores, a local librarian, who had come to deliver bottles of water to those of us down in the trenches (and also to take photographs for the bulletin board at the community center down the road). She seemed pleased to see me out there working alongside the men; and may have also been shocked as I was not familiar to her. A quick flurry of photos, and she was gone – off to deliver supplies to the next group of *acequieros* up the way.

Although the group was predominantly male, that morning I was able to work alongside the granddaughters of Tobías, one of the *acequia* commissioners on this particular ditch. I had heard him speak with pride about his granddaughters' involvement in the *acequia* during an interview in

the months prior, and I was eager to get to know them. We chatted about life and school, and occasionally they ran ahead to play with their dog, who voyaged with us from above the *acequia* banks.

Mostly, though, we worked in silence, each attending to our given role. Occasionally someone would interrupt the weight of that silence with sharp cracked humor, or to ask for help pulling a tire or other debris from the ditch-bed.

From the bottom of the *acequia*, I thought, one sees a lot about the lives of others that may be invisible from the road — perhaps the quieter, more intimate details of a *vecino's* broken wicker rocking chair, of a magical fort built by a child, or of the scattered remains of one too many beer bottles, thrown outside. Such a purview requires an air of respectful silence, it seemed.

I had been invited to clean the *acequia* by a number of members of the *Acequia Madre del Rio Chiquito*. After months of doing research with and alongside them, I was quite pleased that I could join to help clean the ditch.





Figure 5.10: A commissioner of the Acequia Madre del Rio Chiquito hauls out trash found in the acequia into the back of his truck. (Source: Author)

The *limpia* is a chance for one to work together in collective labor: adults, elders, and children alike all have a role.

After one springtime cleaning along the Vigil y Romo *acequia*, a small ditch running off of the Rio Fernando de Taos, I leaned against my shovel and watched the pile of brush we had gathered

from the dried river-bottom burn. There were about five of us there, gathered around, and the pile, which was far taller than me, had been strategically placed so as to not let the sparks jump too far. This was the first of several cleanings for this *acequia* that would occur; we had been called for an impromptu meeting in order to clear the river channel itself, afraid that a rapid spring runoff from recent high-temperatures would cause a debris buildup at the *acequia* headgate, before the proper *limpia* was held. After some time of taking a break, the youngsters among us were sent down the *acequia* to see if there was any preemptive shovel work that needed to be done. Before I set off, I lingered for a moment with one of the elders of the *acequia* who sat, quietly, on the riverbank, watching the brush burn. *"Go on, mijita, and I'll stay here a while…There's usually a role for us elders, like sitting and watching the fire, while the able-bodies carry on..."* In so few words, I was reminded of the intergenerational connection and shared responsibility to each other and to the land that we each held, as we worked together to maintain the *acequia* – which at once bonded us both to each other, to our territory, and to generations past, present, and yet-to-be-born.



Figure 5.11: Parciantes of the Vigil y Romo Acequia clear brush before the annual limpia begins. (Source: Author)

Customs of La Limpia

Although each *acequia*'s bylaws and customs vary slightly, *limpia* labor is generalizably allocated based on the amount of water rights (or, irrigated land) that each *parciante* holds. Thus, larger landowners (or, correspondingly, those who are allocated more irrigation time and material water rights) are expected to contribute more labor or resources to the *limpia* than those with smaller apportionments of water and/or time. Participation in the *limpia* is a core requisite for accessing water during the irrigation season. If a *parciante* cannot attend, they are expected to send a *peone* (helper) in their place, or to pay a cleaning fee in order for the *acequia* to hire out labor for the required work. In addition, each *acequiero* is typically expected to clean and maintain their own individual *venitas* or *linderos* (the lateral ditches that run directly to their property off of the *acequia*) (Taos Valley Acequia Association: *Acequia Parciante* Responsibilities).

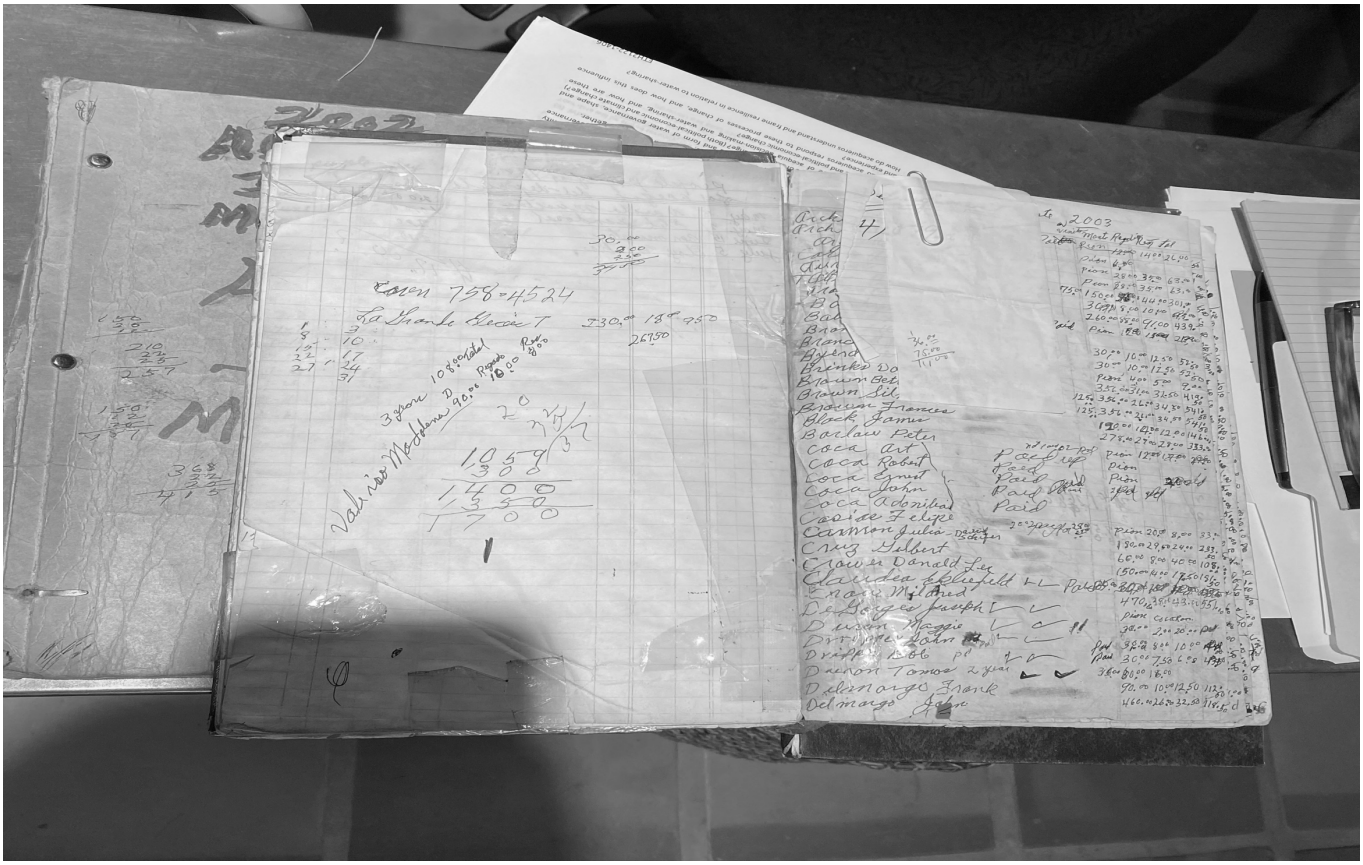


Figure 5.12: Acequia treasurer's book listing parciantes who have paid ditch dues, have sent peones to help clean the ditch, etc. Support with record-keeping and book-keeping is often cited as a primary concern amongst acequia commissioners, who hold decades of hand-written administrative records in their homes. (Source: Author; Acequia del Monte del Rio Chiquito)

The *limpia* is usually overseen by the *Mayordomo* and commissioners of each respective *acequia*, with a "*vuelta* man" dedicated to providing instruction, and subsequently inspecting each section of the ditch, prior to the crew moving on. Participation in the *limpia*, similar to the paying of ditch dues, is often incorporated into the bylaws of each *acequia*, as a prerequisite for using water in the corresponding season. Thus, whether codified in writing or custom, it is through collective labor and maintenance that the passageway for water is prepared each spring, that *vecinos* connect with one another and the land, and that the contours of the *acequia* are again mapped by touch with the *palas* (shovels), *manos* (hands), and *benediciones* (greetings/blessings) of *parciantes* new and old. The *limpia* can be read as an act of reciprocity, of responsibility, and of *respeto* – towards oneself and others, towards *nuestros antepasados* (ancestors), and future generations, and towards the water itself. Each *acequia*'s *limpia* is unique, and yet enduring principles of collective maintenance for the communal *acequia* embroider the custom across the land.

The practice of the *limpia* highlights relational values of reciprocity towards and with nature, as well as a strong sense of responsibility and respect. While *acequieros* often relay a verbalized sense of literal belonging to the *acequia*, or to the landscape, there is an equal emphasis that due to this belonging, the *acequia* is also one's responsibility to maintain. In addition to aligning with varying IPBES nature values life-frames (e.g. living from, with, in and as nature), this sense of obligation also underscores that relationality with the land is a practice, and an ethic of responsibility. This juxtaposes a logic of rights-based entitlements that are prevalent within many state-centric natural resource frameworks (Tynan, 2021; Corntassel, 2008). If "Country itself is known through relationality [then] our connections to Country[21] become realized through relational practices" (Tynan, 2021, p. 601). In this way, the practices that are perceived through maintenance of the *acequia* become a way to '*sentipensar con la tierra'* (think-feel with the earth; Escobar, 2019), knowing that we are *inter-being* in our own reciprocal ways (Hanh, 2021; Escobar, Osterweil, and Sharma, 2024). Such a practice complements Graham's notions of aboriginal

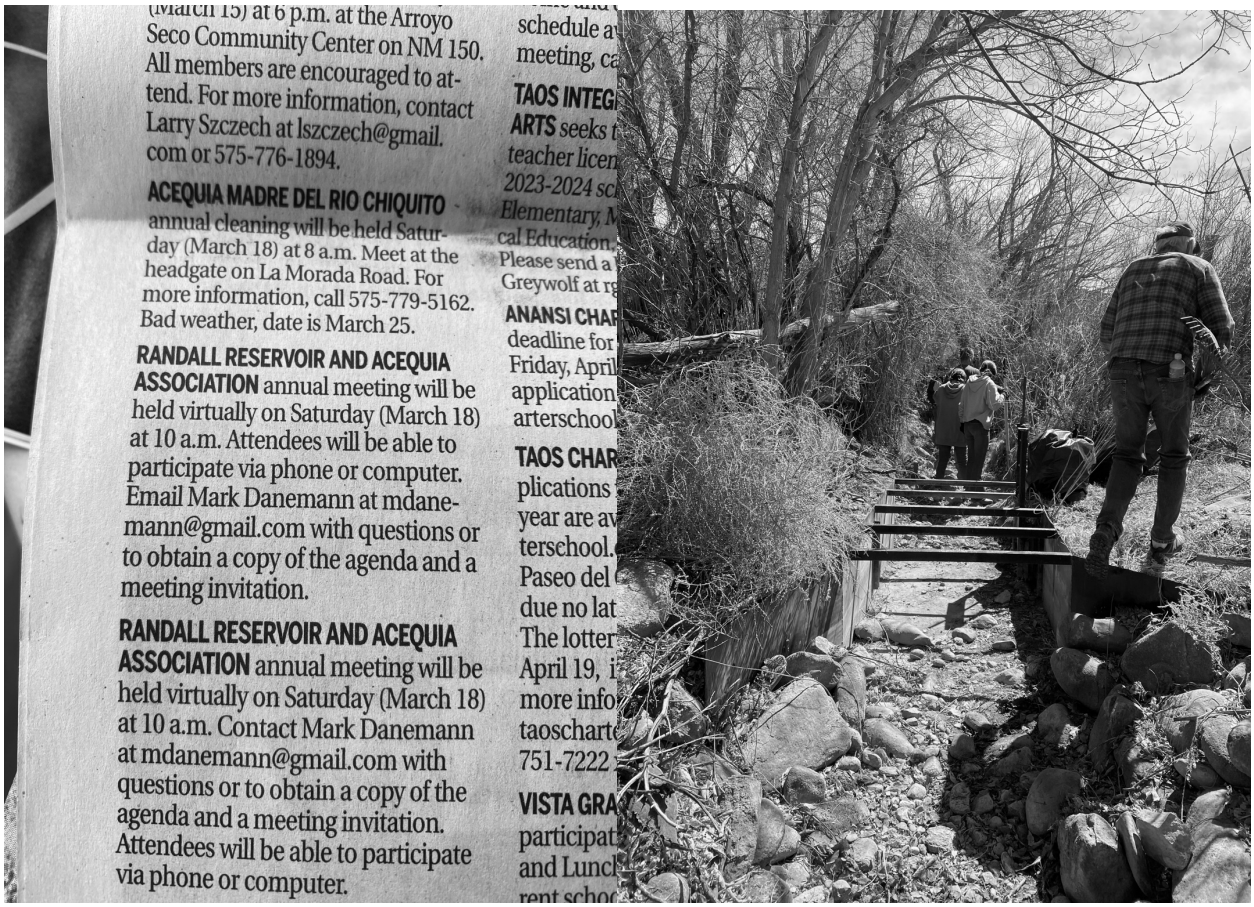
[21] "Country" refers to the term used by many Australian Aboriginal peoples to differentiate from the English word 'land' – similar to the 'Ōlelo Hawai'ian word 'Āina, or concepts of tierra sagrada (and, in this case, territory).

relationality wherein obligation to land is sacralized and put into practice through ceremony, social structure, and patterned practice (Graham, 2014; Tynan, 2021).

Changes to La Limpia

Despite the enduring nature of the *limpia*, certain changes are apparent. A resounding concern as expressed through interviews and as observed in practice across the case study *acequias* was a dwindling level of participation among *parciantes*, including amongst the youth. Potential and stated reasons are multiple: absentee landowners, out-of-state second homeowners, an aging demographic of *acequieros* with fewer young-hands to take their place, busier schedules, and, of course, less land in agricultural production. This final point highlights a shift in the agricultural economy of the region: whereas the *limpia* was once a collective necessity to ensure both individual and communal subsistence, the pragmatic demands – and even tradeoffs of time spent cleaning vs. time spent working – have begun to change within an increasingly wage-driven economy. Some *parciantes* spoke openly about finding it easier to pay the requisite fee to hire an outside *peone* than to attend the *limpia* themselves, while *acequia* commissioners voiced concern at this same pattern of behavior.

> *"Yeah, there's some guys there that they show up for the meeting. They want water and we says, 'how come you don't show up for the for the cleaning?' I tell them,' where you been?' You got these people that say 'I'd rather pay $50 than go to the acequias…' Well, we don't want your $50. We want **YOU** to come over here so we can get that water flowing." – Commissioner of the Acequia Madre del Rio Chiquito.*


(March 15) at 6 p.m. at the Arroyo Seco Community Center on NM 150. All members are encouraged to attend. For more information, contact Larry Szczech at lszczech@gmail.com or 575-776-1894.

ACEQUIA MADRE DEL RIO CHIQUITO annual cleaning will be held Saturday (March 18) at 8 a.m. Meet at the headgate on La Morada Road. For more information, call 575-779-5162. Bad weather, date is March 25.

RANDALL RESERVOIR AND ACEQUIA ASSOCIATION annual meeting will be held virtually on Saturday (March 18) at 10 a.m. Attendees will be able to participate via phone or computer. Email Mark Danemann at mdanemann@gmail.com with questions or to obtain a copy of the agenda and a meeting invitation.

RANDALL RESERVOIR AND ACEQUIA ASSOCIATION annual meeting will be held virtually on Saturday (March 18) at 10 a.m. Contact Mark Danemann at mdanemann@gmail.com with questions or to obtain a copy of the agenda and a meeting invitation. Attendees will be able to participate via phone or computer.

Figure 5.13: Newspaper noticia announcing the upcoming cleaning of the Acequia Madre del Rio Chiquito. State law mandates public and written notice prior to the cleaning. Figure 5.14: Parciantes clean the dry Acequia Madre del Rio Chiquito (March, 2023) (Source: Author)

Another *acequia* commissioner of the *Acequia Madre del Rio Chiquito* reflected on generational knowledge transfer, and the importance of inculcating *acequia* values into children from an early age. Their commission had begun to change the age restrictions on *acequia* participation, in order to bring more youth in.

> *"…[with the] Commission before you had to be, what, 16 years old or something like that [to clean the acequia]. You know what? If you got a kid and he's 12 years old, or 13, or 14, let him work. Let him learn. What's wrong with that?....They do lot of work, if you tell them…Because I've been taking my grandkids and his grandkids [gesturing towards a fellow commissioner], and they enjoy it by the end of the day…so they can get the feel of what it is. So,*

when they grow up, they know that they got to come back and protect these acequias…and clean them!… No, we used to go out with my dad, and we'd go up and help him clean, even though they wouldn't let us because of the age that we were. But we'd still be in there helping, throw rocks, or whatever we needed to do."

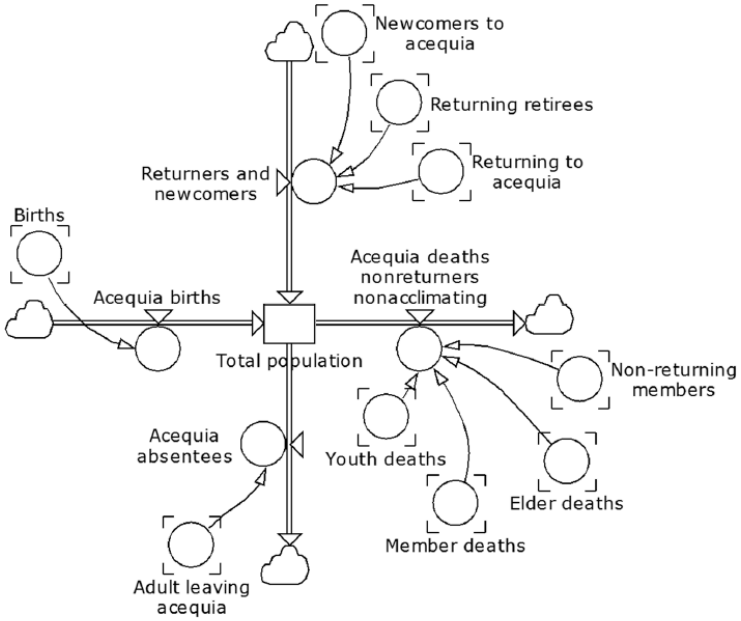


Figure 5.15: Schematic illustrating acequia population dynamics including in and out flows of members (Source: Turner et al., 2016).

Another challenge facing the *acequias*, as illustrated through *la limpia*, are shifts in climate patterning. This includes changes in seasonal snowpack amount and snowmelt timing. The majority of *acequias* in Northern New Mexico are gravity fed, irrigation canals, that depend on snowpack runoff to feed the streams and rivers that they originate from. Historically, *la limpia* occurred in the early-mid spring (March-April), before the irrigation season began. This timing traditionally provided sufficient time prior to peak snowpack runoff, whilst being delayed enough in the season to bypass the heavy spring snows. Of the nine *acequia limpias* I attended during my fieldwork period, timing varied greatly: several *limpias* were postponed due to late-season snow

storms, while others occurred even after the water began to run. Evidence of this change is chronicled elsewhere – see Context for a discussion of climate impacts).

I recall one pre *limpia* meeting that I attended with members of the *Vigil y Romo acequia*, in early February of 2023. As noted previously, this particular *acequia* was in the midst of a water-sharing negotiation with upstream sister ditches, which left the certainty of an irrigation season yet to be decided. The topic of scheduling the annual *limpia* arose several times. One commissioner pushed for the *limpia* to occur in the fall, rather than the spring, based on his observations of earlier and more unpredictable snowmelt runoff in the spring. This way, he argued, the ditch would be cleaned after the leaves fell, and would thus be ready for the irrigation season, with minimal spring-time maintenance required, regardless of when the water began to run. Another *parciante* questioned whether the *limpia* should be held at all: if no water was to be guaranteed due to both the low snowpack and the water sharing discord with the sister ditches, what was the use in keeping the *acequia* clean?

The *Mayordomo* refuted this notion, stating that it was the *parciantes*' responsibility to keep the *acequia* clean whether there was water or not, for otherwise the *acequia* may fall into disrepair. Further, as was custom and written in the bylaws, a *parciante* usually would not be entitled to water (in the chance that it did come), if they had not helped to clean. A contentious conversation ensued, eliciting themes of despair, hope, and responsibility – all of which appeared bound up in the inextricable bond between people, place, and water. Finally, one *parciante* exclaimed *"But, we will just be cleaning the dust*…!" To which the *mayordomo* retorted, *"then we will cry our water into the ditch to make it run."* This settled the topic of the *limpia* being held at all. While the commissioner's suggestion to move the *limpia* to the fall reflects an adaptive relationship with changing environmental conditions, and a deep attunement to the local environment, the elder-most *acequia parciante* advocated for a spring-time cleaning, regardless of any additional work done in the fall, based on his concern for maintaining tradition and customs.

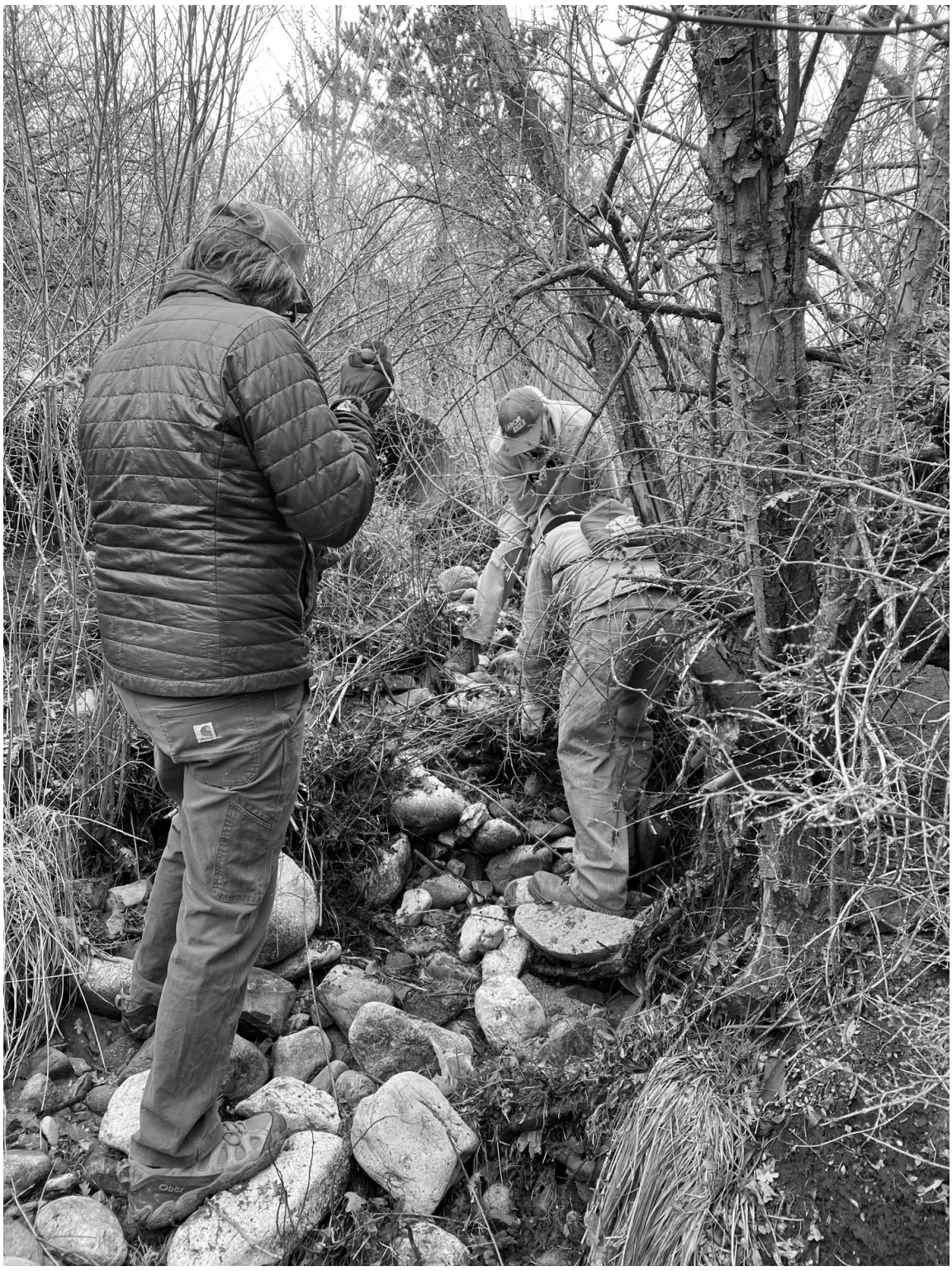


Figure 5.16: Parciantes work together to clear a root build-up in the acequia, 2023. (Source: Author)



Figure 5.17: A female parciante cleans the Vigil y Romo Acequia, 2023. (Source: Author)

Thus, the proverbially 'simple' task of cleaning a ditch can be understood as a complex social, cultural, and ecological practice that serves to reinforce interdependency and relationality both within the community itself, as well as between water, land, and society. In this way, the practice of the *limpia* becomes productive of hydrosocial relations, and constitutes an embodied environmental relationship (Elmhirst, 2011). Despite internal contestation and discord, a resounding commitment to 'place' transcends immediate challenges, and *querencia* becomes evident through the *parciante*'s commitment to maintain the integrity of the *acequia*, despite

water-sharing uncertainties. This demonstrable sense of collective responsibility to the land and water, despite any material 'benefits,' underscores a relationality between people and place – both in the decision to preserve and protect the *acequia*'s integrity for the future, as well as the willingness to explore modifications to traditional practices in order to better care for the system that the *parciantes* belong to. Through such actions of collective engagement, negotiation, and problem-solving, community connection is strengthened and reinforced.



Figure 5.18: A parciante cleans the El Rito de la Lama acequia, 2023. (Source: Author)

Lastly, it is worth noting, that while the theme of land-loss and territorial exclosure faced by many *acequia* communities and individuals will be explored further in the thesis, the *limpia* can also facilitate a pathway to connect people to the place of their ancestors, even if they do not have direct access to those lands anymore. As each *acequia* maintains a legal easement, regardless of private property ownership status, the physical *acequia* itself becomes a pathway through which individuals can walk and pay respect to the land, even if they no longer carry legal ownership of such places. During one *limpia*, I worked alongside a man who was laboring as a hired *peon*e. After hours of cleaning the *acequia* together, he pointed to a field that was adjacent to the section of the ditch we were cleaning at that time. Relaying to me that this was once his grandmother's field, he shared memories of collecting *remedios* (herbs) from the land with her when he was a child. Although I did not know the circumstances of their land loss (perhaps it was an agential choice), I understood that this was now his only way of connecting to the ancestral land of his family.

5.3.3 Relational Practice - Día de San Ysidro Labrador y Santa María de la Cabeza

The *limpia* often precedes, and at times compliments, celebrations and processions of el Día de San Ysidro y Santa María de la Cabeza (the patron saint of agriculture, laborers, and las *acequias*). San Ysidro Day, typically held on or around May 15th, traditionally features a procession of the Santo or idol being carried through fields and along the *acequias*, in prayer for a blessed growing season. Although contemporarily understood as a distinctly Northern New Mexican *acequia* tradition, García, 2024, notes that "as in many communities in the Americas during the period of Spanish colonization and missionization, many of these Christian observances were imposed by the church to fall on significant days that coincided with Indigenous agricultural calendars. *In central Mexico, Tlalok the water and fertility deity of rain and lightning was syncretized with San Isidro Labrador*" (García, 2024, NMAA, emphasis added).

Providing an opportunity for the intergenerational exchange of knowledge as well as for community education, regional *acequia* associations have begun to revive the celebratory tradition. The revival of community celebrations for San Ysidro Day coincide with an uptake in popularity of *acequia* culture, due in large part to the organizing efforts of two *acequia* associations: the state-

wide New Mexico *Acequia* Association, and in Taos, the Taos Valley *Acequia* Association. Such organizing efforts can be understood as a part of a larger political project to gain cultural visibility and therefore legitimacy in regards to environmental land and knowledge claims, a process which seeks to codify 'hydraulic identities' (Boelens, 2014) on behalf of gaining social capital and thereby access to natural resources (Bebbington and Perreault, 1999).



Cuento: Celebration de San Ysidro, Chimayó

In May of 2023, I travelled with a friend and fellow researcher to partake in New Mexico *Acequia* Association's San Ysidro celebration, in the community of Chimayó. The celebration consisted of a welcome ceremony, blessings and prayers, a procession to, and planting of, a newly revitalized community garden, a welcoming of the waters, *un teatro acequiero* (acequia theater), and a *despedida* (closing ceremony) wherein all community members were gifted with a plant to take home to their own *acequia* villages.

The *teatro acequiero* provided poignant lessons on reciprocity and respect, recounting the New Mexican custom of bringing water to one's elders as a blessing and sign of respect. Such a tradition is also recounted by *Nuevamexicana* poet, Olivia Romo, in the opening lines of her *bendición del agua:*

Bendición del agua

Hija, traeme agua
and obediently
I would fetch a glass of water
in my grandpa Francisco's
favorite yellow cup
stood in front

watched as he quenched

his broken body

I bowed my head

La bendición

por el respeto

que yo tengo por el agua

el respeto

por mi grandpa Francisco



Figure 5.19: Altar to San Ysidro, New Mexico Acequia Association, Chimayó, New Mexico, May 2023 (Source: Author)

Following the *teatro*, *parciantes* were reminded that by cleaning the *acequia*, by bringing water to the dry *acequia*, and by accompanying the water down its first voyage, we partake in a symbolic gesture of this same custom, wherein the *acequia* itself represents ones' respected elder. Although such performances, celebrations, and ceremonies do not take place uniformly across all *acequias*,

NMAA's broad community organizing foregrounded *querencia* as a unifying concept and practice, situating it as central to the day.



Figure 5.20: Teatro Acequiero, New Mexico Acequia Association, Chimayó, New Mexico, 2023 (Source: Author)



Figure 5.21: Flower petals thrown into the acequia to honor its first water of the season. San Ysidro Day, Chimayó, New Mexico, 2023. (Source: Author)

5.3.4 Relational Practice – *El Congreso*

Each year, there is a state-wide *acequia congreso* (*acequia* congress), wherein representatives of the hundreds of *acequias* across the state come together to share learnings, stories, discuss *acequia* legislation, build community, and honor those who have passed. Although anyone is welcome to attend, formal participation is usually denoted by membership in the New Mexico *Acequia* Association – an organization to which not all *acequias* in the state are a part. The location and theme of the *congreso* changes year by year. In 2022, the *congreso* theme was 'Tierra Querida – Beloved Land.' The *congreso* was held in Las Vegas (New Mexico), an *acequia* community which had recently been devastated by the record-setting Hermit's Peak/Calf Canyon wildfire (see Chapter 7). The fire, which began as a controlled burn by the U.S. Forest Service, had re-ignited

discussion regarding the exclosure of territory and historic 'mis-management' of *acequia* land grants by the federal government.



Figure 5.22: Congreso de las Acequias Flyers 2022-2024 — Themes "Tierra Querida" (2022), "El Agua No Se Vende: Se Ama y Se Defiende (2023); "¡Somos Acequias! We Are Acequias!" (2024)

(Source: New Mexico Acequia Association 2022, 2023, 2024)

During the *congreso*, representatives of each *acequia* brought forward water from their rivers (*ríos)*, to pour into a large clay vessel at the center of the *congreso* hall. The blending of the waters signified a unified approach, reinforcing state-wide solidarity and organizing between the different *acequia* regions. Those who did not participate in the blending of the waters were reminded that "*just by being here, we carry water in our bodies, and we are a part of the prayers*." Attendees were instructed to turn to one's neighbor and offer a blessing, taking a moment of silence for the *maestros* (teachers) who had passed during the previous year: "*the water belongs not only to the people, but also to those who have passed before us.*" State senators and congressional representatives participated in the *congreso* – some calling in from Washington D.C. to reinforce their *acequia* support. Resounding themes of '*el agua es sagrada'* (the water is sacred) and '*el agua es una frontera'* (the water is a frontier) echoed throughout the day.

The *congreso* represents just one aspect of political state-wide *acequia* organizing, led largely by the New Mexico *Acequia* Association itself. Other visible gatherings include '*acequia* day' at the

State capital, and the formation of governing bodies such as the New Mexico *Acequia* Commission. As Trott (2017) details,

"several of the first generation of *acequia* organizers were part of La Academia de la Nueva Raza (Academy of the New Humanity), founded in Northern New Mexico in the 1970s by a collective of local Chicano intellectuals and community leaders who believed in popular education and consciousness raising through the sharing of local knowledge – *el oro del barrio* (the gold of the community). As a part of this collective, La Academia published a journal called *El Cuaderno de Vez en Cuando* (The Occasional Journal), as well as a collection of oral histories and stories called Entre Verde y Seco (Between the Green and the Dry), which contemplated the components of *una vida buena y sana* (a good and healthy life) in community, art, and working the land" (Trott, 2017, p. 30; Montiel, Atencio, and Mares, 2009).

The influential legacy of La Academia is discernable within *acequia* organizing efforts, today, particularly through the New Mexico *Acequia* Association's emphasis on cultural art as organizing power (*teatro* (theater), music, art, storytelling, fibre-work, and more).



Figure 5.23: Acequia Day at the State Capital (2020) (Source: New Mexico Acequia Association)

5.3.5 Relational Practice - *La Cosecha*, Hay Bailing, *La Matanza*

The relational practices discussed thus far—i.e. the *limpia*—are sustained through recurring acts of maintenance, labor, learning, and dialogue. The acts of harvest extend this relational logic into the domain of production itself, revealing how communal labor organizes not only agricultural output but the social and ecological bonds of the *acequia*. Among the acts of harvest, I focus here on communal hay baling – recognizing also celebrations such as *la cosecha* (harvest) and *la matanza* (communal feast) as tied to the conclusion of the agricultural cycle.

During my fieldwork period, a significant portion of time was spent bailing hay, bucking bales, and receiving food grown in fields: including heritage crops such as *calabazas mexicanas* (Mexican squash), white Hopi corn and blue *maíz*, regional varieties of apples, and wild apricots. More than other acts of *production* (i.e. planting, irrigating), the harvest was revealed as a highly collective activity. This is due in part, I believe, to the physical and infrastructural labor demands of the process. First, the communal nature of the harvest reflects a distribution of labor within an increasingly aged agricultural population. Many of the fields in which I participated belonged to elderly community members who were not physically able to gather their harvests alone. Bucking and bailing hay is arduous work, and a time-intensive labor activity.

A secondary aspect of the communal nature, as alluded to before, is due in part to the infrastructural and equipment demand. In a community where the net farm-income is a negative percentage each year (US Census Data, 2019), small scale farmers do not possess the livelihood assets necessary to purchase or maintain individual equipment. This dynamic has been revealed in previous research engagements (i.e. Dixon, 2020), which spurred the development of small-scale equipment co-ops across the County. Beyond these institutionalized co-operative structures, however, exists the more embedded collectivism of *acequia* communities, wherein one family may own a tractor, and another a baler; flat-bed pick up trucks and trailers are shared as multiple vehicles are needed to clear the hay. This relates to a long history of agricultural mutual-aid in the region (Rodríguez, 2006) – as well as to shared stewardship of land and waters. Moreover, on a pragmatic note, many agriculturalists spoke of the need to support neighbors in keeping their lands in production—not

only for land-tax valuation implications or the infrastructural demands of the *acequia*, but also, notably, for ecological concerns. Fieldwork interviews revealed increasing concern over the presence of invasive plant species in fallow fields, which have the potential to in turn migrate to agricultural fields already made vulnerable by drought. Through the *acequieros'* perspective, fields that were kept in active production functioned as a connected buffer zone against invasive encroachment. This concern reframes the communal harvest as not only a socially relational practice but also an ecologically relational one: neighbors sustaining each other's fields is, simultaneously, an act of landscape-scale stewardship, where the maintenance of social bonds and the maintenance of ecological health are not separate endeavors but are produced through the same collective labor.



Figure 5.24: Hay bailing off of the Acequia Madre del Rio Chiquito, June 2023 (Source: Author)

5.3.6 Relational Practice: Irrigation as Relational and Multi-Cultural

Acequias facilitate gravity-fed flood irrigation. In Northern New Mexico, *acequia* irrigation techniques have been refined throughout centuries, and often incorporate elements of traditional indigenous irrigation design (Nabhan, 2018). The majority of farmers and irrigators with whom I spoke demonstrated immense ecological knowledge regarding the soil, slope, and personality of their particular land, while incorporating both traditional and innovative watering practices into their irrigation regimes.

It is not just the physical practice of *acequia* irrigation that indicates its multi-cultural origin; even the language used for *acequia* irrigation denotes its global roots. *Topanco* (a small raised bump that one constructs in the field to slow or direct the water's movement) derives from the Nahuatl word 'tlapanco' meaning attic, or loft. *Tanque* referring to a small and shallow dip in the ground that collects rainwater, derives from Tiwa, or the spoken language of the Tewa peoples of Taos Pueblo. Other words, which describe the physicality of the *acequia*, mimic the body: *brazal*, stemming from the Spanish word *brazo* – or arm – refers to the small ditch that branches off of the *Acequia Madre* (mother ditch); *sangría*, translated as 'bloodletting,' refers to a perpendicular ditch that directs water from the *Acequia Madre* to irrigate an individual plot of land; a *venita*, or vein, indicates to the same. Indeed, even the word *acequia* (or *séquia* in Catalan) derives from the Arabic al-sāqiyah (الساقية), which means "the one that bears water" (Rodríguez, 2006).

Despite the international, intergenerational, and intercultural influences that inform *acequia* irrigation practice, there seems to exist in Taos almost an entire generation of youth who have lost fundamental instruction in irrigation practices. A seemingly cyclic phenomena, there is also a compounding intergenerational tension that emerges, wherein elders express sorrow that the youth do not know their practices, and concurrently youth express frustration that they were not instructed in the *acequia* ways, and now often lack access to land or resources to become farmers themselves. Resulting from this occurrence, and coinciding with a Statewide uptake in '*acequia* culture,' a powerful youth movement has begun to emerge to reclaim *acequia* practices, and provide popular education to new generations. As one young acequiera commented,

> *"Even though I came from a family of very land based, traditional people, I'm part of the generational gap that, you know…my parents didn't do that because the war changed how families had a relationship to land and surviving….I*

think in acequia communities, people aren't expecting young people to be committed to the work because for many of us, there was a huge gap of information and experience….And so we're learning it much older, with older bodies…" – Parciante of the Acequia de Atalaya (Rio Hondo), January 2023

Another *acequiero*, who was a graduate of New Mexico Acequia Association's '*Sembrando Semillas*' (sowing seeds) program relayed:

"At that time I wasn't invested in any type of acequia culture or anything….descendant of, but not wanting to be…I was more into the material things, wanted to make a lot of money, you know, bunch of houses, fancy cars and stuff. But I struggled with alcoholism, and I was functioning there for a while. But then I got to the point where I was just sick all the time…

And then it went to hell and [a neighbor] got me into this program that the New Mexico Acequia Association was doing called Sembrando Semillas.

So, I became a Maestro (teacher). And I didn't know shit, so I was just basically going off of what my dad was telling me. And my dad said I'll help you with some of the initial tractor work, but I'm done, I'm not doing this anymore, and I'm not a teacher, so it's up to you.

So, I just learned like that on my own, little by little. I was just giving produce. I was learning as I was going. But…this kept me alive. The farm kept me alive. I don't care how shitty I'd feel…I would drag my ass to the field, and I'd still feel a little better, you know? And probably couldn't get much done. But it would just at least wake me up a little. And then just knowing that I had a purpose to do something just kept me going and…I think I had to go to those damn experiences to understand…not only understand…the suffering of the watershed, but the suffering of the community through addiction. And then to see the light that…being with the land heals, and to understand that [this state system is] not letting them be part of who they are." — Maestro of the Sembrando Semillas youth education program, 2022.

Another *acequia* elder shared:

> *"And as water becomes more valuable, people are really engaged. It's not like…there might have been a period there in the 50s, sixties and 70s, when there was a migration from agriculture or rural communities into more of an urban setting. But I think, and I see it, we experience it….I think that shift is occurring right now. We see people coming back and farming and younger generations interested in it and participating. So I think it's positive. I think it's a positive thing." — Acequiero on the Acequia Madre del Cañon Sur, Rio Fernando, 2023.*

In my own experience, I also learned how to irrigate only later in life. I was taught by a woman named Clemencia, while helping her to water her mother's fields during my fieldwork period. Clemencia is a shepherdess known for her unmistakable red lipstick, her remarkable indigenous Churro sheep, and her defiant acts of civil disobedience in protest of the U.S. Forest Service's common land exclosures that occurred throughout New Mexico in the 1980s. She also is a *parciante* off of the *Acequia Madre del Sur* (Rio Fernando).

While irrigating, Clemencia left me to my own devices, mostly, but would occasionally watch me from across the field, or show me how to slide the back of the shovel firmly against the soil, so as to create a gentle contour that the water would then follow. In doing so, she demonstrated the remarkable power of a 1/4inch deep scratch on the earth's surface: one had merely to draw a line for the water to flow, and soon the entire corner of the field would be soaked. Clemencia's technique was soft but effective, and required a very different output of labor as compared to the methods of the men I had also worked with. My own experience often mimicked that of others who have learned to *acequia* irrigation only as adults.

As Rodríguez, 2006 writes:

"Anyone who has watched the minimalist gestures of a *parciante* irrigating a field will allow that at first glance it does not look like much. Yet anyone who has tried to control the gravity-driven flow of water over an irregular gradient of variably porous, plowed ground so that it will soak in slowly, deeply, and evenly will tell you how difficult this job is. Success requires experience, patience, knowledge, and control. One must be familiar with the terrain and responsive

to the contingencies of weather and water flow. One must not lose the water or let it get away. Given the undeniable power of flowing water, little apparent exertion can become a mark of skill rather than lassitude. Each act of irrigation is particular to a piece of land. My own first attempt years ago at what looked like a simple project ended in ruined, washed-out rows and tears of frustration and shock. I failed to anticipate the force of the water as it rushed off the mountain and over my neatly planted rows of seeds" (Rodríguez, 2006, p. 6).

In addition to a gentle-handed technique, Clemencia also taught me about the 'three feminines' of *acequia* irrigation — and how they make themselves known when one attunes to the water. The first was the mother, the earth: how to know the soil, and the contours of the land. The second was the sister, the water: respecting when she comes, learning how to sense her in the air. The third is the grandmother, the moon: she moves the water both within and outside of ourselves, reminding us that we are also part of these systems – bound up in relationality with ourselves, with the *acequia*, with the land, and with others. What Clemencia did not say aloud, but what I sensed through our conversations, was also the notion of a relationality across temporal scale. Put simply: the ways in which the relationship to the *acequia* informs, also, a relationship to one's ancestors, to future generations, and even to generations and cultures which are not our own.

Perhaps this is what Icelandic writer Andri Snær Magnason refers to when contemplating intimate time – the time one can connect with 'personally,' by touching a grandparent or grandchild with their bare hands (Snær Magnason, 2019). With the *acequia*, I reason, one can touch at least several hundred years of ancestral history, for the Pueblo, many more, and — although unknown — perhaps through our actions of irrigating the land, and maintaining the water, also we touch the futures we are helping to create.

Thus, the relationship to the *acequia*, as witnessed through the irrigation practice, becomes woven into a larger context of mutuality and relationships with one another across time and space. Relationality through irrigation is also visible through daily interactions: neighbors letting down the water for an elderly *vecino*, or for the family who works in-town. While it can be said that relationality is also bound up in mutual survival: in knowing that networks of connection serve to buffer rural isolation – when forged throughout centuries and over generations this 'instinct of survival, and instinct of cooperation' (Chapa, 2020) becomes a part of the cultural fabric and ethos of the hydrosocial system, itself.



Figure 5.25: A field being prepared with seeds before irrigation. Chimayó, New Mexico, 2023. (Source: Author)



Figure 5.26: The same field, after the first irrigation. Chimayó, New Mexico, 2023. (Source: Author)

Core to *acequia* governance and irrigation practice is its adaptive nature. *Acequias*, through a material lens, exist as irrigation infrastructure that help to deliver water in the high, arid, mountains of northern New Mexico. Historically, such systems have functioned through low-tech and Lo-TEK[22] design, distributing water across space and time, and within often-times challenging conditions.

Today, many *acequieros* face increasing challenges regarding water delivery and irrigation performance, due both to changing climate and drought conditions, as well as fragmentation of the *acequia* systems themselves (both materially, socially, and symbolically — see later sections for more detail). In response to such challenges, many *acequieros* adopt a multi-faceted approach. This includes the aforementioned emphases on cultural education, broad public organizing, and legal authorities, as well as small-scale infrastructural adaptations and technologies. Such adaptations include, for example, the piped delivery system detailed in Chapter 1, which serves to increase the volume and flow of water to domestic acequias, in an increasingly scarce water environment. Alternative adaptations and new technologies include, also, an uptake in water storage facilities, whereby farmers may utilize their time-based allocations to fill their storage tank or cistern (above ground or below ground), and then divert this stored water into a pipe or drip delivery system across their fields throughout their non-water hours. This has become particularly relevant in cases where *acequias* are extending the period between water allocations, in order to reduce water lost in conveyance, as well as to provide a greater duration for water delivery to occur in each 'turn,' due to reduced volumetric flows.[23] At a larger scale, reservoir systems, such as that within the *Rio Chiquito* watershed, function to offset extreme scarcity through back-up provisioning. In recent years, however, even such large-scale endeavors have begun to run dry.

---

[22] Lo-TEK is a term coined to describe Local and Traditional Ecological Knowledge. See: Dixon, 2017 for more information.

[23] For example: water scheduling may be changed to longer blocks every-other week, rather than shorter time-blocks every week, in order for a usable volume of water to be delivered, due to reduced overall flows. In this situation, a farmer or irrigator may fill their storage tanks with acequia water during their water hours, and then use this stored water to irrigate during the 'off' period.

Additional observed adaptations include the conversion of surface water rights to ground water rights, followed by the drilling of an irrigation well; the cement or slip-lining of canals; or, more commonly, flexible and dynamic changes to rotation schedules, rooted in priorities of equity, proportion, and need. Some *acequias* have also installed metering and telemetry systems, however *mayordomos* frequently report that without proper maintenance, the readings are unreliable due to infrastructural damage, pooling, and the irregular flows introduced by cement weirs in an otherwise earthen canal. Such mechanisms of transformation are adopted, adapted, contested, and foregone across space and time, as is the natural tendency of agricultural endeavors when met with conditions of scarcity — real or produced. All such endeavors represent mechanisms through which *acequieros* engage with the puzzle of irrigation, continuing to find new and appropriate methods of water delivery for agricultural, ecological, and cultural needs.

Such transformations represent not a shift 'away' from the *acequia*, but rather a natural process of experimentation and adaptation. *Acequieros* are keenly aware of the relational nature of their hydrosocial systems and often discuss the socio-ecological impacts of specific technological advances, such as canal lining, through a holistic lens. For example, while lining a canal may serve to increase irrigation efficiency, it can correspondingly contribute to a decline in ecosystem health, a reduction in social and cultural cohesion, and changing relationships with nature, through the elimination of ditch cleanings, a reduction in in-person negotiations, the loss of water infiltration to the surrounding landscape and aquifer, and a decrease in intergenerational learning. Such cost-benefits are frequently weighed in discussion when considering new technological advances.



Figure 5.27: Examples of different headgates — some are wooden and earth, sealed with a grassy mixture called sod; others are metal and cement, sealed with a lock. Many other variations exist within different acequias, gesturing towards both social and infrastructural transformations. Photos: El Rito de la Lama Acequia, 2023 and Acequia Madre del Llano, 2023 (Source: Author)

5.4 What Happens When Relationality Breaks Down: Water Sharing Discord Along the Rio Fernando

"The ultimate test of the power of custom is drought" (Rodríguez, 2006 p. 68).

While the principle of water sharing is instrumental in fostering community wellbeing and cohesion, particularly during times of hardship and/or drought, it is also a system that is ripe with contention and illustrative of power relations along the *acequia*. Such aspects of water sharing are also part and parcel of the relational nature of *acequia* water governance, and often hint at deeply set questions over identity, legitimacy of water resource claim, historic connection to the landscape, and method of negotiation (legalistic v. communal).

Within the fieldwork period, one water sharing discord came particularly to the fore: that between a newly revitalized downstream *acequia* and the waters of the upper longstanding agricultural *acequias* along the Rio Fernando.

5.4.1 Revitalizing the Vigil y Romo

The Vigil y Romo is a small, downstream *acequia* along the Rio Fernando, that winds along the edge of the Town of Taos. Largely abandoned since the 1980's, revitalization efforts began in 2018, when a local environmental non-profit purchased historically agricultural fields off the *acequia*. Among the *acequia*'s eight *parciantes*, six are private landowners and two are institutional actors: the aforementioned environmental nonprofit (that owns and operates an educational farm-park on the property), as well as the Town of Taos. Thus, while conceivably dormant and diminutive, the Vigil y Romo also represents a space of institutional power, urban *acequia* revitalization, and — critically — contested claims to water in a time of increasing scarcity.

Conversely, the upstream *acequias* of the Rio Fernando represent primarily longstanding *Nuevomexicano* families, large agricultural parcels, and a continual history of maintenance and use. While the Vigil y Romo maintains a legally adjudicated right to the *acequia*, upstream

acequias contend that water was customarily shared with the lower *acequia* only as a *sobrante* (excess) right – going so far as to codify a legal water sharing agreement between the upstream *acequias* that excludes/denies the lower.

On speaking about the revitalization process of the Vigil y Romo, the former *Mayordomo* (through his position as Town of Taos Councilor) relays:

> *"I started looking for our in-Town acequia maps…there were none. So, that became job one: where are our ditches in the town? Where do they exist? So, it started with mapping…and then in one of my conversations with [a colleague], he said 'well, this is great, you're starting to make headway…but what about the Vigil?' And I said 'what are you talking about, the Vigil, I haven't heard of it.' And he said, 'well, no one has. Everyone considers it a dead ditch. But it's not.' And, so, he showed me where it was. We walked it. And that began the effort to revitalize that." — Former Mayordomo on the Vigil y Romo, September 2022 (emphasis added).*

Following the years-long physical revitalization of the ditch, negotiations for water began, which quickly revealed the fault lines beneath the surface of the Rio Fernando's water sharing landscape.

5.4.2 Legal v. Community Negotiation

Early in the process of revitalization, members of the Vigil y Romo were confronted by an upstream actor while conducting repair work along the shared waterway. As a commissioner from the Vigil y Romo recounts:

> *"'Whiskey is for Drinking and Water is for Fighting' – and that is the maxim of the Southwest. So…the first battle ensued with a [proposed ditch repair]…we were accosted by a deceased individual, Maximiliano Chavez, brother of Arturo. He saw us down there, looking at the repairs, and just drove up madder than a wet hammot.*

'What are you doing down here! You can't be down here!'

We explained to him that 'We are just looking at this, and looking at the feasibility of maybe talking to the commission about maybe creating a flume…'

'We don't want to talk to you! Get out of here! You have no permission to be here!'" — Commissioner on the Vigil y Romo, September 2022

This encounter set off a process of water sharing discord that has carried both material and relational consequences. As one Vigil y Romo commissioner shares, failed attempts at water sharing during particularly dry years saw requests for water met with hostility, and have resulted in crop failure:

"Three years ago, very poor drought year, I had called Rámon, [Commissioner of the Acequia Madre del Sur] to see if he could let anymore water down from his ditch into the into the Southside ditch, so that we could pick that up at the Vigil and use that to water the crops and get water to the parciantes…I called Rámon, and he said you've got to call Maximiliano, the Northside Mayordomo…I called up Maximiliano, and he basically told me to go to Hell. This is the same Maximiliano that accosted us. So, I was bummed. I gave it a couple weeks. Tried again — I called Rámon, called Maximiliano, he told me to go to hell again, so – no water sharing.

~

So, I talked with George at the [nonprofit] about this situation, sayin' "George, we are in a tight fix. We don't have water in the river because of urbanization, occlusions, perhaps illegal ponding, and lack of water sharing….we are just not gonna be able to water your fields" and so he had lost, well, he's lost three years now worth of crops in that field. And the town has lost three years worth of cover crops." — Former Mayordomo on the Vigil y Romo, September 2022

In the wake of such confrontations, and without progress on water distribution through informal channels, the Vigil y Romo pursued a legal avenue — issuing a written letter of demand for water to the upstream *acequias*, citing their historic irrigated acreage and adjudicated rights, and, later, contacting the District Attorney. For the downstream *acequia*, these choices represented a forced-response to a denial of both dialogue and water. For the upstream communities, the acts constituted a fundamental breach of relational protocol, and an affront to their standing as traditional and continual irrigators.

> *"There were some major breaches of protocol about how that all came down…They sent us a letter notice of demand without talking to us…And they went to the District Attorney to try to leverage us into it. That's just unconscionable…All it did was make our teeth go on edge. And I…I don't… I forgive it, but I don't forget it." — Commissioner on the Acequia Madre del Norte, Rio Fernando, May 2023*

The central tension which emerges is not simply about "upstream vs. downstream" irrigators or "old-timers vs. newcomers." It also includes the reality that the revitalization of the Vigil y Romo — an action that aligns with *acequia* values of restoring infrastructure, bringing water to people, and growing food — is experienced by some representatives of upstream *acequias* as an illegitimate claim on water due to a complex interplay of identities, use, history, methods of conflict negotiation, and – importantly – a lack of relational labor during the past 50 years. The dispute also underscores questions over what constitutes a legitimate relationship with water within the hegemonic-*acequia* realm: is it legal right? Can it be earned through sustained practice, presence, and reciprocity? Is it informed solely through ancestral connection to place?

5.4.3 What for Equity?

Throughout the fieldwork period, I continued to observe a breakdown in collaborative negotiations. The Vigil y Romo pressed forward with their legal right to water, while the upstream

acequias largely dismissed their claims. Mediation attempts by elder acequia leaders, the New Mexico Acequia Association, and the Taos Valley Acequia Association yielded no agreement. Eventually the District Attorney became involved. Amidst the discord, however, was also a tangible, if not complicated, sense of understanding. When asked about his experiences with water sharing and his future aspirations for his property, a young *parciante* of the Vigil y Romo offered:

> *"All I know is that it's the people from upstream…they're just not sharing because this acequia wasn't running for like 50 years…They think that we owe 50 years of, like, ditch dues and that we haven't paid our ditch dues and haven't done our work. So, we don't deserve the water. We can't just come in 50 years later and just expect the water…*
>
> *And is there even enough water to get to us? Because if they start giving us their water, then they don't have enough to farm their land and they…they just shut down their farms, just so downstream can get a little bit of water?...If the only way we're gonna get water is taking it from the people that have been using it, that's kind of…It's hard.*
>
> *If I ever had water on the property, I'd definitely want to farm it, for sure…we have just right as much right to the water as they do, I guess. But when I think about it, well…If it was my choice to take water from them so I could have a little bit and mess up their farming, what they've done for hundreds of years…I wouldn't be OK with that…I would rather just not have the water." —*
> *Parciante of the Vigil y Romo, February 2023*

Thus, through a relational lens, legal entitlement and community legitimacy diverge. The young *parciante* holds a recognized water right, yet defers to what he perceives as the upstream community's earned relationship with the water through generations of labor, maintenance, and presence on the land: two equal but different expressions of *querencia*.

Similar reflections were shared by the land manager of the non-profit farm park. Despite having lost several years of crops due to the water sharing impasse, he situated the discord within a broader history of dispossession, which serves to complicate an easy moral positioning of the downstream *acequias*' pursuit of their legal rights.

> *"If the assumption is that the Vigil y Romo and the Town of Taos are representing, you know, supposedly, the wealthier aspect of Taos…then it kind of adds another, a different flavor to folks that are protecting, attempting to protect what they believe is theirs and is being taken… and you know this history goes way back…this whole thing ties into, you know, the land, land grant rights, and issues of cultural gentrification, rural gentrification, and income gaps and wealth versus poverty and all of that." — Commissioner on the Vigil y Romo, December, 2022*

Critically, this reflection extended to the very mechanism through which the Vigil y Romo has pursued its water rights:

> *"[One commissioner's] approach is like 'we're going to stand with the law, we're going to use the law to say, you know, this is our right…' but, we live in a community that, you know, feels that…the law hasn't ever really defended them…The law has only been used to take from them… what does equity mean in a community where Hispanic, intergenerational families are losing their power, basically because they're losing their water rights?" — Commissioner on the Vigil y Romo, December, 2022*

While the confrontation was spearheaded by demographically elder-men, a notable generational divide also emerged. Two young female commissioners — one upstream, one downstream — offered parallel reflections. The upstream commissioner observed:

"You know, we got the same letter, we go to the same meetings. And you know we could have figured this out. But we're not going to if they're going to be asking for in that way.

My dad will always say like we….We don't have money, but we're rich because we always have a lot of seeds and grow a lot of corn. So I always knew that it was something I had to take care of and something that was important. But, I'm the only woman usually, and I'm definitely the youngest…so, it's some heavy stuff to be in those meetings" — Commissioner on the Acequia Madre del Sur del Cañon, Rio Fernando, April 2023

This was mirrored by her downstream counterpart, who shared:

"For me I feel like the strongest foothold I have in this discussion is kind of…not begging, but pleading to those who are in their commissioner roles at this point in time talking about water sharing…how it impacts our generation. If they choose to go in a direction that further separates and splits and creates division….They're leaving us with nothing. They're leaving our generation with very little community, with very little agreement and compromise " — Commissioner on the Vigil y Romo, January 2023

At the time of writing, no compromise has been reached.

The water sharing discord of the Rio Fernando serves as a necessary corrective to any romanticized portrayal of *acequia* governance. What it reveals is not the failure of relational water management, but rather its deeply political nature: relational claims to water are themselves contested, shaped by identity, history, positionality, and lived experience of power. These relations are also deeply impacted when varying expressions of *querencia* and ontology collide — particularly within and between *acequia* actors themselves. In this instance, a joint idea of fairness leads upstream and downstream commissioners to opposite conclusions: for upstream irrigators, water must be earned

through recursive participation and labour, while for downstream commissioners it is owed through shared custom and need.

Both upstream and downstream actions are intelligible within their respective logics, and within each of these spaces plurality is also seen to emerge. It is precisely this plurality of logics, operating within and across *acequias*, that renders water governance in this landscape irreducible to an essentialized framework, highlighting instead the complex interplay between identity, resource use, and relations of power. Environmental claims, knowledge systems, and management practices are, in this context, inseparable from the ontologies and histories of those who articulate them. To understand water sharing, then, requires attending not only to how water is distributed, also but to whose relationships with water are recognized, legitimized, and valued — and by whom: a theme reflected across scale.

5.5 Discussion: Relationality as *Querencia* in Practice

5.5.1 Relational Practice as Hydrosocial Constitution

Acequias as hydrosocial systems exemplify a complex interplay between cultural practice, environmental resource management, and social organization – serving not just as avenues for material resource distribution, but also as socio-natural entities that embody a mutual co-constitution between water and society (Linton and Budds, 2014). Whereby *acequias* are hydrosocial entities, and the hydrosocial cycle is "a socio-natural process by which water and society make and remake each other over space and time," (Linton and Budds, 2014, p. 170), the rituals associated with the *acequias*, such as the annual *limpia* (collective cleaning of the ditch) or the procession of San Ysidro, can be understood as core components of this mutual co-constitution.

By applying a relational-processual lens to the cultural practices of *acequias*, the complex interplay of hydrosocial processes is visibilized. The relational practices (discussed elsewhere as ritual practices, e.g. Rodríguez, 2002) associated with *acequias* embody what Geertz might term as 'cultural performances,' or, enactments of deeply held worldviews about socio-natural

relationships. More than a cultural curiosity, however, *acequia* relational practices are fundamental to the active maintenance of the *acequia* itself, linking cultural practice to environmental and community outcomes. While such practices "may change through time, [they] continue to express very localized attachments to specific places" (Rodríguez, 2002, p. 20). Relational *acequia* practices therefore serve to reinforce a sense of *querencia*, and, in doing so, can be seen to widen the *acequia* "space of re/existence" (Escobar, 2019, p. 42), thereby reinforcing a relational *acequia* ontology that is rooted in the aforementioned concept of *querencia* and its corresponding values.

Rappaport suggests that rituals (in this case, relational practices) can serve as a means of communicating with ourselves about our relationship to one another and to our environment (Rappaport, 1999), and, if viewed through this perspective, it can be seen that through *acequia* relational practices, the hydroscape is "sacralized or made sacred from the standpoint of those who have endowed it with such meaning through generations of cultural discourse and practice" (Rodríguez, 2002, p. 16). Such a perspective aligns with Escobar's reflections on ancestrality, insofar as that ritual – "far from an intransigent attachment to the past…stems from a living memory that orients itself to the ability to envision a different future" (Escobar, 2019, p. 47).

In the context of *acequias*, one can see how the physical features of the irrigation system - the channels, headgates, and surrounding fields - similarly become infused with cultural meaning and moral lessons through generations of use and associated storytelling. The rituals and everyday practices associated with *acequias* not only manage water distribution, but also continually reinscribe the community's values, history, and identity onto the physical environment, creating a 'sensing of place' that is integral to the community's cultural continuity and environmental relationship (Basso, 1996).



Figure 5.28: "Umberto" cartoon from the local newspaper, depicting a respect for, and relationship to the acequia, located in the Taos Valley Acequia Association's office. April 2023.

(Source: Author; Taos Valley Acequia Association; Guillermo Baron, 1998)

Translation:

"Umberto! Wake up! Today we are going to do work for our mother! Put on a shirt and clean suspenders, we must demonstrate proper respect for our Mother! Eat well, my great-grandson, we need strength in order to help clean our Mother. Our Mother has been good to us! She takes care of us, and has given us all that we need in life for more than 300 years. My great-grandson, I would like to introduce you to our mother…the Acequia Madre!" "Very pleased to meet you, how can I help!"

As Rodríguez, 2002, writes:

"Sacred rituals are the medium or setting for the transmission of core values and regulatory messages. Every cultural system represents an adaptation created and modified over generations by people who inhabit and move through a particular habitat; terrain, or territory…Although the subsistence pattern of the people in question has changed dramatically over the past half-century, the entire *acequia* culture complex remains integral to their social cohesiveness, economic welfare, sense of historical continuity, and moral-spiritual understanding of who and where they are" (Rodríguez, 2002, p. 21)

Thus, through a hydrosocial and relational perspective, it can be understood that the *acequia* is not simply a backdrop for cultural practices, but is instead an active participant in the making and reshaping of such practice. Through relational practices, *acequia* landscapes become imbued with moral and historic significance, serving as living repositories of cultural wisdom and identity.

Through this lens, relational processes can be understood as a core element that enables *acequieros* to engage with their world and transmit knowledge across generations. Both the glorious and the mundane become a process by which *acequieros* "get to know their local world not through distancing reflection, but by going about it, that is by being alive to their world" (Escobar, 2019, p. 45).

This type of engagement indicates an active practice, an active worlding, which, within the *acequia* context, often requires a physical relationality with the *acequia*, and both informs and is informed by a sense of *querencia*. If *querencia* is "a reciprocal complex of interconnected relationships…that helps maintain the cultural homeland of Nuevomexico" it can also be understood as something which must be made and re-made through active engagement, or what Gonzales terms as "one's *tarea*" (task) (Gonzales, 2020, p. 248). Thus, maintenance of the *acequia* through relational practice can also be seen as the maintenance of *querencia* – or that which enables *acequieros* to maintain a relationality with the *acequia* in the first place. It is through this practice, I contend, that *acequieros 'sentipiensan con la tierra' (think-feel with the earth)* (Escobar, 2019, p. 43).

Lastly, it is important to note that *acequias* are sites of hybridity and imperfection. Accordingly, what are referred to here as *acequia* relational practices, as with any cultural practice, must also be understood as imbedded in, and reflective of, varying relations of power. When understood in this way, practices can also be seen as reflective of, and respondent to, varying environmental narratives and claims over resource use, territory, and identity (e.g. in the case of the Rio Fernando). In one way, the maintenance of *acequia* relational practices can be representative of a contestation towards dominant/hegemonic water management paradigms. Concurrently, however, *acequia* practices can and should also be understood as complex sites of inter and intra cultural contestation and negotiation in unto themselves: *who participates in such practices, on what terms, and to what end? What does a process of reinforced cultural practice, and therefore claim over territory and place, mean for those who are the original stewards of the land?* In recent years, there has been increasing visibility over the mestizaje nature of *acequia* practice and ritual, and an

increased recognition over *genízaro*[24] identity and influence on *acequia* practice itself. Yet, these claims must be taken with caution, so as to not ignore the *acequia's* historic relationship with coloniality itself (see Nunn et al., 2020, for a discussion on healing the colonial wound between and within Indigenous and Nuevomexicano communities, through a conversation on *querencia*).

There may never be a 'solution' to the complex relationalities of power that are borne through water in Taos. Accordingly, this thesis seeks to recognize *acequias* as simply that: as complex sites of negotiation, as illuminations of multifaceted histories, and as ever-evolving spaces of healing, of discord, and of inter and intra community relations.

Thus, perhaps by allowing *acequias* to exist as sites of hybridity, it becomes possible to work towards an embodiment of plurality, recognizing that as "we move in and out of different cultures, [we become] aware there is always a larger, more accepting *querencia* that includes us all" (Anaya, 2020, p. xxii).

5.5.2 *Querencia* as Living Practice

Querencia, and its expressions and manifestations, are not uniform. It is a concept and practice, that is made and remade through recursive practice across space and time. For each individual, expressions of *querencia* may vary and change. As a term, it is not intended to mask internal diversity, contestation, or discord – but rather to serve as a unifying concept through which to understand *acequia* relational ontology, including a deep and embedded sense of, and reciprocity with, place. Similar to concepts of *buen vivir*, the notion of *querencia* emerges as a "culture of life…[a] response/proposal… which is rooted in a communal rather than individualistic paradigm" (Rodríguez, 2020, p. 7).

---

[24] Genízaro refers to both de-tribalized mestizo/indigenous communities (e.g. Abiquiú), and, more traditionally, the descendants of indigenous peoples who were sold into slavery by both indigenous and/or Spanish captors, to be baptized and raised in Hispanic custom. At one time, more than 1/3 of all Hispanic identifying people in New Mexico were genízaro (Gonzales and Lamadrid, 2019). Today, most Nuevomexicano identifying people are of partial indigenous / genízaro ethnic and cultural descent (see later sections for writing on the 'tri-cultural trap').

As the cases in this chapter suggest, variations of *querencia's* expression(s) are themselves evidence of its unique and multi-faceted nature. On the *Acequia Madre del Rio Chiquito*, *querencia* may be expressed through insistence on bodily presence at the *limpia*, while on the *Acequia de Atalaya*, a young *parciante* may express her *querencia* through learning irrigation practice, even with a much "older body." On the Rio Fernando, *querencia* may be seen to emerge through cleaning a dry ditch, or through palpable tensions that occur regarding the idea of disrupting another's irrigation practice for one's own water-gain. My current practice of *querencia* may be writing this thesis, while another's expression of *querencia* may be returning from the city to participate in the annual baling of hay (Dixon, 2026). *Querencia*, although existing in relationship to a sense of place, is not bounded by space or time, or limited by geography. As Fonseca-Chávez documents, *querencia* also exists within a collective memory of the *Nuevomexicano* homeland, even for those whose migration pathways have taken them far away (Fonseca-Chávez et al., 2020).

This chapter has sought to explore the intricate web of relationships, practices, and rituals that form the foundation of *acequia* governance in New Mexico. In doing so, the chapter has highlighted the role of relational values (such as respect, reciprocity, and responsibility towards place) in constituting the *acequia* itself, as a living, hydrosocial space that is actively made and remade over space and time. Through an examination of water sharing practices, governance structures, and cultural relational practices, the chapter has explored the ways in which *acequias* transcend material resource management, and instead embody complex hydrosocial systems rooted in relationality and *querencia*. The aim of this chapter is to provide a grounded introduction to central practices of the *acequias*, in order to set the stage for further analysis throughout the thesis. Accordingly, subsequent sections of this thesis will explore the political context that shapes *acequia* governance, and the themes of relational autonomy that will come to the fore, as territorial protection (beyond the materiality of water itself) emerges as a central component of *acequia* organizing. These inquiries will help to examine the implications of *querencia*-informed governance for developing more just and equitable water management paradigms, recognizing the central role of relationality in doing so.

Chapter 6. Water Rights, Adjudication, and the Production of Hydrosocial Difference

6.1 Introduction

Within the greater political landscape of New Mexico, legally adjudicated water rights operate under a system of seniority and priority, following a 'first in time, first in right' determination of legal hierarchy. This process exists alongside but in contrast to existing water-sharing practices (Rodríguez, 2006; Perramond, 2018). This system of hierarchy results in those water rights holders with the senior-most water right legally maintaining first and full claim to the use of water in a time of scarcity, shortage, or drought. The system of prior appropriation often results in indigenous nations receiving the senior-most water right (based on a priority date of time immemorial), followed by *acequia* users, private landowners, municipalities, industries, and so forth.

Existing tensions around water—including a lack of material water to satisfy all paper water demands—have triggered a process of state-led water rights adjudication: the codification and apportionment of individual and communal water rights to allocate and account for all water use and claims in New Mexico. New Mexico is party to both interstate and transboundary water compacts, which regulate both the quantity of water flowing into and out of New Mexico. Under the perspective State Water Code of 1907, New Mexicans do not own water; rather, they own a right to use the water (Perramond, 2012). The process of adjudication, therefore, is the state's mechanism for quantifying, monitoring, and enforcing said water rights. Yet, as Perramond (2012) notes, "adjudication is not just about property rights. The process fundamentally challenges community notions of who owns the water, who has the power to manage the water, and how water will be apportioned in the future" (p. 65).

I also contend that the state-sponsored adjudication process has contributed to the commodification of water in two keyways, while simultaneously producing and relying upon a new 'expertise' of

water that is largely abstracted from a relational perspective. First, the process of adjudication is an essential step in the privatization of communal water rights. This is crucial, as it is only through legal titling and privatization of water that it is made enclosable and saleable, demonstrating the ways in which "water flows increasingly in accordance with the flows of capital" (Linton and Budds, 2014, p. 172). Second, findings of the over-allocation of water rights (proportionate to actual material water available in the state) have activated market demand. This has in turn placed pressure on small farming communities, water rights holders, and landowners, many of whom can be understood as 'land rich but cash poor.' Lastly, due to the doctrine of prior appropriation, the process of adjudication apportions water differentially within community: federally recognized indigenous users are adjudicated (and represented) in opposition to non-indigenous *acequia* users, who are in turn adjudicated in opposition to municipalities, private landowners, etc. Thus, the process of adjudication, through prioritization, privatization, and a manufactured 'atmosphere of adversity' (Rodríguez, 1990a) serves to disrupt horizontal relationships between water users on the ground (Perramond, 2016b), particularly between indigenous and non-indigenous communities, while threatening to fragment the *acequia* system as a whole. In other words, the process of adjudication divides not only the land and the water, but also the community (Levine, 1990; Rodríguez, 2006; Perramond, 2012). Each of these factors result in a tense environment for managing and distributing water and are reflective of wider processes of ongoing political-economic change within which *acequias* are located.

The following chapter is divided into two sections. The first discusses the legal governance structure of surface water rights in New Mexico. This includes the doctrine of prior appropriation, the concept of beneficial use, water transfers, and contestations over definitions of public welfare, all of which are crucial elements in understanding the wider political-economic landscape of state-led New Mexican water governance. The second portion of the chapter addresses the adjudication of water rights and what I deem to be a subsequent production of, or reinforcement of, difference between indigenous and *acequiero* water users – aligning with a legacy of racialized water management structures that serve to uphold hierarchies of environmental knowledge.

The language and terminology used in section one of this chapter at times mimic the legalese used within the New Mexico constitution and corresponding doctrines pertaining to water rights and

allocations throughout the State. I do attempt, however, to translate this language into more rooted understandings of the corresponding implications of the legal framework, through storytelling and reliance on community observations, *Acequia* Association literature, fieldwork interviews, as well as personal experience attempting to navigate legal structures of the State as a *parciante*, myself. To assist in this act of translation, I rely heavily on the interpretive work of the Utton Transboundary Resources Center (hereby referred to as the Utton Center), located at the University of New Mexico. The Utton Center has, through their team of legal experts, developed a suite of resources by which to synthesize complex water law into relatively digestible material. Despite this legal-aid, my attempt at translation requires an imagination of nuance: thus, misinterpretations of the legal structure – a structure that is concomitantly open to interpretation and simultaneously 'cut and dry' – remain my responsibility, alone.

Lastly, and seemingly as an aside, I wish to frame the upcoming discussion of the law through a reflection on neutrality. One winter evening, roughly a decade ago, indigenous activist, mother, and community leader Beata Tsosie-Peña, formerly of Tewa Women United, opened my eyes to the outdated, racist, and colonial structures of water pollution regulation and protections that operate within the state of New Mexico. Beata had long been involved in advocating for safer contamination regulations resulting from Los Alamos National Laboratory's (LANL's) radioactive waste that was and is continually discharged into her indigenous territory (Okhay Owingeh, New Mexico), as well as the surrounding areas (including traditional *acequia* territories that saw entire communities displaces by the Manhattan Project and the nuclear-coloniality project – see Gómez, 2022 for more detail). Despite LANL's continuous history of pollution exceedance (including, for example, detection of PCB (Polychlorinated biphenyls) contamination in LANL stormwater at 40,000 times over the EPA's water quality standard) (Communities for Clean Water, 2024), Beata also demonstrated to me the ways in which many of the existing regulations were themselves insufficient, even if they *were* adhered to, as they centered on protecting the white, male body – evidenced by examining the US EPA's (Environmental Protection Agency's) exposure 'subject' (in this case, a printed graphic of a presumably Caucasian man, in good health). Beata argued that by changing our perspective to center the indigenous, pregnant woman – and her child, as the baseline standard – exposure limits would shift dramatically, and in doing so we would open the doorway to create transformative visions of pollution regulation and water

protections throughout the State. Moreover, through this conversation, we examined the ways in which the seemingly protective and 'neutral' framing of the 'exposure subject' actually resulted in furthering processes of harm, by both failing to account for the physical health implications of radiation exposure to the indigenous, pregnant, woman, as well as by guising these implications under structures of neutrality – leading to limited understandings (or 'glossing over') of real-time health-impacts. Further, all such protection regulations also fail to account for the unique relationship between community and territory in this land. Although a seemingly simple lesson on Environmental Justice 101, this conversation forever shifted my notion of 'neutrality,' during a time when my mind was both impressionable, and perhaps naïve to the structural racisms that pervade environmental law in the United States – a privilege of my positionality, no doubt.

Thus, while the branch of water research that accompanies the aforementioned transformative activism will not be discussed here (nuclear coloniality, natural resource contamination, indigenous territory, health impacts, and the military industrial complex of New Mexico), I offer this small-aside as an invitation to take any reading of the law – a subject often posited as seemingly neutral – with a grain of salt. The law is subject to our interpretations and is enforced by the setting of precedent: each of which rely heavily on perspective(s) generated through human experience, which (in my experience), is far from a neutral ordeal. The hegemonic water management institutions, policies, and technologies that exist today in New Mexico were not born by accident. Rather, they represent a construction of modernist scientific knowledge that has been used to justify the displacement and dispossession of *Nuevomexicano* communities from their land, and in doing so have been generative of US settler-colonialism – both materially and emblematically. The dominant form of water management and decision-making structures that exist today are reflective of a hierarchy of knowledge: one that has privileged judicial and conflict-oriented approaches, and that is rooted in a form of environmental knowledge production based on a racialized understanding of scientific (and hydrologic) expertise (Lane, 2024). The implications of this racialized water management structure are evident today — through adjudication proceedings, through legal hierarchies, and through dominant nature-valuation frameworks — and, yet, through the naturalization of 'the law,' such systems of coloniality and displacement continue to achieve a privileged status of near invisibility – particularly to non-*Nuevomexicano* audiences.

Thus, while certain readings of the law may emphasize the State's preference for active water management, efficiency, and water-use responsibility, a critical examination – rooted in an understanding of racial stratification, and the role of water management policy in altering both community and landscape – may yield a different perspective. For, "modernist water policy for New Mexico was never placeless or based in objective science. It was based from the beginning in a racialized political project centered on remaking both environments and social relations" (Lane, 2024, p. 10).

Water governance in New Mexico exists at the intersection of multiple legal and cultural frameworks, each carrying its own historical weight and resultant power dynamics. Yet, the State itself lacks a credible system of legal pluralism. While the current legal structure, anchored in state water law and prior appropriation, presents itself as neutral and objective, it fundamentally operates within a settler-colonial context that has historically privileged certain forms of knowledge and relationships to water, over others (Lane, 2024). Despite the implications of this colonial structure of water management, it is also possible that existing within this system are the seeds of its own evolution – beckoning us towards more just, and alternative futures (Rodríguez et al., 2023). The *acequia* system, for example, stands out as a living practice of how colonial legal frameworks can be transformed through persistent engagement with indigenous and land-based ethos of relationality. Spanish law once also served as an occupying force in this region. Thus, just as Spanish law was once transformed into the foundation of what we now understand as relational *acequia* governance (albeit a transformation that required violent resistance, and that continues to evolve), so too, perhaps, can the efforts of indigenous and *acequia* relational autonomy yield transformative futures and outcomes in discourse with the State. This transformation isn't – necessarily – about replacing one system with another, but rather about creating space for forms of governance that honor multiple ways of knowing and being with water. The ongoing negotiations between *acequia* communities and state water law demonstrate how communities can engage with dominant legal structures while maintaining their relational autonomy and traditional water-sharing practices, suggesting pathways toward more just and inclusive water governance systems. Like the historical transformation of Spanish water law through both indigenous influence and the development of a deep, land-based ethos of responsibility (i.e. *querencia*), contemporary

water governance in New Mexico holds the potential for similar evolutionary processes - not to erase historic and ongoing injustices, but to forge new possibilities for equitable and relational water stewardship. The thesis now turns to examining several fundamental aspects of water law in New Mexico that shape the legal context within which *acequias* operate: the doctrine of prior appropriation, the concept of beneficial use, the notion of public welfare, and the process(es) of adjudication.

6.2 Legal Governance Structure of Surface Water in New Mexico

6.2.1 Water Rights Overview

New Mexico's water rights system rests upon the fundamental principle that water is determined to belong to the public and is subject to appropriation by beneficial use (N.M. Const. Art. 16, § 2). This framework establishes water rights as "usufructuary" property rights – or, a right to use and to put water to a beneficial use, rather than a right to 'own' water itself (Office of the State Engineer, 2022). As Perramond (2018) describes, water thus becomes a 'hybrid good,' one that is "publicly owned yet privately dispensed for use as a property right to use" (Perramond, 2018, p. 6). Missing from this notion of hybridity, however, is an understanding of water as a commons and as kin: a relational entity itself with whom one engages reciprocally.

Water rights in New Mexico operate under the doctrine of prior appropriation, the underpinnings of which can be traced to Western mining law, and follow a logic of "first in time, first in right" (Merta for the Utton Center, 2015). Priority dates, which govern the allocations of water rights and the satisfaction of these rights, are established by the date by which the "appropriator first [took] concrete steps to [put] the water to beneficial use" (Office of the State Engineer, 2022), i.e. the date from which a ditch was constructed, the date from which a well was drilled, or the date from which an application for a water right was filed with the Office of the State Engineer. Pueblo (indigenous) water rights hold a priority date of 'time immemorial,' the implications of which are visible within the adjudication process and will be discussed further, below. The documentation

of priority dates presents a particular challenge for *acequia* systems, however, as official records may not fully reflect historical usage patterns. In other words, the priority system requires users to prove or document their first priority date through a mechanism recognizable to the State (written documentation, legal notice, etc): thus, for some *acequias*, the priority date defers to the first legibly-documented record of the ditch, which may or may not correspond with reality (intergenerational memory, oral testimony, or alternative record not withholding in the court room).

6.2.2 Prior Appropriation

As discussed, the apportionment of water in New Mexico operates under the doctrine of prior appropriation. The doctrine of prior appropriation in New Mexico operates through a temporal hierarchy of water rights, where primacy is established through actual intended use rather than mere claim or title. This "first in time, first in right" principle creates a system of senior and junior appropriators, with earlier users maintaining priority during periods of scarcity. Thus, when shortages occur, the right to use water is determined by the date of prior appropriation – This means that 'senior' water rights holders are entitled to their first and full share of water, before 'junior' water rights holders receive their entitlement. In a time of shortage, this also means that senior water rights holders may receive their full claim (material water realities, allowing) while junior water rights holders receive a reduced amount, or no water at all, depending on the limits of supply (Office of the State Engineer, 2022).

The 1907 territorial water code formalized the prior appropriation doctrine within New Mexico's legal framework, which has served to create the legal foundation for modern water governance in the state. The territorial laws of this period, "later adopted by the State through its constitution and statutes, were based on Western mining laws and embraced the concept of prior appropriation. Miners who staked claims needed to use water and with those needs came the question of how to determine rights to stream flow diversions. Since titles to mining claims were based on "first in time, first in right," the same principle was applied to the appropriation of water, resulting in the development and adoption of the prior appropriation doctrine" (Merta for the Utton Center, 2015).

6.2.3 Purpose of Use and Beneficial Use

The concept of beneficial use, when coupled with the doctrine of prior appropriation, is a cornerstone of New Mexico's water governance system, serving both as a philosophical framework and practical constraint on water rights. This principle (defined below) operates through two key mechanisms: first, by requiring that water be actively employed for state-recognized and thereby sanctioned purposes, rather than being speculatively held or wasted; and second, by establishing a "use it or lose it" framework that enables reallocation of unused water resources to other water users (a critical component of state water law in a state that exists in perpetual water debt due to interstate and transboundary water compacts and material water/drought shortage). The state reinforces this doctrine through both civil and criminal sanctions, reflecting water's status as a *public good* subject to *private usufructuary rights* (Office of the State Engineer, 2022).

Thus, water rights in New Mexico are defined, in part, by their designated purpose of use. Each water right has a corresponding purpose of use, which can encompass a broad spectrum of activities, including irrigation or agriculture, commercial use, municipal use, domestic use, an environmental or in-stream use, an industrial or mining use, etc. Importantly, New Mexico law *does not* distinguish between a hierarchy of uses: therefore, all rights are treated 'equally,' regardless of the designated purpose (for example, a municipal use is not valued over an irrigation use, according to law – rather, hierarchy is instead borne through temporal seniority). The purpose of use corresponds to the notion of 'beneficial use,' which constitutes 'the basis, the measure (amount), and the limit (maximum) of a water right' (N.M. Const. Art. 16, § 3).

The concept of beneficial use is central to New Mexico water law and the maintenance of water rights: in order to be maintained, a water right must be put to beneficial use. Despite this importance, the state constitution leaves the term deliberately undefined. Instead, as noted by the Utton Center (2015), the practical definition of beneficial use has continued to evolve through judicial precedent and statutory law to encompass a broad range of activities, including traditional irrigation and agriculture, domestic and municipal use, and – more contemporarily – the maintenance of endangered species habitat (requiring in-stream flows). The flexible framework allows, in theory, the notion of beneficial use to respond to changing societal needs and to guard

against the wasteful use or non-usable accumulation of water rights (by not recognizing such uses as beneficial). Yet, this framework concurrently depends on subjective notions of what is beneficial – a sticky operational space when practices such as flood irrigation have historically been deemed as inefficient by state water managers and contemporary 'sustainability' advocates, despite evidence to the contrary (Fernald et al., 2007).

While the concept of beneficial use remains undefined, it deliberately does not include the 'wasteful use of water' (Utton Center, 2014). Accordingly, the intentional waste of water and/or the unauthorized use of water is classified as a criminal offence in the State of New Mexico (NM Stat § 72-8-4). The criminalization of water waste and/or unauthorized use underscores the state's emphasis on 'active water management,' yet also the state's authority to determine the legitimacy of water use, reflecting a broader shift from relational/communal values to state-centered and legalistic water governance practices. Thus, as the state determines what constitutes 'wasteful' versus 'beneficial' use, a hierarchy of recognized practices is created – rooted in specific forms of resource management preference.

Importantly, as all uses (not users) are treated equally, there is no priority scheme for allocation by use during water during shortages, in contrast to the *repartimiento* system that shifts water allocation priorities based on need (e.g. keeping a home-garden alive, rather than watering a large field). Instead, priority defaults to the date of prior appropriation, rather than a valuation of need/use. The equality of uses under New Mexico water law – while designed to be neutral – reveals both the system's rigidity and its limitations, as water allocations default strictly to temporal priority rather than adapting to social need or equity. This stands in marked contrast to *acequia* systems of allocation that (although internally imperfect), are based on concepts of proportional need and communal welfare. State systems of prioritization are also reflective of the system's roots in 19th century mining law, which emphasized individual and – importantly – *competitive* claims to resources, rather than water governance traditions that emphasize relational flexibility and resultant adaptive management strategies (Perramond, 2016b).

Furthermore, and in contrast to neighboring states such as Colorado, New Mexico does not require an in-stream minimum, and thus the river itself does not hold a water right – the implications of

which are visually evident during certain periods of irrigation when some stream systems are diverted completely towards irrigation use (see prior chapter). It can be seen that the lack of in-stream minimums reflects a generalized devaluation of 'non-consumptive uses,' whereby the valuation of consumptive water uses over ecological function can come into question when analyzing other forms of non-consumptive use, such as cosmological/ceremonial uses of water – and/or cultural connection to material water itself, and the right of future generations to maintain this relationship to place and water (in other words: could the right for communities to maintain cultural connection to water – an act that necessitates material, physical presence of water – be argued in court? What happens when the Rio Grande runs dry, as has now been seen during extreme droughts in the 2020's?).

Another key aspect to the present-day notion of beneficial use is the role the concept plays in adjudication proceedings (subsequent section, below). In order for a water right to be established, it must correspond to a real amount of water use. Such use must be demonstrated in order to be maintained: thus, for many communities, the concept of beneficial use and the 'use it or lose it' logic of the state has resulted in at-times frenzied efforts to demonstrate maximum use of water resources during adjudication surveys, regardless of real-time ecological or agricultural need: creating a paradox of extreme water use in the present, in order to maintain a right to use water in the future. As Perramond (2018) reports on behalf of the State Engineer, "*I think people were irrigating like crazy with us present [chuckles]. . . I mean they weren't growing rice in places like Taos or Talpa, so that . . . [laughs] was pretty entertaining" (Perramond, 2018, p. 58).* This vignette of overwatering – variations of which were humorously recounted in my own fieldwork interviews (i.e. irrigating with ankle-deep water when the 'State' was around) – can also be read to demonstrate:

a) a keen awareness on part of rural agricultural water users as to the State's intention to limit water rights to observable use amounts, based on singular field seasons or days rather than holistic and traditional need;

b) an understanding that the adjudication process – at least in Taos – coincided precisely with one of the largest regional declines in agricultural productivity, thereby rendering contemporaneous water usage at odds with historic patterns and potential future needs (rendering a protective stance) and;

c) a highly discerning lens through which *acequieros* had come to view the State, its water agents, and its expert engineers, as a history of land dispossession through legal and illegal fraud had already once dispossessed entire communities of their common lands for lack of ability to prove boundary lines or private title (Lane, 2024:41). In colloquial terms: communities had become wise to the tools of the State, and chose not see their commons dispossessed again.

6.2.4 Loss of Water Rights

Outside of adjudication, dispossession, and commodification, there are two primary ways that the loss of water rights can occur: forfeiture and abandonment. Forfeiture is an administrative mechanism that is triggered after four consecutive years of non-use. Through a demonstration of non-use, the state receives the authority to transfer the water right elsewhere (remembering water's status as a *public good* subject to *private usufructuary rights*). Abandonment represents the intent to relinquish or 'abandon' a water right. If a water rights holder is found to have forfeited their water through four years of consecutive nonuse, the state then has the authority to notify the water rights holder of their intent to abandon, and provide the water rights holder with up to one year to remedy the situation. The water right must be put back into beneficial use during this time, otherwise it is forfeited. The burden of proof in abandonment cases shifts to the water rights holder to justify their period of non-use, reflecting the state's interest in maintaining active 'beneficial' use of its water resources. Thus far, individual homes/fields fall under the state's inspection less frequently than large water rights holders, such as a mine (e.g. the Molycorps Mine, now owned and operated by Chevron, located in Questa, the northern-most area of Taos County) – however, there is resounding sentiment amongst interview participants that the precipitous decline in agriculture visible in Taos (due to the outmigration of farming generations, the general unprofitability of agriculture in the County as a primary income source, transitions to the wage-economy, and the median elderly age of most agriculturalists) renders the region's *acequia* water resources vulnerable to repossession by the State: if the State Engineer were to survey active water use in Taos, many of the barren and vacant fields would lose their right, and thus the water would be transferred out of the system as a whole.



Figure 6.1: Fallowed field off the Acequia Madre del Sur, Rio Fernando; land now prime for real estate speculation due to its central positioning near the downtown area of Taos. (Source: Author)

Relation to Development Pressures

Moreover, as development pressure continues to increase, many of the prime and valuable lands in the region (due to their geographic positioning near the central urban area) sit within the historic irrigated 'green belt' of Taos. The development of traditionally irrigated lands permanently retires the corresponding water footprint of the building (usually ¼ acre foot), and also physically fragments the *acequia* system: if one water user transfers water outside of the system (either through 'loss' or intentional transfer vis-à-vis a development housing footprint and/or transfer to a domestic use), the overall flow of the *acequia* (a generally earthen, gravity-fed irrigation canal) is diminished. Without a sufficient flow, it proves challenging to deliver water to irrigators: in these systems, water quite literally needs water's volumetric push to move. Secondly, it is not uncommon for developers to build directly in the flood-plain the of *acequia*: more than once, I

have heard complaints of a home being flooded by irrigators, only to learn it was built in the natural pathway of the water's flow. Lastly, development pressure on traditionally irrigated lands ties into broader discourse on agricultural land valuation, taxation/tax status, property value, and more. Such development concerns, at least for those *acequia* systems located in nearest proximity to the Town of Taos are spurred on by decades of Town expansion and/or neglect. As one Town Councilor reflected,

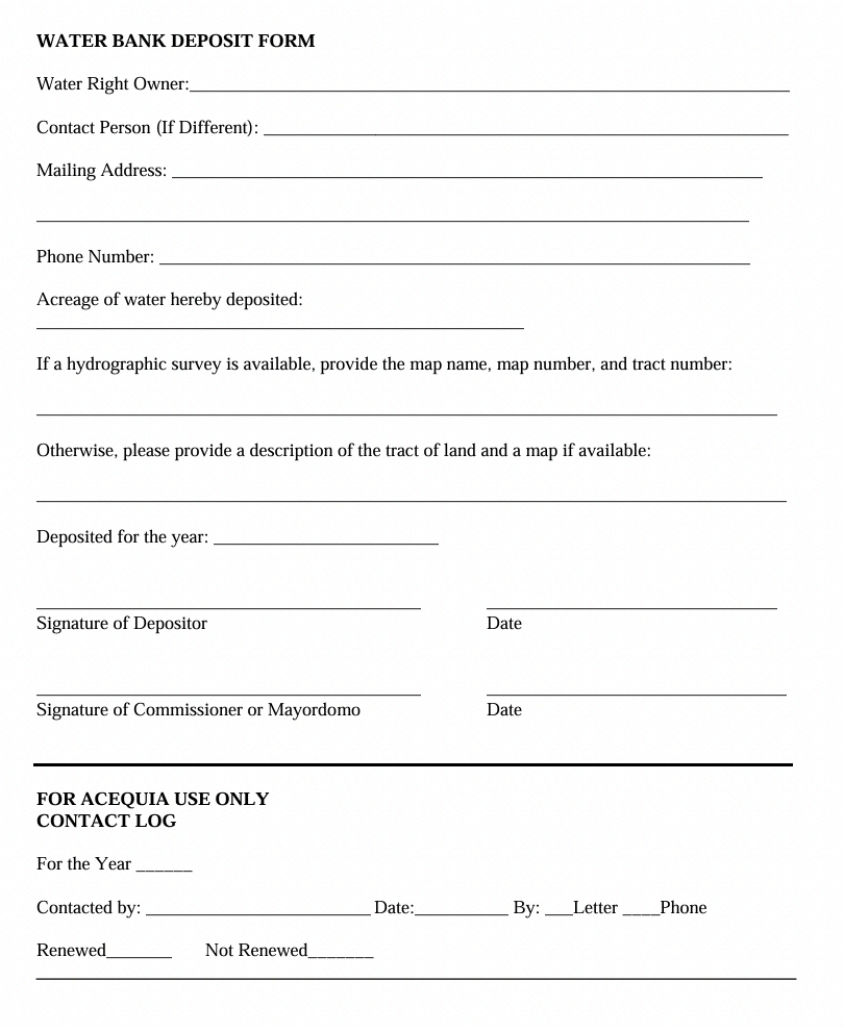
> *"Eight years ago, when I was asked to run for office…I was very humbled by that request but needed to do some serious reflection as to what I could bring to the table. From my perspective, in a small rural town in northern New Mexico, the name of the game here is demographics: we are losing our young people…It became apparent to me that our greatest strength has been our agrarian past, and intertwined with that is our water, and our ability to use our water in a meaningful way. I became focused on that. It became my north star, as it were. Everything I do is focused around the ditch. It is my main goal, my main vision….The hope was to revitalize our urban acequias, and augment the possibility of young people being able to use their lands once again, for agriculture.*
>
> *The north star that I needed to grasp onto eight years ago was acequia revitalization, and that would be a good reason to get involved in Town government….Because the Town, quite frankly, prior to eight years ago, had completely disregarded our acequias. They've covered them over with streets…everyone has beaten up on our cultural tradition of acequia water delivery." — Town of Taos Councilor, September, 2022*

Such sentiment is visible when walking through the downtown streets of Taos: if one's eye is attuned, it becomes possible to recognize shallow divets in the landscape, indicating where an *acequia* once ran. Thus, a simple mechanism of forfeiture or abandonment is embroiled in a much larger landscape of development patterns, land use choices, taxation and revenue policies, an outmigration of youth and farming generations, and overarching questions of agricultural sovereignty in a traditionally agrarian community.

6.2.5 *Acequia* Water Banking

In response to the 'use it or lose it' logic of the State, *acequia* communities engaged in a legislative process to develop New Mexico Statute 73-2-55.1, "Water Banking; *Acequias* and Community Ditches." The statute, passed in 2003, grants *acequia* communities the right to develop and adopt water banking bylaws which stipulate that if an *acequia* user cannot put their water to 'beneficial use' during any given season, they are able to transfer those water rights to a 'water bank,' where the rights are held within the *acequia* (guaranteeing flow volume and the maintenance of rights within the system), without the individual user forfeiting their rights due to non-use (Figure 6.2). In order for the banking to go into effect, a water banking agreement must be incorporated into an *acequia*'s bylaws. The length of banking time varies per *acequia* – some require annual renewal, whereas others allow up to five years of banking at a time. These protections are intended to prevent water from being taken out of the *acequia* system, and – in the case of areas such as Taos – out of the valley, as a whole. Water banking is also commonly referred to as a drought ordinance, as it is one of the few mechanisms available to *acequia* users to legally protect their water rights during a time of ecological drought, which would otherwise see the water rights forfeited due to non-use (regardless of the material water availability). The adoption of water banking protocols highlights the ways in which *acequia* communities continue to negotiate within the structure of the State to achieve legally recognized protections for traditional ways of managing and using water: whereas *acequias* inherently require a certain degree of flexibility and adaptability in response to changing climate conditions, and do not use a consistent amount of water at all times, the static logic of the State is premised on a 'use it or lose it' paradigm of beneficial use, for all existing water rights. Therefore, should the water banking provision not exist, *acequia* communities would risk forfeiture of their historic water rights, regardless of the real-time conditions supporting irrigation activities. Drought, of course, is not the only catalyst for banking water rights: many *parciantes* who find themselves unable to irrigate (for a variety of reasons, including old age, ill health, etc) are also eligible to bank their water rights with the noted intention of returning their water to beneficial use in the future. For some *acequias*, *parciantes* are also excused from regular *acequia* duties (such as participating in the *limpia*, or paying an annual fee) if their water is banked: while offering reprieve for inactive *parciantes*, any decline in participation

impacts the wellbeing of the *acequia* as a whole. Importantly, water banking occurs *within* the *acequia* – and therefore does not require *acequia* users to notify or obtain permission from the Office of the State Engineer to bank their water.



WATER BANK DEPOSIT FORM

Water Right Owner:_____

Contact Person (If Different): _____

Mailing Address: _____

_____

Phone Number: _____

Acreage of water hereby deposited:
_____

If a hydrographic survey is available, provide the map name, map number, and tract number:

_____

Otherwise, please provide a description of the tract of land and a map if available:

_____

Deposited for the year: _____

_____ _____
Signature of Depositor Date

_____ _____
Signature of Commissioner or Mayordomo Date

FOR ACEQUIA USE ONLY
CONTACT LOG

For the Year _____

Contacted by: _____ Date:_____ By: ___Letter ____Phone

Renewed_____ Not Renewed_____

Figure 6.2: Sample Water Banking Form (Office of the State Engineer, 2024)

6.2.6 Water Rights Transfers and Water Marketing

As stated previously, the transition of water in New Mexico from a legally recognized communal resource (Treaty of Guadalupe Hidalgo, 1848; Meyer and Brescia, 1998) to an individualized and privatized 'right' has enabled its commodification and marketization, influencing the ways in which "water flows increasingly in accordance with the flows of capital" (Linton and Budds, 2014,

p. 172), or – in in the words of one *Mayordomo* – the ways in which 'water can be made to flow uphill towards money' (Crawford, 1990). The foundational way in which paper water gains mobility occurs through the transfer, sale, and/or lease of water rights in New Mexico. Although New Mexico lacks a formal water 'market,' (i.e. a centralized clearing house for the sale and transfer of water rights), contention is pronounced within *acequia* communities over the notion that water can be severed from land and community, and sold as a privatized property right, when fundamentally viewed as a collective resource and relational entity (See Figure 6.3).



Figure 6.3: "El Agua no se Vende: El Agua se Defiende"

(Translation: The Water is Not for Sale, The Water is to Defend). A common bumper sticker to see around northern New Mexico, distributed by the New Mexico Acequia Association. 2023. (Source: Author)

As New Mexico's surface water is already fully appropriated, the acquisition of new water rights requires a transfer of existing ones from a previous water rights holder. This process is largely overseen by the New Mexico Office of the State Engineer (OSE), and most often involves converting an agricultural water right to an urban use – particularly as urban municipalities grow and expand (Utton Center, 2013). Moreover, as economic development and notions of 'progress' within the state –which consistently ranks last in the nation for nearly every 'development'

indicator (education, income, health care, infrastructural integrity, child welfare, crime and corrections) – hinge largely on the availability of water resources, the historic transfer of water rights has trended towards those entities with economic power, particularly moving water from rural (agricultural) to urban (municipal) uses (Garcia and Santistevan, 2023).

Although individual water rights transfers are generally modest in size, the collective impact of water rights transfers away from agricultural/rural areas and towards urban centers hold the potential to create significant shifts in water allocations and uses at a large-scale. A notable example is the Middle Rio Grande Conservation District, into which more than 21,000 acre-feet of water rights were transferred between 1982-2011 (Utton Center, 2013).

Reflecting on the notion that in a region where water rights are already fully allocated, any transfer of water fundamentally requires the loss or forfeiture of those rights from another entity, one *acequia* commissioner stated (in reference to increasing water-grabs by a small municipality):

> *"…so [they] went into the water business….and they went into the water business, but there's no water! So they got to come and claim the water and take it from somebody else…" — Commissioner on the Acequia Madre del Rio Chiquito, February, 2023*

In response to the marketization of water rights in New Mexico, *acequia* communities (whom often hold the second-most valuable water right in the State, behind Tribal Nations, due to their usually-historic priority date) engaged in a process of legislative development in order to grant *acequias* the authority to adopt a water transfer bylaw that enables the *acequia* commission to hold 'veto' power over proposed water transfers. The legislation, passed in 2003, provides *acequia* commissions with the power to approve or deny water rights transfers *outside* of the *acequia* system (i.e. to a water rights user not within the *acequia*, including a transfer from a surface right to a domestic right), in order to protect against the loss of water within the system as a whole. In order to be effective, each *acequia* commission must adopt corresponding language into the bylaws of their individual *acequias*. Once such language is adopted, *acequia* commissions are entitled to notification of any intent or request to transfer water out of the system. Such commissions are then

afforded the right to approve or deny the request – with some *acequias* adopting blanket language that states there will be no approval of a transfer outside of the system, whatsoever. Although seemingly a silver-bullet for water rights protections, numerous *acequias* still have not adopted the bylaw due to misunderstandings of the legalese and paperwork involved.

As noted by Garcia and Santistevan (2023), prior to the creation of this legislation, the only recourse for *acequias* to assert autonomy over their waters was to be in a position of defense: "rather than having roles as decision-makers regarding the water rights of their own communities, *acequia* leaders had been relegated to being protesters in hearings before the state engineer" (Garcia and Santistevan, 2023, p. 25). Signifying a huge moment for *acequia* autonomy, the successful passage of this legislation marked the first time since the adoption of the territorial water code where an entity other than the Office of the State Engineer was entitled to approve or deny a water transfer. While the legislative authority has yet to be put to the test in court, the bylaw amendment in theory enables *acequias* to protect their water rights within the whole system, at large (Figure 6.4). Lastly, despite this hard-won legal assurance, many *acequia* representatives still express fear and concern over the loss of water rights in the future – often citing trepidation over the potential decisions of future generations, whom elders identify as being increasingly disconnected from both the land, as well as from the responsibilities generated through multi-generational struggle to protect water rights, that many elder *acequieros* were embroiled in.

Sitting together with one of the eldest *mayordomos* whom I had the privilege to interview during the course of my fieldwork period, at a wooden fold-out table on a chilly February night, surrounded by *colcha* and quilt weavings hung on the walls of the local community center, we discussed his concerns over youth sharing their historic rights:

> *"Well, it's like in the…in the land over here, the people, the young guys….now they hardly…they don't care about irrigating…or….No, they don't care. And, that's why we got to protect these water rights and not let nobody know what the Abeyta Settlement is doing! Cause they will sell it all! [Pounds fist]….If they know they can get…the young kids…[they'll say] 'well, my dad gave me*

this piece of land, but I don't want it and I'm gonna sell it and…I'll build a house and get rid of the water." — Mayordomo of the Acequia Madre del Rio Chiquito, February, 2023

In a community where more than 42% of the housing stock sits vacant, owned by out-of-state second homeowners (whom primarily utilize the properties for 2-3 weeks per year) (Town of Taos Affordable Housing Plan, 2020), and in a community where housing costs are amongst the highest in the state and where the median household income is amongst the lowest in the state, issues of affordable housing, development, and the livability of a traditionally agricultural community continue to rise.

As one *acequiero* put it,

"They say now that affordable housing in Taos [for Taoseños] will be a mobile home put in the middle of an agricultural field or ancestral property…now, you tell me how that's sustainable development." — Commissioner on the Acequia del Monte del Rio Chiquito, November, 2022

Thus, for 'land rich but cash poor' (or, in this case, 'water rich but cash poor') communities, the intersection between economic disenfranchisement, the disruption of an agrarian economy, historic processes of land loss and dispossession, and current market pressures has the potential to alter relationships with water, as well as material belonging.

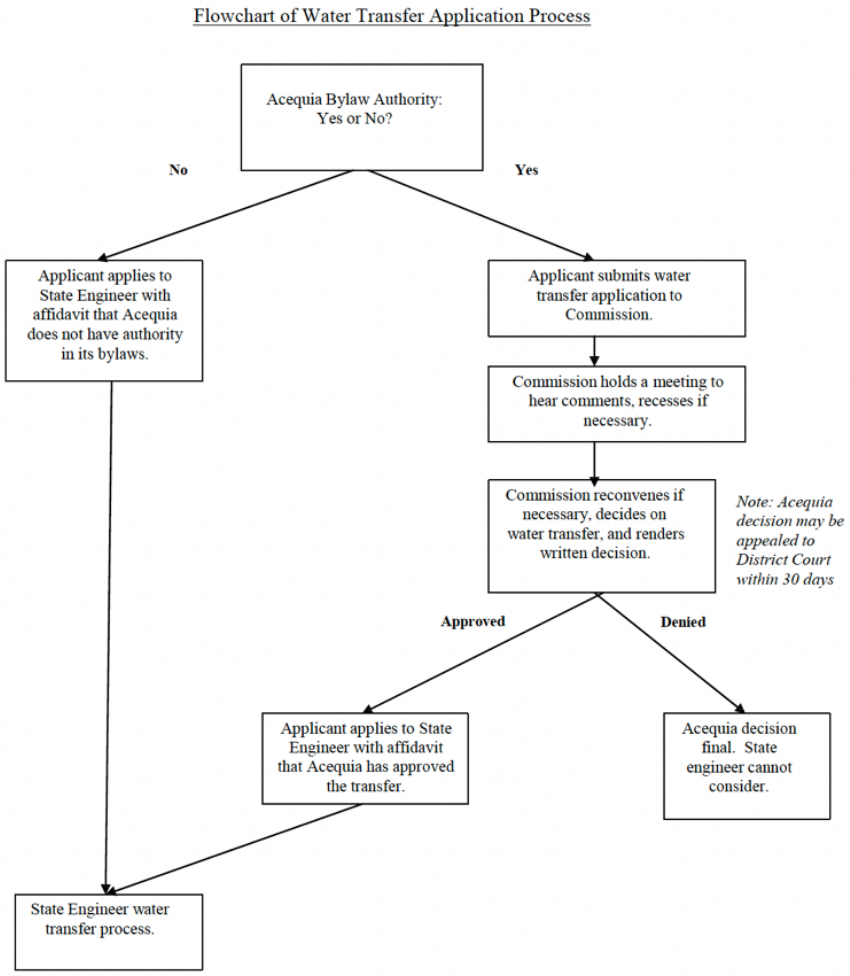


Figure 6.4: Water Transfer Flowchart (New Mexico Acequia Association Governance Handbook, 2014)

Public Welfare and Water Rights Transfers

Pertinent to the discussion of forfeiture, abandonment, and resultant water rights transfers, the state water code determines that "a person may use unappropriated surface-water or transfer existing water rights after receiving a permit from the State Engineer…*The Engineer must find that there is water available, and that the approval of the application will not impair existing rights, be detrimental to the public welfare of the state, or be contrary to water conservation*" (Utton Center, 2014, emphasis added). The provisions for concern over public welfare and conservation were added to the law in 1985, however – similar to concepts of beneficial use – the provision lacks formal definition. The implications of the lack of definition of public welfare comes into light when entities seek to transfer water rights to create large-scale development, citing that such

development is in the interest of public welfare of the State of New Mexico (through the provision of jobs, or development of the economy: seen currently in requests for the development of large AI Data Centers in the Southern areas of the State, the acquisition of public utilities by the Blackrock Investment Company, and/or the development of luxury housing estates). While this issue is prevalent across the state, a local example includes tensions between housing resort developers and the local/agricultural community: whereas resort developers argue that such a development would benefit the community through economic development and an increase in "housing" (read: luxury), the agricultural community counterargues a negative impact to the welfare of the local population due to loss of agricultural land, reductions of material water in the irrigation system/for other community uses, fragmentation of natural landscapes, and an allocation of water towards a use that is not in alignment with demonstrated community valuations of water. Thus, the position that many *acequia* communities have adopted is that public welfare must be defined locally, so as to protect against development transfers that economically benefit the 'State' to the detriment of the local population and/or agricultural landscape. In a community with a long history of occupation and gentrification, such a provision would also serve to – in theory – protect against the accumulation of water rights by wealthy developers to the detriment of small hold landowners and farmers.



Figure 6.5: Young activists gather to oppose the development of the 'Tarleton Eco Ranch' in Taos County, citing incompatibility with local values, improper development over traditional agricultural land, and taxation of water resources. October, 2024. (Source: Daniel Pearson, Taos News, 2024)

The Draft version of the Taos Regional Water Plan (2016) moved to adopt a definition of public welfare that included criteria to protect: culture, agrarian character, ecological health, long term economic development potential, recreational tourism, public information, water supply management, conservation, conjunctive management, and the minimization of water contamination. While the Statement was omitted from the final version of the plan, should the definition be adopted, the community would be able to reference the local definition to identify violations of the community's definition of public welfare when determining if a transfer should or should not be approved.



Current

TAOS REGIONAL WATER PLAN
PUBLIC WELFARE STATEMENT

Agua es Vida – Water is Life

Spanish Partidas, Law 3: "Las cosas que son de todos y todas – son l'agre, sol, uvia, agua y el mar."

"The things which belong in common to all the living creatures of the world are the air, rain, water, the sea, and its shores; for every living creature may use them according to his wants."

I. INTRODUCTION:

Water is the most fundamental natural resource sustaining the communities and environment of the Taos Region.

Figure 6.6: Opening lines of the Draft Taos Regional Water Plan Public Welfare Statement (July, 2016) (Source: Draft Taos Regional Water Plan, 2016)

First Rights and Community Concern

Of concern, and as resulting from the process of adjudication, is the differential treatment of water rights and water rights transfers between Tribal and non-tribal users within Taos County. As discussed in more detail, below, the adjudication settlement of water rights in Taos is based on the need to demarcate all surface water rights (and claims) in the Valley. Taos Pueblo holds the senior-most water right (a priority date of time immemorial), and therefore all water rights are adjudicated against their claim of historic usage. While *acequia* communities maintain the transfer provision (or 'veto power') to approve or deny a transfer if incorporated into their bylaws, the provision is nullified in regard to the transfer of water rights to Taos Pueblo, as Taos Pueblo – written into the adjudication settlement agreement – reserves the right of first refusal on all water transfers/sales throughout the valley, in order to achieve their historic irrigated acreage (Abeyta Settlement,

Section 8). The 55 member *acequias* of Taos Valley *Acequia* Association (party to the settlement) agree, through the settlement, to "cooperate with the Pueblo in the Pueblo's acquisition of surface rights in the Valley in order to expand the Pueblo's irrigation to the full extent of its settled right" (Utton Center, 2013, p. x). Although the first right of refusal has the potential to limit or prevent water rights from leaving the Taos Valley, instead ensuring they are held by Taos Pueblo, *acequia* members continually express suspicion and concern over this provision. In a community with a long history of water sharing between indigenous and non-indigenous users, adjudication proceedings have once again served to further fragment water - and community - along differential lines drawn by the colonial legacy and logic of the State. Whereas *acequia* communities have achieved a certain degree of autonomy against market forces through the aforementioned transfer legislation, this is nullified in regard to Taos Pueblo – a nullification made possible only through the quantifications of the adjudication settlement, rather than community negotiation.

As one *acequia* commissioner, who was in his late eighties at the time, shared:

> *"You know, we've had a couple of that…[attempts to transfer water rights out of the acequia]. I've been here and see…the thing is with the Abeyta Settlement…We don't need to get the Pueblo's notice…Cause the Pueblo's got first rights. They don't need to tell nobody, yeah. Don't got to talk to nobody. You want to sell them, you can just sell 'em….See, but we're not telling people this. We're not letting nobody know that. Cause everybody who has got water rights that belong to their grandpas or their uncles or whatever…Heck, they'll take them to the Pueblo and they'll pay them cash for it. And then we lose those rights. So we don't tell nobody nothing about that….." — Commissioner on the Acequia Madre del Rio Chiquito, February 2023*

Another *mayordomo*, along the same *acequia*, stated:

> *"I don't know what the Pueblo pays for those water rights. We have no idea of what they're worth. We don't want to know that….because they can just come and buy it and….that's what we've been told: the Pueblo got first dibs to it. They don't even have to come to the commission…Which, I have nothing against Los Indios…I have a lot of friends who are Indios, no….We have got a*

lot of friends that are Indios….[but] they [the Federal Government] say in the Abeyta Settlement, 'the Indians claim all these water rights,' and then the government backs them up….But that's just the way it rolls….gone today, back years ago…" — Mayordomo on the Acequia Madre del Rio Chiquito, February 2023

Under the Abeyta Water Rights Adjudication Settlement, Taos Pueblo is recognized to have senior (aboriginal) water rights to divert and consume water for 5,712.78 acres of historically irrigated land. In order to avoid severe and abrupt curtailment of non-Pueblo water use in the Valley, Taos Pueblo agreed to a temporary forbearance of their water rights claim. This limits the initial irrigation right of Taos Pueblo to approximately 2,322 acres, however the forbearance is not permanent: the Pueblo may increase its water usage over time, specifically as water rights are acquired and retired from the Taos Valley to offset those increases (See Figure 6.7). Thus, a specific water rights market mechanism to increase Pueblo satisfaction of their full right is created, whilst pressure is exerted on acequia water rights, as these represent the second-most senior rights in the valley. It is important to note that the acquisition of rights does not correspond to material water availability.

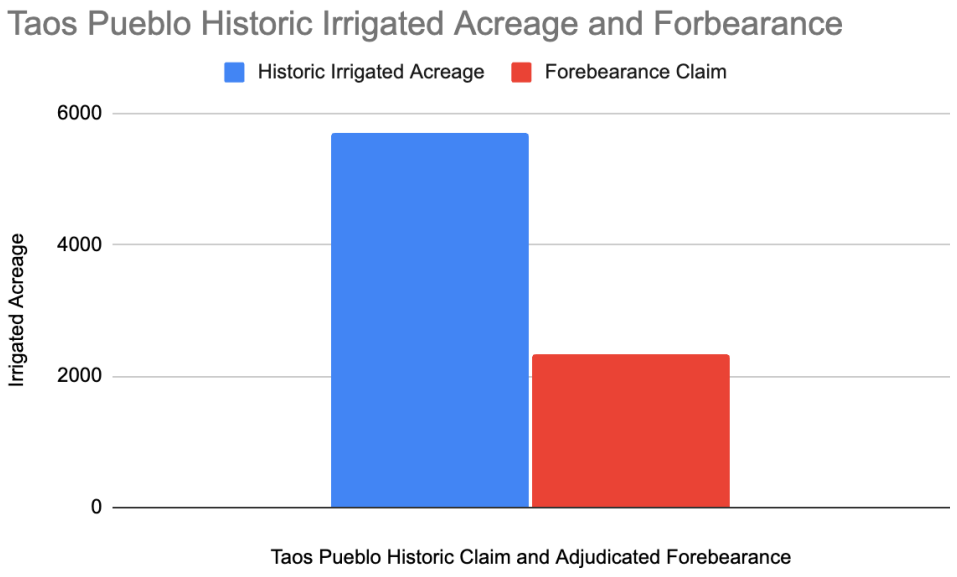


Figure 6.7: Taos Pueblo Historic Irrigated Acreage Forbearance (Source: Author; Abeyta Settlement)

I learned later, in speaking with a different *mayordomos*, that most water rights in the Valley were selling for ~$30,000 per acre foot of water: a sum that rivaled most families' annual income (~$28,000 in 2022), and certainly surpassed the negative average income earnings of farmers in Taos County (per farm average net cash income based on 2019 US Census Data: -$2,211).

6.3 Adjudication and the Production of Difference

The brief overview of core components of the legal structure of modernist water management policy in New Mexico is intended to demonstrate how the law facilitates the privatization of communal resources. In doing so, such a system also creates and upholds hierarchies between water users that can fragment relational water sharing practices. A core component of said structure is the process of adjudication, or state-mandated lawsuits that enable the formal tracking and description of all water uses within a stream system, in order to enable the apportionment and administration of said waters under the purview of the State Engineer. An adjudication results in a "final decree that defines and formalizes all rights to a stream system's water supply" including quantity, use, and percentage (Utton Center, 2014). Adjudications are intentionally litigious procedures: as New Mexico holds no special water court to resolve water disputes, adjudication proceedings are presided over by specially appointed judges.

The process of adjudication is also a window into the ways in which 'environmental knowledge' is produced and upheld within the State of New Mexico – recognizing that the "legal process, emerging legal discourses, and the adjudicated result disrupt past legal-social relations and remap how people, either individually or collectively, relate to each other and themselves" (Jepson, 2012, p. 617).

The adjudication process that most directly pertains to the case study research is known colloquially as the Abeyta Settlement, or the *Abeyta Water Rights Adjudication: Settlement Agreement Among the United States of America, Taos Pueblo, The State of New Mexico, the Taos Valley Acequia Association and its 55 member acequias, the Town of Taos, El Prado Water and Sanitation District, and the 12 Taos Area Mutual Domestic Water Consumer's Associations.* The

title alone is enough to indicate its breadth. Spanning from 1969-2013, with implementation discussions still ongoing at the time of writing (2026), the Abeyta Settlement was initiated to settle all claims to water within Rio Hondo and Rio Pueblo de Taos stream systems, and to negotiate Taos Pueblo's aboriginal priority claim to all waters within the Taos Valley. Fundamental to the adjudication process is the differentiation between tribal and non-tribal defendants, who are both represented, and adjudicated, in opposition to one another.

The settlement process began in 1969, when the State Engineer initiated a quantification effort of all surface water rights in the Taos Valley. While *acequia* and domestic water rights were relatively easily accounted for, the federal administration of Pueblo water rights (which are held in trust by the Federal government) – and the Pueblo's priority date of time immemorial – challenged the process. In 1989, Taos Pueblo announced an intention to claim 7,883 acre feet of water per year (approximately 2.6 billion gallons of irrigation water per year), enough to sufficiently divert complete water from all other users. In response, the recently formed Taos Valley *Acequia* Association (representing 55 different *acequias* within the Taos Valley) approached the Pueblo with an offer of negotiation, to which the Pueblo agreed. In early 1990, representatives of Taos Pueblo and the TVAA established their intention to suspend litigation and negotiate face-to-face, outside of the courtroom, in order to develop water sharing agreements that aligned with their traditional allocations and relational mechanisms of water apportionment (Rodríguez, 2006). This was materialized through a motion to suspend litigation for 12 months in order to come to a community-negotiated compromise, to which parties to the settlement agreed – *except* for the Office of the State Engineer (state) and the U.S. Department of Justice (federal), who maintained that there must be "**necessary adversarial tension**" in order for the adjudication process to occur (Rodríguez, 1990a, p. 311). In response, the Abeyta Settlement carried on for 24 more years, with protest and negotiation continuing, today. Such a mandate demonstrates a core difference between relational and legalistic ethos of conflict negotiation, as well as the prioritization of certain forms of knowledge that are upheld as legitimate within the court room (hydraulic surveys, studies, archival documentation – not community sharing practices). The case also demonstrates the divisive nature of state and federal procedures that differentially adjudicate community and waters based on ethno-territorial distinction (as defined and underpinned by the state). As written by Rodríguez during the height of the adjudication, "if Taos Pueblo and the TVAA do manage to

achieve a negotiated settlement, it will be in spite of state and federal procedures and attorneys rather than because of them" (Rodríguez, 1990a, p. 311).

When asked about the changes to community resulting from the adjudication process, one *parciante* relayed that although the *acequia* to which he belongs, and the Taos Pueblo, have maintained a court-decreed water sharing agreement since 1893, the formality of water sharing shifted dramatically following the settlement. Now, water is gauged and metered in order to determine adherence to water allotments, and accessing *acequia* waters on Tribal lands requires official permitting, rather than open-gate access.

Another *mayordomo* reflected on the process of trust-(re)-building that was required following the adjudication between his *acequia* and the Pueblo: in his youth, he remembers cleaning the *acequias* that flowed between tribal and non-tribal boundaries with ease, and with his fellow Pueblo neighbors. Today, he asks permission to open the padlocked gates, and is often escorted onto and off of indigenous territory. In-between removing sneaky-sandbags placed by a *parciante* to covertly divert water during the night, he shared with me that after years of mistrust and community tension following the adjudication, he decided to call the Taos Pueblo Governor's office and ask for permission to clean debris off of Pueblo land. Different from cleaning the *acequia* itself, he described that he believed much of the debris collected along the banks of the *acequia* on tribal land belonged to the *acequia* cleaners of the past 40-50 years. His request was met with anticipated suspicion: 'why would you want to do that for us? Are you trying to parade through our land and showcase it to outsiders?' When he described his desire to clean up after his ancestors in territory that was once mutually-stewarded by indigenous and non-tribal *acequieros*, it was agreed that they would be allowed to access tribal land. Slowly, through many concerted efforts, familiarity has begun to be restored.

6.3.1 A Production of Difference

Adjudication is the state's primary mode of privatizing communal water rights – and depends entirely on stratified notions of ethnic and territorial identity. Far from a simple accounting exercise of existing property rights, the adjudication process itself actively converts water

commons, and historic water sharing practices, into legally codified and statically apportioned processes. In doing so, adjudication represents a fundamental shift in power relations, determining who controls water management and allocation decisions. The process, as demonstrated, tends to privilege state and federal authority over traditional community governance systems, as well as over community systems of conflict resolution (in this case emblemized by the federal government's demand of litigation vs. negotiation). The adjudication process enforces a system of individual property rights onto historically communal resources, and in doing so often fragments community water sharing practices (and, in the case of Taos, resulting social bonds between indigenous and non-tribal members). By privileging certain forms of legal evidence and knowledges, adjudication processes often disadvantage community water use that predates written record – aside from tribal rights of time immemorial (Perramond, 2012). Thus, the adjudication process exemplifies how the current legal system actively resists relational approaches to water governance, instead privileging conflict over cooperation, documentation over direct experience, and individualistic rights over communal relationships.

Foundational to the disruption of community relations through adjudication proceedings is the differentiation of ethnic identity in a pluri-ethnic community. Lane (2024, p. 8) argues that in New Mexico, "modernist water policy participated directly in the erasure, elision, and simplification of complex identities" – serving to differentiate identity and water rights citizenship based on static ethnic categories as defined by the State. Ethnic categorization in New Mexico has long-operated under a tricultural mythology (Bodine, 1968), defined and perpetuated by white colonial logics. Through these logics, Indo-hispano identity is largely reduced to a non-indigenous category of belonging, wherein *mestizaje*[25], *genízaro* identity, and plurality is erased. This ethnic-categorical structure is evident within adjudication proceedings: immobile hierarchies of priority claim based on federal designation erase relational and plural experiences of identity, belonging, and resource management. In this way, differential state and federal policies divide interests both within and between ethnic groups (Levine, 1990), serving to disadvantage and disposes both indigenous and

[25] Mestizo in this case refers to Indo-Hispano (not, specifically, Anglo).

Nuevomexicano communities of their water resources (Lane, 2024). Thus, while often presented as an objective legal framework, adjudication also functions as an attempt to "quantify citizenship (translated by water rights) on a legal basis for managing state resources…[in doing so] it tends to reinforce social categories created by both federal and state interests, and in undeniable ways creates differential citizenship for water resource governance" (Perramond, 2012, pp. 64-70). This process may mirror the 'ethnicization' of development expressed by others (de Zaldívar, 2008), as well as the re-organization and racialization of subaltern groups (Pallares, 2002).

During my fieldwork period, there was a strong sentiment that emerged regarding *acequia* water rights and the process of adjudication that alluded to a history of dispossession, exclosure, and marginalization. As one long-time *acequia* commissioner whispered, "*we just don't want to lose anymore*" (personal interview, 2023). Crawford (1990, p. 266) described adjudication as "social policy disguised as something else," which Perramond (2012, p. 67) unpacks as recognizing that what appears to be an 'equalizing' judicial process in fact hinges on the transformation of power relations, knowledge commitments, and ethnic differentiations.

Thus, the process of water rights adjudication in New Mexico represents far more than a mere legal procedure. Rather, it embodies a technology of governance – a 'hydro(govern)mentality' (Perramond, 2012; Lankford, 2013b) that fundamentally reshapes notions of belonging, citizenship, and power relations (Armijos, 2013). Adjudication is often labeled as an innocent process, one that is presided over by Anglo engineers, water masters, and hydraulic experts who – – in their infinite wisdom — are able to discern objective truths about water management and use, regardless of their familiarity with the actual material landscape. In doing so, adjudication upholds an "aura of legitimacy and functions to reproduce itself and the system it belongs to by forcing all participants to conform to its own narrowly defined canons of evidence and performance. Thus one cannot enter the game, much less hope to win, without playing according to its rules. The unspoken and indeed often vehemently denied political infrastructure of these rules constitutes a massive system of domination and hegemony" (Rodríguez, 1990a, p. 312). Such a phenomena represents a coloniality of knowledge, which has been decisively used to overpower land-based systems of governance and negotiation to the benefit of American expansionism (Lane, 2024). In doing so, a hegemony of Eurocentrism has been upheld as "*the* perspective of knowledge, and an

association of intellectual production with 'civilization', the power of the written word, and with the established racial hierarchy" (Walsh, 2007, p. xx; Quijano, 2000). Mansilla-Quiñones et al. (2024) identify these structures as a part of the 'coloniality of nature,' which serves to impose a Eurocentric model of 'reason' upon indigenous (and land-based) ethos of relationality, wherein a fragmentation between culture and nature occurs as a part of the imposition of universalized Cartesian reasoning (Walsh, 2007). In doing so, the coloniality of nature responds to notions of development rooted in natural resource extraction and racial hierarchies (Harvey, 2018; Porto-Gonçalves, 2006), resulting in "epistemic violence against colonized people's traditional knowledges and practices with nature; the installation of a political project based on the degradation of life in its multiple expressions; and the imposition of a human-nature dualist ontology, where the human dimension and its privileges prevails" (Mansilla-Quiñones et al., 2024, p. 1; Cubillos et al., 2022).

Adjudication is a process of privatization, community differentiation, and court-mandated conflict that no community asked for. Rather, adjudication was imposed on communities and their corresponding watersheds due to litigious policy and state mandate. Quite literally, adjudication proceedings – a required process in New Mexico – open with a state-sponsored lawsuit. What does this type of behavior mean for relational water governance traditions?



Cuento: " I signed that thing with my left hand"

I took a walk with Tranquelino Lopez one spring morning, around his *acequia* and *comunidad* in Cañon (off of the Rio Fernando, Taos County, New Mexico). As we were walking, he turned to me and said: "*you know, I signed that thing with my left hand*." He was referring to the Abeyta Settlement, of course.

Tranquelino serves as a commissioner on the *Acequia Madre del Sur*, which runs off of the Rio Fernando – one of the many stream systems embroiled in the decades-long Taos Valley adjudication suit. A highly educated *Nuevomexicano* community activist, Tranquelino left his academic program to get a doctorate in the ditch: that is, to learn by doing, and to become an *acequia* advocate and community educator by studying the ways and culture of the *acequia* through on the ground practice. Together with his wife and two young daughters, Tranquelino runs an educational farm and offers workshops on *acequia* culture, racial justice, and irrigation/agricultural practicums. Most Friday mornings, Tranquelino can also be found slinging Chimayó Chile in the parking lot of the Talpa Community Center Farmer's Market.

I had been hoping to meet with Tranquelino for several years. I first got up the courage to ask him for an interview in late 2019, when I was working on an *acequia*-based participatory vulnerability and capacity assessment for agricultural needs in central Taos County. The usual questions resulted: who are you? (Chyna). When did you come to Taos? (I was born here, but my parents weren't. My grandmother taught at the high school). Why are you interested in the *acequias*, don't you know about anything else? (I don't). Several years later, I was still reaching out for an *acequia* interview request, to no avail. Then, one morning, after I lost any pretense of research objectivity during a community comment meeting for a proposed recreational trail development (discussed in the subsequent chapter), Tranquelino emailed me to meet.

We spent most of the morning walking his property, moving the water, looking at the corn, chile, and beans growing in the sun. He showed me how to plant *maíz* in sets of three so that the strongest one will be supported by the rest. We examined his hand-built *horno* (traditional outdoor adobe oven), and changed *acequia* headgates. We discussed the adjudication, water sharing, negotiations, and community stand-offs. Mostly, we discussed what Tranquelino refers to as the *acequia* apocalypse (Santistevan, 2021).

"We used to be vecinos, you know…we also are indigena…"

What Tranquelino continued to relay to me during that walk is something I would witness time and time again throughout my fieldwork period: the differential treatment of federally recognized indigenous communities versus mestizo *acequia* communities by Anglo and Federal actors

regarding the legitimacy of their traditional relational knowledge and identity surrounding territory, resource use, and resource protection. The observable phenomena is not new: there is the famous example of two brothers in the Ohkay Owingeh Basin who were adjudicated differently based on their tribal membership status: both equally indigenous – both positioned in opposition to each other on the adjudicated boundary lines (Perramond, 2018:28).

Then there is the example of Abiquiu and Pecos Pueblos – both of which were federally 'detribalized' and whose residents lack any federal recognition, at all.

One *acequiera* shared how the increasingly stratified language around identity and race functioned to shape new relationships between *Nuevomexicano* and indigenous communities:

> *"the whole conversation that's coming into our consciousness, and that language…I feel like it's changed a lot of our relationship with the natives around us…I think that the colonial…the fact that I was a colonizer has always been there, but the neighborliness was always there…now… it's more individual, saying 'my needs have to be prioritized more.'" — Parciante of the Acequia Madre del Sur del Cañon, March, 2023*



What is obscure about this, of course, is that the racial and ethnic identity of *Nuevomexicano* people is in itself an abstracted and political category: it is an identity that has shifted from mestizo, to indigenous, to Mexican, to Spanish, to white, and back again to brown – over the centuries, depending on political will and gain (Lane, 2024, p. 17). Thus, while *Nuevomexicano* identity is in itself a hybrid space, due to federal constructs and distinctions of indigeneity and ethnic difference, there is no space for recognition of this plurality. Thus, just as pluralistic systems for managing water struggle to be recognized under the law, so to do the ethnic identities and cultures of *Nuevomexicano* peoples within a settler colonial context of the United States – one that relies

on stratified notions of belonging and place to uphold both the tri-cultural mythology of New Mexico, as well as hierarchies of expertise and knowledge to justify water management decisions that historically have both privileged and promoted the settlement of Anglo populations on this land, as well as the concomitant dispossession of *Nuevomexicano* and indigenous communities from their water, land, and resources. Simultaneously, such structures have served to cultivate a form of "federal dependency" (Lane, 2024) of indigenous communities to the Federal Government – wherein sovereign lands (and resources) are held in 'trust' rather than in full autonomy. As Rodríguez notes, "the state underwrites difference by conferring trust status on the Pueblos and other tribes and by ordaining who is or may become a citizen of the nation or province and what that involves . . . Water rights adjudication exploits the difference produced by the Pueblo, the state, the tourist market, and individual actors" (Rodríguez, 2006, p. 126).

This production of difference is emblematic of a 'coloniality of power' (Quijano, 2000), one that is systemic, intentional, and decisive. Such a stratification of identity contributes to a coloniality of being (Maldonado-Torres, 2007), and limits and prohibits 'other' knowledges, systems of thought, and realities from taking precedent within the modernist water management regime that "universalize[s] European thought as scientific truth, while subalternizing and invisibilizing other epistemes" (Walsh, 2007, p. xx).

This is not to say that difference did not previously exist: the impacts of Spanish coloniality – including the construction of the first *acequias* through conscripted indigenous labor – leave behind legacies and realities of a first wave of colonization. The Pueblo Revolt of 1680 served to push out the Spanish empire, after all – not the Americans. Yet, it is the intentional exploitation of such division by the United States that I contend contributes to a larger legacy of coloniality and dispossession experienced differentially but simultaneously by both *Nuevomexicano* and indigenous communities, today. In doing so, this same operation of power disenfranchises systems and processes of relational knowledge that hold seeds for alternative futures, beyond water management decisions, alone. For, relational systems of being with water are rooted not merely in efficiency-driven resilience paradigms, but rather in a reciprocal relationship with territory that – as discussed in the prior chapter – enables communities to think-feel with the earth (Escobar, 2019).

6.4 A Shifting Consciousness of the Material Politics of Water

Although communities maintain traditional practices of water sharing, the influence of quantified approaches to water management as well as the adjudication processes have fundamentally altered the ways in which communities maintain material relationships with water and one another, and is indicative of a larger and longer process of coloniality that operates within the sociopolitical landscape of New Mexico.

Sitting in the shade under a cottonwood tree on a cold yet bright spring morning, *acequia* commissioner Carmen Griego shared with me her perspectives on how water sharing and relations have changed as a result of the adjudication and increasingly quantified apportionments of water:

> *"Water sharing is heavy duty…when I talk to my dad, you know…it was all based on time. Our consciousness around water has changed so much in the last 120 years [referencing American occupation], and even in the last 50, because of climate, because of development…now it's about quantity. We share water based on quantity, on seniority…versus time. It's changed a lot.*
>
> *It's even changed in my village. Gardens in my village have always got water first, cause you're growing food to live. And these are in the bylaws, forever. In the last five years, it's changed that the ranchers get water first, because they are gonna sell their cattle for money. The livelihood is put up over the sustenance…to me, it's all consciousness…how are we relating to it, based on the things that happen in our experiences? It's heavy duty. Our family doesn't have enough land to be ranchers, so we really are farmers. And now there's not a lot of water….*

Ideally, the acequia culture in general has all the tools to get us out of the mess…but the intact culture doesn't exist. People all over the world are discussing this, and I feel we have a lot of ideas about the ways this can go…but the consciousness is not there. I hope that we will remember it in our bones, and that we can share, and say this is how we do it…but I don't think it's ever gonna be how it was.

The stories that I have about who made my acequia…these people had to die to come here. They figured it out. In my village, it's a story of a woman, who said that we need to bring the water down. I come from people who said we need to figure this shit out, and that's my acequia culture that I want to harness and store in my bones. The inner workings of it? There's a lot of variables. But the essence? We will move water, bring it to the people, share it, figure it out…so that we can survive. And that's the part that I want to remember. I feel that my acequia culture has given me all the tools, and I hope that I remember them when I really need them."

— Commissioner of the Acequia Madre del Cañon Sur, Rio Fernando de Taos. April, 2023.

The State system of managing water is just one representation of coloniality and a hierarchy of knowledge. As Lane documents, it has been a strategic process of hegemony and settler colonialism. Yet, the branches of this newfangled management extend beyond the State. They are visible in the non-profit industrial complex, in the endless stream of environmental surveying, and in clashes between ontologies of water in Taos and resultant impacts to territory, culture, and values. It is clear that the State itself struggles to adapt within the confines of its own logic: increasingly, new legislative initiatives are proposed in order to increase the flexibility of water management protocols away from the sole oversight of the Office of the State Engineer, in search of alternatives to priority distribution in non-adjudicated communities. Correspondingly, well-funded initiatives seek to understand and develop shortage sharing agreements, while 'adaptive' monitoring systems for quantifying resource use abound. Underscoring these actions is a resounding recognition that the State's water future is in jeopardy under current management

regimes. Recognition notwithstanding, there appears to be a constraint through which attempts are made to incorporate relational ethos of water management *into* the hegemonic system, rather than fundamentally altering the paradigm within which decisions are made. This can be understood as a managerial approach to the incorporation of relational ethos that yet falls short of a transformative outcome.

During my fieldwork period, the Governor's Office initiated the development of a '50 Year Water Plan' for New Mexico. I attended several of the Strategic Water Task Force meetings, organized to support the development of the plan. What I witnessed during these meetings, aside from the continually astounding amount of time, energy, and effort that I see every day New Mexicans putting towards good-thinking about water, was a suspiciously familiar slant of categorical thought, wherein cultural ethos were invoked, yet relational or flexible frameworks were absent. The result, I read, is a relatively economically efficient plan that acknowledges culture and traditional knowledge while emphasizing technological solutions to water scarcity, and a fundamental treatment of 'water' as 'H2O.' Among the solutions proposed by the Plan, water-use reductions came to the fore, including market mechanisms to retire existing water rights from use, as well as the supplementation (and sale) of naturally occurring surface water with 'produced' (treated) wastewater from oil and gas activities (Office of the Governor, 2024). What is missing within this, of course, is an incorporation of multiple ontologies of water, and a transformative outcome or future. Not all water is equal – and community relationality with their traditional waters cannot be supplemented by 'produced' waters of extraction.

The nuance of hegemonic water management paradigms is mirrored across scale, with some *acequias* adopting more judicial proceedings for their own internal water sharing discords (i.e. the Rio Fernando), while some opt towards community adaptation/negotiation (i.e. Rio Chiquito). The legalistic and oppositional framework displayed within the Rio Fernando *acequias* relies on the law of the state to guarantee water sharing in times of reduced water supply, rather than defaulting to collective or negotiated norms. Such solutions mimic the State's reliance on legalistic, and even oppositional, mechanisms of dispute resolution, and thus far have not resulted in a more equal distribution of water resources. Conversely, the adaptive water distribution practices displayed within the Rio Chiquito (i.e. prioritizing tail-end users first, engaging in experimental and

rotational distributions), highlights community flexibility, trust, negotiation, and a centering of a fundamentally equitable stance towards achieving water security for all. This juxtaposition is a necessary component of any water governance analysis, as it serves to disrupt the often-upheld binary of "state" (bad) and "*acequia*" (good). It demonstrates, rather, the non-linear spectrum through which *acequias* navigate, negotiate, transform, and contest hegemonic and relational power both outside of, and within, themselves. As previously stated, water sharing is both enmeshed in, and reflective of, power relations. Accordingly, relational ontologies of water do not reflect a moral supremacy, but rather demonstrate the persistent, if embattled, presence of alternatives – perhaps leading towards and demonstrating opportunities of 'flexible frugal flourishing irrigation in a pressure-port warming world' (Lankford, 2026).

Through understanding the state mechanism for water governance, it becomes clear that *acequias* continue to engage in a form of relational autonomy with the state, through negotiation and re-negotiation of their governance systems in dialogue with the hegemonic standards. This includes, for example, re-working the law to their advantage in order to create hybrid mechanisms of water sharing that are both legible to the state, and codify some norm of community-sharing (i.e. Rio Hondo Administration Flow Sharing Agreement, Appendix B). This includes, also, securing unified 'priority' dates amongst all users on an *acequia*, and indeed across multiple *acequias*, in order to nullify the potential of a priority call (Appendix C). *Acequia* autonomy is achieved – to a large degree – through their legal standing as a political subdivision of the State: a process of recognition that utilizes and depends upon the State's power and authority. In this way, while the fundamental system of hegemonic water governance remains unaltered, *acequias* engage with and transform it on their own terms.

There are, in fact, multiple cultures of water present within this one locale. Within this space of plurality, it becomes possible to recognize that alternatives to hegemonic water governance are actively present within the everyday politics of *acequia* water governance. Whilst these alternatives are pressured, fragmented, and at times internally contradictory, this does not negate their significance, but rather can serve to reflect the conditions under which they persist and transform. Thus, negotiation is part and parcel of the lived political reality of *acequia* water governance in a space both historically and continually shaped by overlapping colonial and

relational histories. It is within this contested, plural landscape that *acequias*' relational autonomy — their capacity to navigate, adapt, and assert alternative logics of water governance and environmental management in dialogue with, and at times against, hegemonic structures — becomes most visible. It is to this capacity that the following chapter now turns.

Chapter 7. Trails, Territory, and *Acequia* Relational Autonomy

7.1 Introduction

7.1.1 Statement of Chapter's Central Argument

Land in New Mexico is contested terrain. Legacies of territorial transformation have resulted in complex, overlapping, and interwoven claims over environmental stewardship, access, and control – each aspect of which is correspondingly bound up in identity, relationalities, and worldviews. Such instances include, for example, the Rio Hondo watershed in Taos – where one can trace the lineages of indigenous and *acequia* water sharing practices, territorial violations and rematriations (i.e. as visible through the return of neighboring 'Blue Lake' to Taos Pueblo in 1970), U.S. Forest Service management of 'public land' (a contested term, when such lands were expropriated from traditional communities), Taos Ski Valley's recreational development expansion and former query for priority over *acequia* water rights, and the transformation of traditional *acequia* water sharing practices into formal adjudicated agreements (i.e. through the Arellano Settlement, 2013).

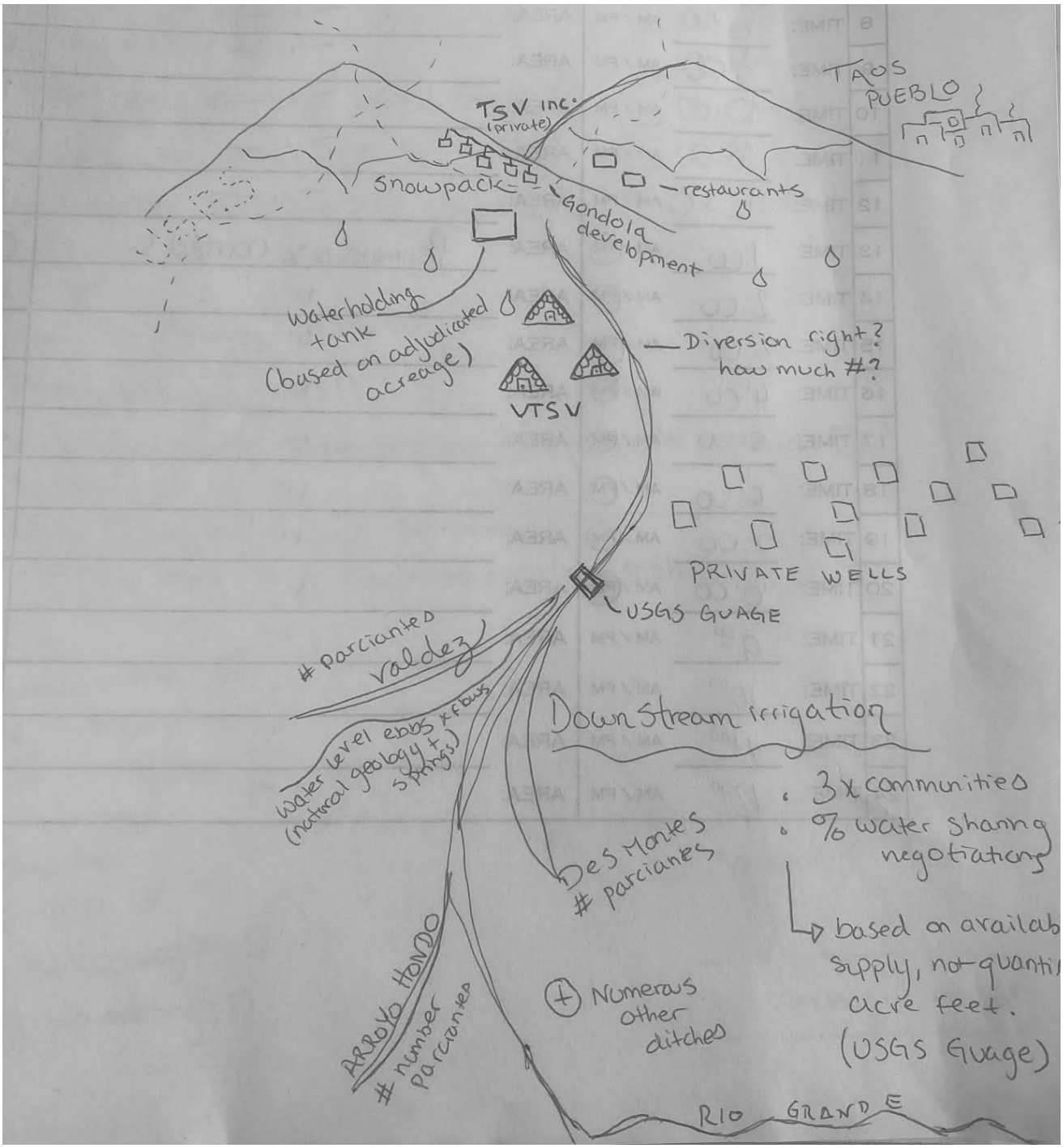


Figure 7.1: Schematic of Rio Hondo watershed (Source: Author)

Thus, in this small watershed, as in many others throughout northern New Mexico, one can witness the overlapping historic and contemporary influences of indigenous sovereignties and violations, ethos of *acequia* community management, Anglo-American expansionism, private property rights,

and public domain. In a place such as Taos, each of these spheres continually intersect and converge, giving way to spaces of territorial pluralism and dispute. These geographic loci in turn transcend the 'physical' and touch the ontological. In this way, land becomes the space upon which ontologies are both projected and performed—born and transformed.

The role of *querencia* has been demonstrated throughout the thesis as fundamental for shaping *acequia* practices and relationalities. This chapter seeks then to address a fundamental question, which is: how do *acequia* communities navigate structures and processes that jeopardize or challenge such *querencia*?

While the thesis is largely focused on water, this chapter itself turns to territory. I argue that *acequias* function as spaces of relational autonomy where communities navigate existing power structures through *querencia*-based practices (informed through centuries of mutualism), in order to engage in wider territorial protection, that affects relationality between people, place, land, and water, regardless of recognized land tenure. While previous chapters have examined the internal and relational water sharing practices of *acequias* (Chapter Five) and their encounters with state water governance regimes (Chapter Six), this chapter expands the analysis to consider how *acequias* support communities to defend broader territorial relationships that extend beyond 'water management.' Crucially, the fight to defend territory also helps to defend and strengthen the *acequia* system itself—these struggles are mutually constitutive rather than separate endeavors. It is from the space of the *acequia*, from the relational practices that emerge through *acequia* governance and water sharing, that *querencia* is generated and sustained. This embodied *querencia* is then the foundation from which community members articulate and defend broader territorial relationships that encompass watershed health, cultural practice, and spiritual connection to place. Thus, through this examination, the chapter highlights the importance of territorial relationships to maintaining *querencia* (and vice versa), as well as the existing power relations and structures of coloniality that *acequias* must navigate.

Through ethnographic examination of contemporary territorial conflicts in northern New Mexico, I demonstrate how *acequias* serve as institutional center points for broader territorial defense, providing legally recognized platforms from which communities can assert their *querencia* as a

legitimate basis for environmental governance and, in doing so, move towards alternative visions of development. I argue that *acequia* communities neither fully reject nor completely accept state frameworks of environmental governance. Rather, they engage in practices of *autonomía* (or relational autonomy) in order to maintain relational ethos and mutualistic practices – alongside, and at times in spite of, hegemonic environmental governance regimes. This approach challenges binary frameworks that position communities as either a) resisting, b) complying with, or c) being oppressed by state power, revealing instead how communities may strategically navigate power structures while maintaining core relational values and practices – in sometimes covert or contradictory ways.

Moreover, it is important to note, that this relationship with state or hegemonic power does not constitute an inherent separateness: sometimes, the act of walking alongside and navigating such systems results in hybridity, plurality, and even transformation – generating new forms of governance, autonomy, and being that would not be possible without the relational interaction between communities and differing spaces of power (Armijos, 2013). Thus, in keeping with an overt commitment to challenge binary frameworks, I seek to demonstrate the power and generative potential of pluralism and that which emerges from the space of interaction between, and convergence of, ontologies.

The territorial conflicts examined in this chapter—particularly the proposed development of mountain biking trails in the *acequia* community of Talpa (in the Rio Chiquito watershed)—reveal how seemingly innocuous recreational development and environmental management proposals become critical sites where power relations are both reproduced, contested, and transformed. It also reveals how threats to *querencia* – that is, relationship to place, spiritual practice, and in this case watershed health – activate a response that is emblemized through practices of relationality. Central to this argument is the understanding that *querencia* is maintained through relationality and *autonomía* — including the collective practices of water sharing, democratic decision-making, and territorial stewardship refined over centuries. Thus, when external projects threaten these relationships, communities often draw upon these same mutualistic practices to engage in their own variation of relational autonomy, whilst also generating new and pluralistic ways of being.

Lastly, these conflicts also serve to make visible the ongoing process of coloniality in northern New Mexico, particularly through what Correia (2008) terms "racialized territoriality"—or, the ways in which racialized categories shape whose claims to land and resources are recognized as legitimate. The *acequia* communities of New Mexico occupy a tentative role: that is, neither white nor 'indigenous;' both colonizer and colonized; land-based, yet at times land-baseless; situated within the 'Global North' yet sub-altern within this realm. Thus, by highlighting the processes of coloniality ever prevalent in New Mexico, the chapter seeks also to situate the *acequia* story within a larger structure of power relations, environmental justice, and coloniality.

7.1.2 Chapter Structure and Preview of Case Studies

To examine these dynamics, the chapter draws on the conceptual framework established in Chapter Three — particularly the concepts of *querencia*, *autonomía*, and coloniality — while also introducing Correia's (2008) framework of racialized territoriality to illuminate how racial categories shape whose claims to land and water are recognized as legitimate within environmental governance processes. The chapter also draws upon the history of land grant dispossession established in Chapter Two — the process through which communal lands were reclassified as "public domain" and *acequia* communities were exclosed from traditional territories and corresponding land-based practices (i.e. wood harvesting, herb gathering, hunting, ceremony) — to help understand how this history shapes contemporary territorial politics, and informs a living-memory of *acequia*/state relations.

The core of the chapter examines the Talpa Trails controversy—a recreational development proposal for the creation of a 70-mile mountain biking trail system in the Rio Chiquito *acequia* watershed. This case study reveals how recreational development becomes a site where power relations are reproduced, at times through participatory processes that systematically marginalize community perspectives while purporting to include them. The ethnographic analysis details community responses to this proposal, paying particular attention to the working group process established by the U.S. Forest Service, by examining how institutional asymmetries shaped participation and how community members strategically navigated these constraints – often using the '*acequia*' as the center of broader environmental and territorial defense.

The chapter then briefly examines parallel struggles—particularly the expansion of Taos Ski Valley recreational infrastructure and community processes of forestry management (the Forest *Mayordomo* Project)—to demonstrate patterns (and ruptures!) across different contexts. In keeping with the notion that a pluriversal knowledge of territory must recognize gradients of control, I also utilize this space to present a power relations framework that positions the three case studies (Talpa Trails, Taos Ski Valley, and Forestry Management) on a spectrum, highlighting the varying degrees of power differentials (from strong power asymmetries and exclusionary processes to collaborative and transformative spaces of symmetrical power relations), with the ultimate goal of demonstrating the transformative potential of pluralistic and *querencia*-informed approaches to environmental management.

Through this process, the analysis is informed by a notion of just-transformations (see, for instance, Rodríguez et al., 2023). This includes recognizing the means by which communities transform power relations from spaces of high asymmetry to co-equal (or even pluriversal) relations, as well as the processes through which *acequia* and irrigation communities enact 'counter-hegemonic alternative politics and world views' rooted in ethos of *querencia* (Rodríguez et al., 2023, Temper, 2019). The framework takes a necessarily decolonial lens, understanding territorial struggles as sites of pluriversal encounter where multiple world-making projects interact.

To demonstrate this framework in practice, I examine three territorial conflicts in northern New Mexico. Throughout the chapter, I demonstrate how territorial conflicts that appear to be about "water rights" or "recreational development" are fundamentally about *querencia*—and, concomitantly, about defending the spiritual, cultural, and relational integrity of territory itself. In doing so, I argue that *acequias* function as institutional and epistemic platforms where communities assert *querencia* as a legitimate basis for environmental governance, refuse the binary between "tradition" and "modernity," and enact pluriversality, including through the maintenance of distinct governance structures and ontologies while strategically navigating and engaging with state and hegemonic legal systems. By analyzing these conflicts through the lens of power, justice, and *autonomía*, I contribute to broader conversations about decolonial territorial politics — including that of categorically "non-indigenous" (yet land based, yet land rooted) communities in

the Global North whose practices embody sophisticated counter-epistemologies and world-making projects.

7.2 Conceptual Grounding: Coloniality, Racialized Territoriality, and Relational Autonomy

7.2.1 Revisiting Conceptual Terms

Coloniality: As established in the conceptual framework (Chapter 3), coloniality operates as an ongoing process — not a historical event. It continues to shape power relations, knowledges, ontologies, and being in northern New Mexico. The colonial matrix of power endures through systems of authority and knowledge that influence how territory is governed, and whose ways of relating to land and water are positioned as legitimate. In this chapter, these dynamics become visible through the institutional processes and territorial struggles examined in the case studies.

***Autonomía*:** *Autonomía* describes the outward practice through which *acequia* communities assert and navigate their relationships with territory in relation to the state and other actors. *Autonomía* is relational and dynamic, rather than absolute — it is not a rejection of state frameworks but a strategic engagement with them on communities' own terms (Armijos, 2013). In this chapter, *autonomía* is examined in practice: through the ways in which communities utilize the *acequia*'s legal standing as political subdivisions of the state, their collective governance structures, and their *querencia*-informed environmental ethos to defend territorial relationships that extend beyond water management alone.

***Querencia*:** *Querencia*, as demonstrated throughout the thesis, denotes an inward relationship with territory, water, and community. It is a deep and recursive bond with place that informs identity, stewardship, and governance norms. *Querencia* is both concept and practice and can be identified as the relational ground from which *autonomía* is enacted, wherein communities draw on their relational bond with territory to assert their right to governance (and relationships) on their own terms.

A Decolonial Lens: A decolonial and relational lens illuminates both the power relations inherent in hegemonic governance regimes (and processes of coloniality), and also highlights the role of *querencia* and relationality in informing community response. Through a decolonial and relational lens, *querencia* and *autonomía* are revealed not as separate concepts, but as mutually constitutive and co-generative.



Figure 7.2: Bumper sticker reading 'la acequia es nuestra escuela' or 'the acequia is our school,' emphasizing the ontological nature of the acequia as an institution of thought and praxis, rather than simply irrigation infrastructure. Photo taken in Santa Fe, 2023. (Source: Author)

7.2.2 Racialized Territoriality (Correia 2008)

Correia's 2008 framework on racialized territoriality provides a useful lens for understanding how colonial power dynamics operate through environmental governance regimes in northern New Mexico. The framework illuminates the ways in which racialized categories of identity shape whose claims to land (and corresponding knowledges) are recognized as legitimate within decision making processes, and, therefore, whose visions of development continue to guide land use decisions within the state.

Through this lens, struggles over land and territory are fundamentally shaped by racial dynamics and corresponding power relations – largely defined (and created) by Anglo settler-colonial logics. This recognition is supported by the work of Bodine (1968) through what he deems to be New

Mexico's "tri-cultural" narrative — or, the Anglo-generated (and tourism-industry upheld) idealistic notion of distinct, isolated, and culturally relegated spheres of ethnicity (Anglo, Hispano, and Indigenous), that negate an on-the-ground reality of relationality, plurality, joint identity, and *mestizaje* (culturally, politically, or ethnically). This is not to say that cultural distinction does not exist, however there is promoted, within New Mexico, a very curated notion of three separate and co-existent cultures that denies the messy and embedded realities of cultural development. Rodríguez carries this analysis further, describing the 'ethnic reconstruction of contemporary Taos' (1990) as an Anglo-generated project that is informed specifically by colonial notions and promulgations of art and tourism that fetishize distinct racial categories and their historic positionings. Such an ethnic categorizing not only relegates living communities and relationships to narrow, historicized, and binary identities, but also sees the *acequia*/hispano community as "confronted on the one hand with the devastating consequences of their land loss and subordinate status…and on the other with the Anglo glorification…and imitation of Indian culture" (Rodríguez, 1990b, p. 543)—despite both indigenous and *acequia* communities rebelling against, and reconfiguring, these externally imposed categorizations and imaginings – (see, for instance, 'Indian in a Blanket' or 'New Mexican American' textile and fashion by Josh Tafoya, 2022). Thus, whilst the myth perpetuated by the tri-ethnic trap continues to endure in contemporary New Mexico — it is important to recognize it not as a true rendering of cultural relations, but rather as a tool of discourse variously employed and/or rejected by communities in struggles over land and water — ongoing, today.

Through this lens it is evident that territorial struggles represent more than disputes over land access—they embody fundamental conflicts over whose claims to land (and land practices) are recognized as legitimate and how racial categories shape access to resources and power. Thus, returning to the concept of racialized territoriality, Correia examines the ways in which contested territories such as the forests (or, watersheds) of northern New Mexico are constituted not just through overlapping and convoluted legal designations, but also as ongoing spaces of social relations and power. This framework helps to explain not only how territorial struggles in New Mexico persist with a profound endurance, but also why these struggles relate so deeply to questions of identity.

This framework follows in line with Wilmsen's (2007) conceptualization of New Mexico's "environmental-racial order," or, the politics and power relations that manifest through the 'racial (re)coding' of space, resources, and territory in New Mexico (Wilmsen, 2007). Through this process, the legitimacy of land/resource use, stewardship, and control responds to a "politics of racial triangulation" in which communities make "claims, counterclaims, and counter-counterclaims about environmental problems in northern New Mexico…" (Wilmsen, 2007, p. 238), variously utilizing ethnic claims to reject and/or advance specific land-use desires. This triangulation in turn "produces, contests, and reinforces inclusions and exclusions for certain groups from making legitimized claims to land" (Correia, 2008, p. 565).

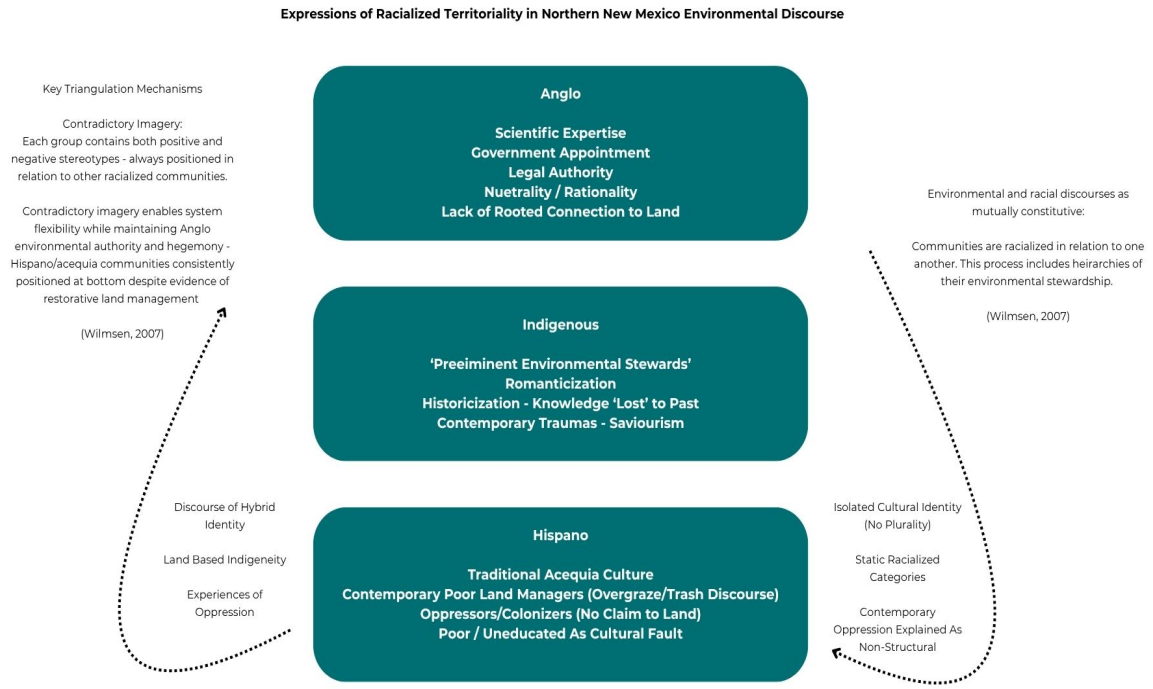


Figure 7.3: Racialized Territoriality as theorized by Wilmsen's (2007) environmental racial order. (Source: Author; Wilmsen, 2007)

In the context of forest (watershed) management in northern New Mexico, racialized territoriality continues to operate not only through the exclusion of communities from the stewardship of their traditional territorial lands, but also through institutional processes (such as the U.S. Forest Service's 'Talpa Trails Working Group'), which appear neutral but continue to privilege Anglo-

American logics of land use, management, and discussion – while largely marginalizing *acequia* perspectives (and thereby legitimacies of input and claim to land).

Racialized territoriality thus operates as one mechanism through which coloniality endures in contemporary New Mexico — shaping not only who is excluded from territorial governance, but also the terms on which inclusion is offered within the hegemonic realm. It is within this context that *acequia* communities enact *querencia* and *autonomía*: asserting relational ways of governing territory that challenge the racial and ontological logics through which their claims have historically been marginalized.

7.3 Parallel Struggles: Expanding the Territorial Defense Framework

7.3.1 Introduction

During my fieldwork period, several instances of converging struggle manifested around land, water, and territory in the *acequia* communities of Taos. These included, amongst others, the Talpa Trails controversy (discussed above), increased development expansion of Taos Ski Valley in the Rio Hondo watershed, the successful designation of Las Comunidades del Valle de los Ranchos as a Traditional Historic Community (protecting against annexation into the Town of Taos, and thereby protection of water rights), a proposal to permanently retire grazing permits from federal lands (former land grant commons which individual now hold grazing permits for, representing a further exclosure from traditional territorial engagements), watershed recovery from devastating forest fires, ongoing water rights adjudications, and complex water sharing negotiations. Rather than isolated conflicts, these territorial struggles form a constellation of encounters where *acequia* communities must continuously negotiate the terms of their relationship to place within a larger system of territorial politics. Each watershed, and each *acequia*, holds a world unto its own – yet, within each of these microcosms, one can observe varying gradients of power relations, of strategies for negotiation, and of a larger tapestry of *acequia* autonomy. Thus, each case

illuminates different strategies, power dynamics, and outcomes—from exclusionary processes to collaborative frameworks—and, in doing so, each struggle concomitantly reveals different dimensions of how *acequia* communities strategically engage with state (/hegemonic) systems to defend *querencia* while maintaining varying degrees of *autonomía*.

7.3.2 Gradient Towards Just Transformations

Of the multiple instances of converging struggle documented above, this chapter details three, and their positionings along a gradient of power differentials, moving towards just transformation (Rodríguez et al., 2023). Drawing from just socio-ecological transformations theory (Rodríguez et al., 2023), and justice typologies for socio-ecological restoration (Martin et al., 2025), I position the case studies in movement from exclusionary processes (and spaces of high power asymmetries) toward collaborative governance arrangements, with the potential for eventual transformative outcomes.

Each case incorporates different dimensions of justice—distributive (resource allocation), procedural (decision-making processes), and epistemic (whose knowledge counts, and how)—alongside varying transformation mechanisms including legal recognition, procedural reform, and cultural acknowledgment. Of the varying instances documented, the three cases selected most clearly demonstrate distinct positions along the justice spectrum: Talpa Trails exemplifying systematic exclusion of community knowledge, Taos Ski Valley illustrating long-term negotiation strategies and progression from conflict to collaboration, and Forest *Mayordomos* representing emerging transformative governance arrangements. Together, these cases span the justice typology while demonstrating how *acequia* communities strategically navigate different power contexts. The examples provided here represent a small fraction of the innumerable processes undertaken, ongoing, and underway – each of which respond to the seeds of their own making. It is important to note that transformations often progress from resistance to alternatives (Rodríguez and Inturias, 2018). Thus, while certain cases (i.e. Taos Ski Valley) emerge from decades of conflict and tension, these same cases can also demonstrate openings for negotiation (i.e. the Rio Hondo Watershed Group), and movement forward on the gradient (although neither the gradient – nor processes of *autonomía* – are necessarily linear). No case on the gradient reaches the ‘end’ of the

transformative spectrum – rather, they extend towards pluriversal, and decolonial recognitions of territory, and signal the multivalent ways in which *acequia* communities negotiate *autonomía*.

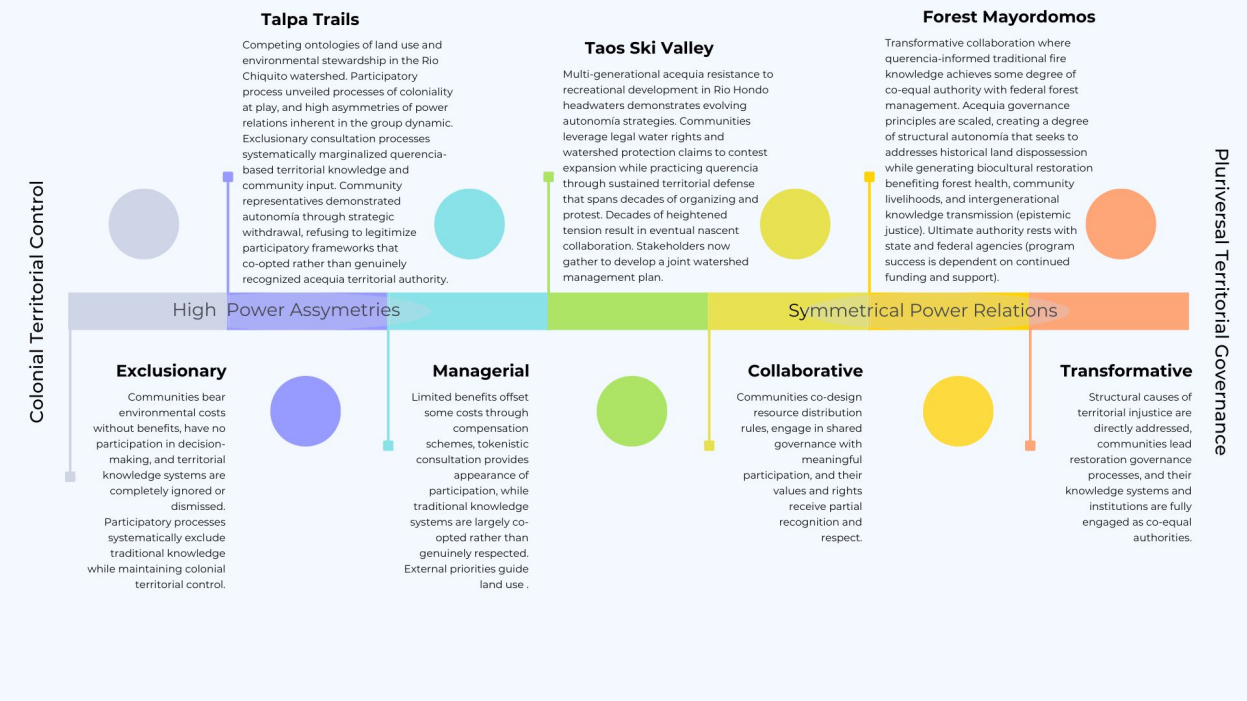


Figure 7.4: Just Transformations Framework for Acequia Territorial Defense. This framework analyzes acequia community responses to territorial threats across a spectrum from exclusionary to transformative approaches, demonstrating how querencia (reciprocal place-based relationships) informs strategic autonomía practices. Case studies reveal different forms of environmental justice engagement: exclusionary processes prompt strategic withdrawal (Talpa Trails), managerial approaches enable legal negotiation within dominant frameworks (Taos Ski Valley), while transformative collaboration achieves structural power reconfiguration and knowledge co-authority (Forest Mayordomos). The progression shows how communities maintain core territorial relationships while strategically navigating varying power contexts. Querencia provides the foundation for strategic autonomía across the justice spectrum.

(Source: Author, Adapted from IUCN WCPA Justice Typology for Restoration, Martin et al., 2025).

These examples demonstrate that *acequia* territorial politics are not only about resistance, but rather reveal sophisticated strategies for negotiating state systems, while defending pluriversal approaches to territorial knowledge and governance through dynamic processes of *autonomía*. The three cases demonstrate escalating degrees of transformative potential, revealing pathways toward collaborative territorial management that benefits both ecological health and plural forms of governance. This approach addresses the structural inequities documented throughout the thesis—from territorial dispossession to hegemonic water management structures—while creating more

effective environmental outcomes through the integration of place-based knowledge systems. The following case studies examine how these dynamics operate in practice, tracing the specific strategies communities employ to defend *querencia* and practice *autonomía* within different power contexts. The case studies reveal increasing acknowledgment that multiple legitimate ways of knowing and governing territory can coexist, moving from colonial exclusion toward collaborative and pluriversal knowledge systems.

7.4 Talpa Trails and Territorial Defense: "You Can't Put a Mountain Bike Across My Church!"

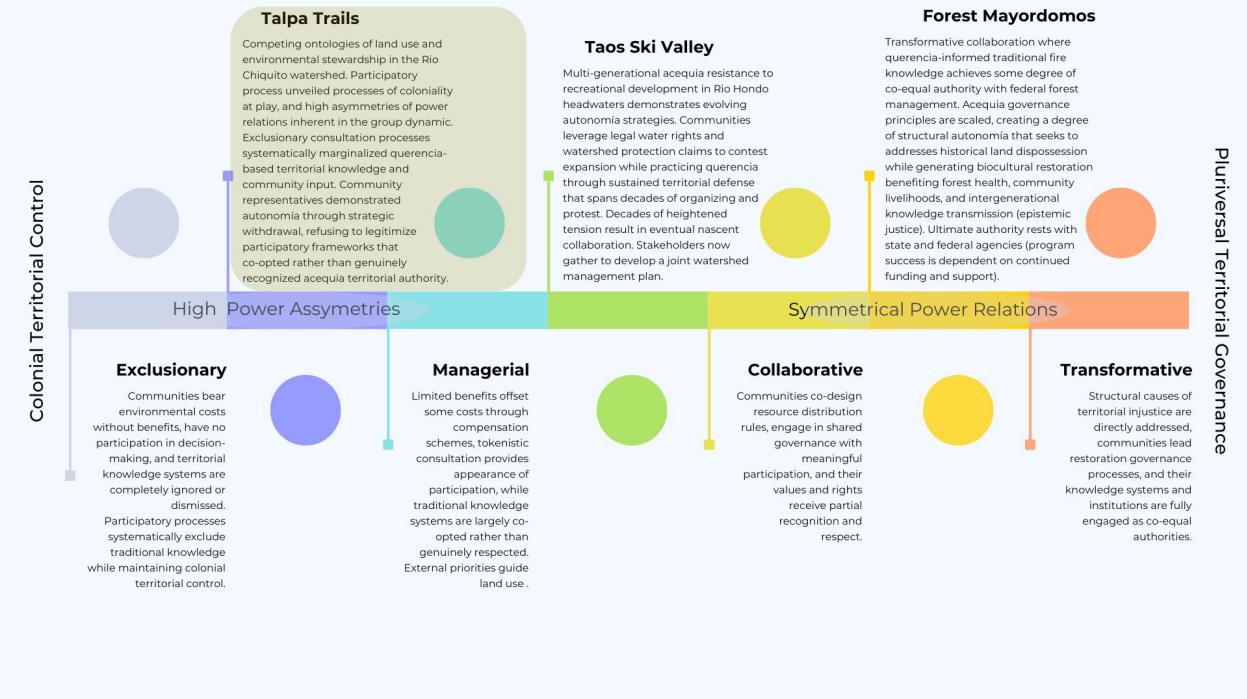


Figure 7.5: Just Transformations Framework for Acequia Territorial Defense: Talpa Trails. (Source: Author, Adapted from IUCN WCPA Justice Typology for Restoration, Martin et al., 2025).

7.4.1 Introduction to Talpa Trails Proposal

In November of my fieldwork period, I had given a call to my friend and colleague Filemon Martinez, a commissioner on the *Acequia Madre del Rio Chiquito.* Filemon and I had known each other for several years—first working together as part of an agricultural collective in the community, and later connecting over my fieldwork research. Although we had already sat together several times for an interview, I had wanted to ask him a few more questions about the processes of water sharing his *acequia* was engaged in. Like many *acequias* in the region, the *acequias* of the Rio Chiquito (the *Acequia Madre del Rio Chiquito,* the *Acequia del Monte del Rio Chiquito*, and the *Deposito*) were engaged in a highly adaptive system of water sharing that 1) prioritized downstream users first, and therefore delivered water from the 'bottom' to the 'top' of the ditch, 2) engaged in a rotational schedule to deliver the maximum amount of water to each section of the ditch at a time, rather than a consistent flow to multiple *acequias* that would be insufficient to irrigate, and 3) followed principles of equity, proportion, and need when making 'tough' decisions to prioritize water allocations in times of drought. Where the *acequias* of Rio Chiquito seemed to differ from other Taos *acequias*, however, is that this system of water sharing was occurring both within and between *acequias* – signaling a shift in scalar relationality.

As we spoke over coffee, Filemon asked me if I had heard what was going on with the mountain biking trails: I hadn't. He showed me a map that aligned with a recently announced proposal for a trail network (70 miles in total) to be developed in the Talpa Foothills – the watershed of the Rio Chiquito, and the ancestral territory of most Talpeños. As we spoke, Filemon shared his concerns over watershed health, erosion, infringement of *acequia* water rights, and *acequia* impairment. We discussed impacts to wildlife – primarily elk – and the existing disrepair of USFS trails that already presented challenges for those needing to access the forest for wood products. We also, more quietly, discussed the sacred sites that these trails would cross over: *descansos* and shrines, pilgrimage trails for *los hermanitos de los penitentes*, hunting trails, and areas of contemplation that individual Talpa families had maintained for generations. Although at first the idea of a mountain biking trail seemed relatively harmless (on paper, it increased recreational access, and offered some small employment opportunities) I soon came to understand the gravity of the proposal: it was not only the density of the trail network that was concerning, but also the ways in which the process had begun to unfold. With scant community input, the proposal exemplified the increasingly visible impacts of rural gentrification, as well as profound tensions between

competing visions of environmental stewardship. What I didn't anticipate is that a proposal for bike trails in an *acequia* watershed – in many ways, a seemingly innocuous form of recreational development – would form a pillar of my research for months to come, revealing how *acequias* function as institutional platforms through which communities articulate and defend broader territorial relationships that integrate watershed protection, cultural practice, and spiritual connection to place.

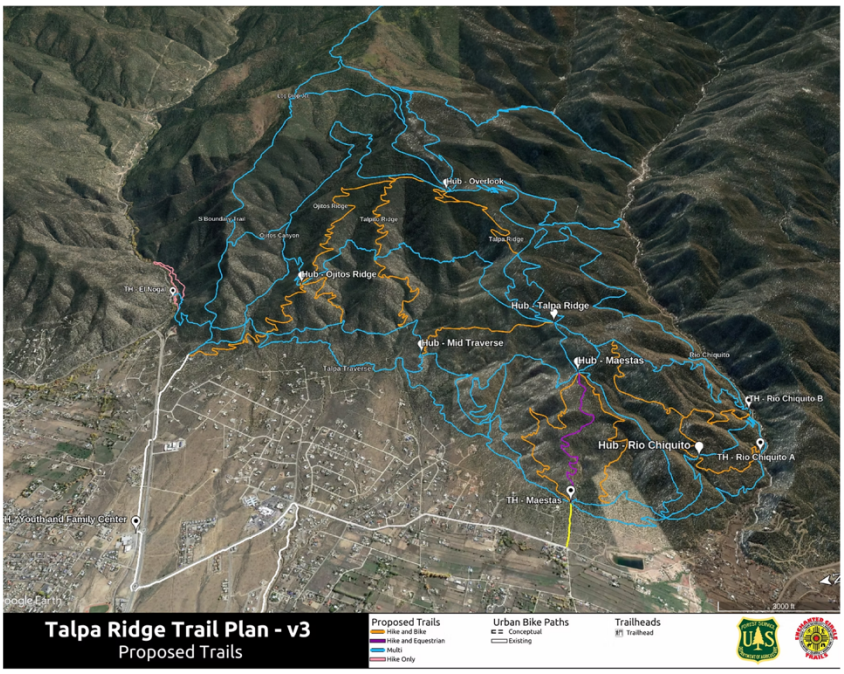


Figure 7.6: Talpa Ridge Trail Conceptual Plan – Initially Proposed Trail Plan. (Source: Enchanted Circles Trail Association, 2024).

7.4.2 Initial Community Mobilization

As community concerns about the trail proposal intensified, the U.S. Forest Service announced its intention to form the Talpa Trails Working Group to address the contention that had arisen regarding the proposed trail system thus far. Concurrently, the *acequia* networks that had facilitated water sharing between the Rio Chiquito communities began to transform into an infrastructure for territorial defense. Of the 'traditional community' representatives that would serve on the USFS Working Group, all were *acequia* commissioners, *acequia* association leaders,

or *parciantes* actively involved in their *acequia* communities—not coincidentally, but because the *acequia* provided the institutional legitimacy and organizing infrastructure necessary for collective action. In doing so, *acequias* reveal themselves as living networks of social infrastructure that are prepared to rapidly mobilize from resource management to territorial protection and disaster recovery. The relational nature of the *acequia* explored earlier in the thesis — including shared labor obligations, institutional practices, and collective decision-making processes — evidences and provides a framework for sustaining the social relationships and infrastructure necessary for territorial defense.

Filemon, along with other *acequia* commissioners, leveraged their positions as democratically elected representatives to contact state senators, the Attorney General, and attorneys with the New Mexico *Acequia* Association to voice *parciante* concerns: these representatives were democratically elected by *acequia parciantes* to serve as *acequia* commissioners, and in turn became representative of the community at the watershed scale.

This mobilization reveals how *acequias* function as more than irrigation infrastructure—in all of their earthen-ness, they are still not just simple mechanisms for water delivery. Rather, the *acequia* provides a bounded space of belonging from which community members can articulate and defend their relationship to the larger territory, as well as their ideas and contestations with development practices. In doing so, the *acequia* functions as the point from which communities can leverage state-recognized legitimacy to defend territorial relationships that exceed the boundaries of water law, extending to encompass watershed protection, cultural practice, and spiritual connection to place. Thus, the *acequia* both is sustained by – and sustains – the relational and material world.

Similarly, when community members voiced their concerns about the proposal – which ranged from soil destabilization, to watershed health, to impacts to elk migration, to unequal access to forest service land (traditional community land grant common land), and the desecration of sacred sites (amongst other concerns), they consistently framed their concerns not simply as residents of the neighborhood, but rather as *acequia* members with institutional (and legal) rights to a healthy watershed. In doing so, they were able to link concerns over broader territorial impacts (i.e. forest health, risk of wildfire, encroachment on multi-species habitat) to watershed concerns that could

impact the *acequia*, and thereby assert a larger degree of legitimacy over their traditional territories than would be possible without the institutional standing of the *acequia*, alone. An example of such linking might be citing concern over heightened wildfire risk that accompanies increased public road access to the forest – and, that such risk would demonstrably harm *acequias* in the case of post-fire flooding. While, of course, concerns over wildfire extended far beyond the post-fire flood risk, and also touch upon legacies of fire suppression by the USFS, a loss of access to traditional forest product harvesting, a disregard for traditional forest management practices by *acequia* communities, and the dispossession of common lands – these latter concerns lack institutional recognition, and, therefore, *acequia* communities strategically utilize the impacts to the watershed/irrigation system as their method of further reach – as their rights to the *acequia* are politically 'secured.'

A second example might be citing concerns over increased erosion due to soil destabilization from man-made trails, and how this erosion could harm the functional infrastructure of the ditch system. Again, although this concern is legitimate in its own right (soil studies demonstrate highly porous bedrock and shale-slide risk within the proposed trail area), it also serves to protect against encroachment from the trail system upon sacred landscapes illegible to the State – *acequia* communities lack legal recognition for these sacred sites in the same ways that tribal nations may receive protections; therefore, the linkage to the *acequia*'s infrastructure enabled communities to advocate for multiple (yet at times hidden) concerns.

This linkage is not immediately visible to the outside observer. Yet through discourse analysis and continued conversation with *acequia* communities, the utilization of the *acequia*'s institutional standing to protect wider traditional territories to which environmental claims are now limited (or denied), becomes clear.

The concerns raised at initial meetings revealed the depth and complexity of community relationships to the Talpa watershed. Through the primary themes of contestation that arose during the comment period it became increasingly clear that the proposal for trail development touched upon broader community concerns over territorial maintenance, access, and visions of development. During community meetings, community members drew on intimate familiarity

with soil types, seasonal water flows, wildlife migration patterns, and sacred geographies to challenge the technical assumptions underlying the trail proposal. Each of the concerns reflected embodied territorial relationships that do not cleanly separate the ecological from the cultural and spiritual dimensions. Examples of community comment demonstrate the ways in which watershed health, cultural practice, and community wellbeing are discussed as fundamentally interconnected and mutually co-constitutive.

7.4.3 Mapping Community Concerns: Relational Environmental Knowledge

During initial community meetings, *acequia* members articulated interlinked concerns that revealed the depth of their territorial relationships. While recognizable 'claims' were limited to *acequia* infrastructure, the following community comments — drawn from initial public meetings on the issue — demonstrate how watershed health, multispecies relationships, and spiritual practice form an integrated whole, reflecting a territorial understanding of *querencia* as a form of embodied environmental knowledge that does not separate complex assemblages of water, soil, wildlife, and human communities into discrete or solvable categories.

Through this relational perspective, nature exists not simply as "an objectified backdrop against which social relations play out, but [rather] as a subject in its own right" (Elmhirst, 2015, p. 524), with agential power. Analyzing community responses through a relational lens of material feminism reveals both emotional and embodied connections to the environment, which in turn inform an ethics and politics of care expressed through community response. Such a lens does not seek to essentialize community relationships to the environment, but rather to acknowledge that embodied and material connections with the environment are fundamentally constitutive and expressive of an 'ethical responsibility to human and more than human worlds' (Elmhirst, 2015).

Excerpted Community Comments

"This is a watershed, this is how our community has sustained ourselves for generations…, it is a necessary part of our community, and it will disappear. Water is our number one resource and it's shrinking and disappearing. How can any federal agency propose having this activity on this mountain, as it will impact our water?"

"This is one of six rivers in Taos valley…This river supports hundreds, thousands, of species other than humans who live up here. We need to remember our animals…this river needs to be kept whole. Who is the USFS? They're not living up to their promise. [We need to] speak for Rio Chiquito and the whole watershed."
"You can't put these trails in and protect the watershed at the same time; you have one or another….we live in nature, and [we] respect nature…others need to respect nature as well. I know [we] live where the animals are…the mountain lions come and go and don't harm anyone."

This relational articulation extended to community members' description of sacred landscapes. The Talpa Ridge is considered a sacred place for many families of the *Rio Chiquito*: it contains not only *descansos* and shrines, but also places of burial, worship, and pilgrimage. While the hillside has been sacred for many families for generations (far predating the presence of the U.S. within this territory), the occupation of the common lands has brought with it increased 'quietness' of spiritual practice—that is, no specific protections exist for retaining the spiritual practice of community residents in their traditional watershed or territories. Therefore, many practices now occur 'illegibly' on USFS land through unmarked procession routes, hidden shrines, and general relationality with place. Beyond 'religious' use, community members also emphasized that access to these hillsides – and the ability to maintain traditional customs – informed their *querencia*, and relationship to place – which in itself is a spiritual practice.

Excerpted Community Comments

"The spiritual significance of the lower Talpa Ridge is not to be underestimated or trivialized. While the shrines near the *calvario* [pilgrimage/offering site] at the top of the hill are widely known, many others are encountered throughout the area. Most are private and not easily found. Some have been carefully maintained for decades, others are more transitory, replaced by new ones over time. The individual shrines are important, but it is the place, the locale, that is most spiritually significant, regardless of the permanence or passing character of each shrine. Many people walk here because of its spiritual nature, even if those who do not have shrines there..."
"My first reaction to the trail proposal was 'you can't put a mountain bike across my church!'"

The sacralized relationship to place presented a challenge for conventional planning approaches. While trail proponents suggested mapping specific sacred sites, community members explained that this approach misunderstood the nature of their relationship to the landscape. While some shrines are visible, the hillside is also a space of 'silent' prayer, and of sacred sites (and practices) that are kept hidden and private (such as the practices of *Los Hermanitos de los Penitentes*, a religious sect now endemic to northern New Mexico, with extraordinarily strong cultural,

community, and spiritual ties in the region). Therefore, the suggestion to demarcate sacred sites on maps in order to 'deter' bikers from trespassing there, was met with community member concern that such action would a) make such sites even more visible to outsiders and tourists, b) would endanger cultural practice that is intentionally kept hidden, and c) would capture only specific locations, but would not protect the hillside in its entirety (or future shrines) – as sacredness is not confined to the site of a shrine, but rather imbued in the landscape and in turn visibilized through relational practices of *querencia*. Through this, there appeared a tension between practices and locations that are legible to the state (i.e. identified by archeologists, located on a map) and those more 'subtle' and relational practices of *querencia* that may or may not ever be definable according to state standards.

Perhaps most profound were community reflections on economic development that revealed alternative economic ontologies which contrasted sharply with tourism-based development models. In doing so, community members effectively critiqued the notion that the community should provide the landscape, infrastructure, labor, and cultural backdrop for other's profit and pleasure.

Excerpted Community Comments

"This talk of economic development seems to assume we need to bring people with money from the outside to use our resources in order for us to live. We are living here by protecting these resources. This economy that we maintain doesn't go into cash and get recorded, but it allows us to survive here. There is a traditional economy that is very strong in this area."
"People want the joy ride without the respect…This land we are graced to live on – is this a privilege? Or is this a commodity? These maps [of the proposed trail system] show that the migratory animals will suffer. Most of the people who come to do their pleasure within our communities come with a feeling that we should accommodate them instead of them coming and respecting our local people."



Figure 7.7: Our Culture is Not for Your Entertainment – community member raises a sign during a community comment meeting for the Talpa Trails, May, 2023. (Source: Author)

7.4.4 The Working Group Process: Institutional Asymmetries and Racialized Territoriality

Despite the seemingly equal makeup of the working group, power relations continued to unfold. An outside facilitation firm (Peak Facilitation Group) was hired by the USFS to conduct the working group process – the firm specialized in "high conflict collaborative process" and was based out of a neighboring state, with no discernable ties to New Mexico. In total, 16 community representatives were chosen from a pool of 44 applicants to participate as working group members,

each of whom would represent a "differing, yet critical perspective[e] during discussions" (USFS Press Release, December 16, 2022) (Figure 7.9).[26]

The working group process timeline was designed to allow for four working group meetings (which the public could attend but could not participate in), as well as one community comment meeting (in-person) and one virtual comment meeting (online) (Figure 7.8). Within the span of the three-month timeline, working group members were charged with developing proposals to be considered by the USFS for inclusion in the National Environmental Policy Act (NEPA) process – which was highlighted as a future opportunity for public engagement. The public was encouraged to reach out to the working group members to voice their concerns, although their direct ability to comment on the process and/or plans was limited.

[26] Despite the working group's seemingly balanced composition, significant concerns arose about its formation. On several instances, community members asked for transparency regarding the formation of the group: how were members chosen, and by what criteria? (Public information, per federal requirements). Failing to receive such information, individual working group members resulted to filing lengthy Freedom of Information Act (FOIA) requests, which were received nearly a year after the process concluded.



Figure 7.8: Timeline Proposed by USFS for the Talpa Trails Working Group (Source: Author)

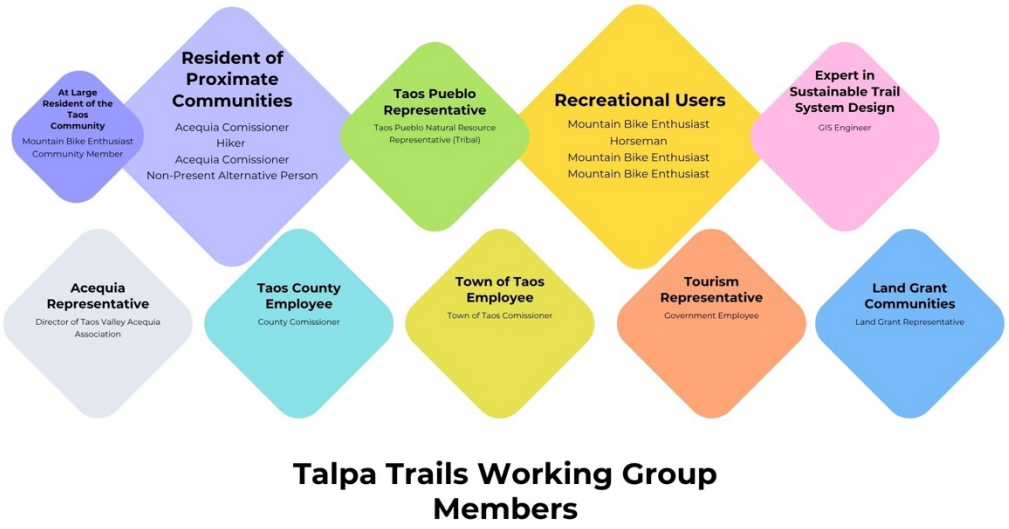


Figure 7.9: Talpa Trails Working Group Composition (Source: Author)

Despite the working group's seemingly balanced composition, the process revealed deep inequalities that demonstrate how coloniality operates through seemingly neutral participatory frameworks, which appear inclusive yet systematically reproduce existing power relations through procedural constraints, structural inequalities, and cultural dominance. The working group process was imbued with racialized power dynamics: uneven burdens of labor, asymmetrical community

outreach, discrepancies in resources and skills available to working group members (i.e. map development), conformity to rigid procedural norms, and a lack of relationship building.

Amongst these constraints were visible disparities in time, labor, and resources, as well as the time allocated for processes of trust-building. Whilst local community members volunteered their time, certain trail proponents participated as paid staff. *Acequia* members volunteered time to hold local meetings, gather community input, and hand-draw schematics to represent their territorial knowledge. Conversely, mountain bike interests hired professional GIS experts, trail planners, and designers. When community representatives requested more time for thorough community engagement, trail proponents accused them of "stalling the process" (Taos News, 2023), disregarding both the unequal labor burden and differing cultural values around transparent information-sharing versus rapid decision-making. Spatial segregation was visible —Taos Pueblo representatives and *acequia* members sat together, while white mountain bike proponents occupied the other side of the room. It is important to note that the bulk of the working group process occurred at the peak of *acequia* irrigation and planting season – a concern repeatedly raised by *acequia* working group members.

The facilitation process itself furthered existent power dynamics, and can be read as a site of racialized territoriality. Although the facilitation team was highly skilled at their job, the nature of facilitation was antithetical to a relational process of community negotiation. The pre-positioning of the working group as a 'high conflict process' was procedurally visible: very little time was given to relationship building or the development of trust. Instead, both the public and the working group members were expected to adhere to rigid procedural norms, or what I would term 'Anglo rules of engagement: that is, speaking in English, delivering one's point quickly and concisely, not 'straying' from the line of discussion (which in itself was narrowly defined by the facilitation team), speaking only when one's turn at the microphone arose, never raising one's voice, responding only in silence to comments made by others, sitting calmly in one's seat and standing presentably in line, eat quietly outside the room, and overall behaving in an 'orderly' manner (as defined and enforced by the facilitation team). To stray outside of these rules risked forcible removal from the hall, the forfeiture of one's ability to observe or comment, and the ongoing reinforcement of a narrative that suggested *acequia* members acted as irrational and unreasonable

participants in response to a civil engagement process. What lay hidden beneath these rules of engagement was the infliction of colonial violence that marginalized community voice and methods of engagement. As Fanon writes, “for the colonized subject, objectivity is always directed against him” (Fanon 2004, p. 37).

In addition to the power relations inherent in the rules of engagement, were the equally telling ways in which complex relational knowledge was consistently reduced to concerns that were ‘solvable’ through technical solutions.

An example might be:

- Esmerelda, native of Talpa, shares her concern over elk, her feeling of responsibility to protect the elk’s habitat and wellbeing, her relationship with elk over the course of a lifetime - including watching them come down from the hills to graze in the early mornings and how her grandfather taught her to call in the elk during hunting season. Elk remind her of her interconnectedness with nature and her culture, and she feels that if the elk were to disappear so would her children’s relationship with their ancestry and place.
- Official meeting notes may read: concerns over wild species habitat.
- While technically accurate, this skips over multiple relations with nature and place expressed by Esmé in her initial commentary, transforming embodied territorial relationships into discrete environmental concerns manageable within planning frameworks.

Such frameworks mirror IPBES nature value frameworks (or ‘life frames’) for living from, in, with, and as nature (Figure 7.10) (Pascual et al., 2023). Whereas the facilitated planning process may account only for life frames for living *from* or *in* nature, the interrelated and *querencia*-informed perspective of Esmé relates more to an understanding of living both *with* and *as* the larger territory. The *acequia* networks, like Esmeralda's elk relationships, represent what the IPBES terms relational values, or "the importance of meaningful relationships between people and nature and among people through nature such as reciprocity and care" (Pascual et al., 2023, p. 813). Yet, where research and policy most frequently align with *'living from'* frameworks, such relational perspectives get flattened into instrumental concerns about water management or wildlife habitat protection rather than accounting for their true relational nature. Thus, this clash in worldviews

and knowledge systems render the facilitated planning process as increasingly incommensurate with community relationships and values, through the privileging of certain frameworks of nature value systems over others.

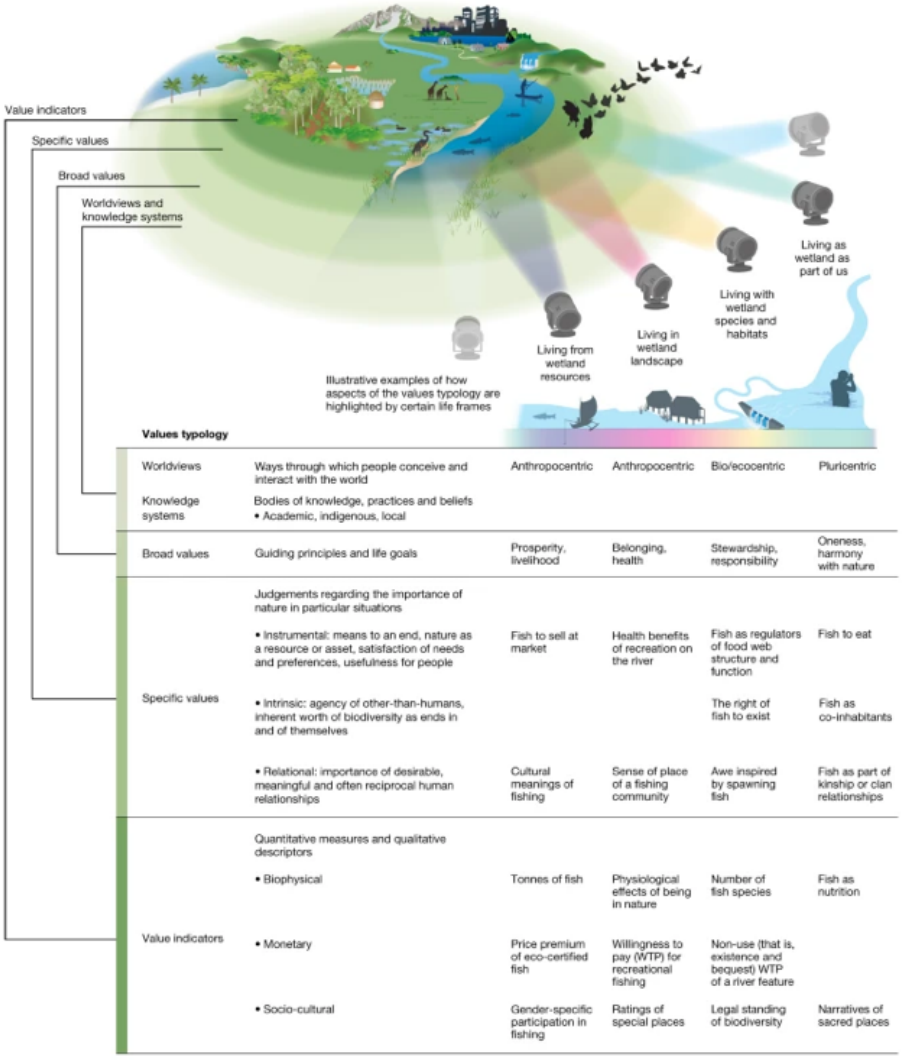


Figure 7.10: "The Inclusive Typology of the Many Values of Nature" (Source: Pascual et al. 2023).

7.4.5 Participation as an Exclusionary Process: *Out of Place, Out of Time, and Problematic*

The facilitation of the Working Group process mirrored a particular form of engagement, wherein community members would appear at a meeting to voice concerns, only to be told that the format of their concern was not presented properly for inclusion, that this particular meeting was not

intended to collect community comments, or that these specific state agents or facilitators were not the ones to speak to. Following Maldonado-Torres, I read this pattern as representing "a demonstration of a decadent modern/colonial attitude which tends to be expressed through multiple forms of evasion and bad faith where the standards of reason [in this case, engagement] constantly change in the effort to make the questions…inert and irrelevant, as well as making the questioner appear as out of place, out of time, and problematic" (Maldonado-Torres, 2016, p. 9).

Thus, despite community members voicing concerns, the process appeared to be another mechanism through which to steer community voices into a predetermined framework of outreach and participation that would ultimately justify an external vision of development, rather than one designed to respond to local perspectives.

> *"For over three months I have been trying to understand the trail proposal…and still can't make sense of it. It seems to be an approach where* ***they think of "solution" (for more bike trails) and then figure out how to make it look good in the plan.*** *This proposal only serves bike interest, and pays lip service to the other parts of the community." — Community comment, Talpa Trails Community Meeting, January 2023 (emphasis added)*

Beyond procedural control, was the positioning of community voices in relation to a predetermined proposal: rather than beginning from a place of genuine engagement, community members were placed in a relatively reactionary position. That is, developing 'counter maps' and 'counter proposals,' rather than authentically participating in the development of a plan from its inception. This power imbalance was further reinforced when, contrary to federal regulations, a 'no-action' alternative was not presented as an official option during the working group process; an omission that community members ultimately challenged. This framework mirrors processes of adjudication in many ways, where communities find themselves positioned in a reactionary stance to an imposed and/or pre-determined process, negating the opportunity for authentic plural and/or relational engagement.

And, thus, a remarkable process occurred in which 'participatory community engagement' was once again transformed into a mechanism by which community must conform to a regulated and Anglo-logic dominated environment, or have their concerns excluded from the process.

> *"I see this proposal as a continuation of more of the same: the same as airport expansion, the same public money funding going towards a gondola in the ski valley, the same as getting grazing off of public lands. When are our leaders in the private and public sector going to listen to our concerns?* ***We have had so many plans done in our community and no one is saying 'we want more tourism or we want more service industry jobs.'*** *This proposal won't help our kids stay in this community." — Community comment, Talpa Trails Community Meeting, January 2023 (emphasis added)*



Figure 7.11: Flyer encouraging Talpa community members to provide input. Despite a petition with over 1,300 signatures opposing the trails, these voices were not included as legitimate within the planning process, as they existed outside of the facilitated structure. (Source: Author)

7.4.6 Coloniality in Public Discourse: *Whose Knowledge Counts?* — Race, Class, and Temporal Othering

Concurrent to the power relations inherent in the method of facilitation, were the interpersonal dynamics within the working group itself. As the working group process continued over several months, power relations, and the role of coloniality, became increasingly visible in public discourse. Mountain bike groups took to social media labeling the *acequia* community as backwards and uneducated. News outlets framed the conflict as a type of "culture war" (Reuters, 2023). Children watched as their parents were publicly shamed by white professionals for defending traditional territories. Some Anglo residents weaponized fears of community violence to silence opposition, drawing on perpetuated racial stereotypes that characterized the Hispanic community as violent. When *acequia* representatives held community meetings to share information, trail proponents characterized these gatherings as "angry mobs" (field work notes of community comment meeting, May, 2023).

This racialized dynamic was also evident in how different forms of territorial knowledge, and therefore, ontologies, were valued within the facilitated framework. While indigenous community comments were highlighted by Anglo working group members as legitimate, and zones of ancestral cultural sensitivity for the Pueblo were excluded from trail development, *acequia* sacred sites remained 'fair game.' One form of territorial relationship was upheld as rightful, the other was not – a binary produced and reinforced solely through external logics, evidencing a racialized legitimacy over environmental knowledges that conformed to the Anglo-generated 'tri-cultural' narrative and Wilmsen's 'environmental racial order' in New Mexico. Frequently, *acequia* members were characterized as resistant to change, improvement, and modernity – portrayed as being stuck in a glorified past irrelevant to contemporary realities. This pattern reflects what Trott (2017, p. 8) terms "chronotopic marginalization"—or, the ways in which *acequieros* "have often been represented as melancholy and illogical citizens...[who] are subject to technologies of governance...[that] dematerialize their contemporary concerns and displace them in time and space from decision-making processes" (ibid). While elements of nostalgia are apparent in community discourse of land dispossession, the presiding portrayal obscures the real implication of land loss and resultant practices of environmental management that inform community concerns. Such forms of temporal othering reflect what Rifkin (2017) terms "settler time" - a chronopolitical framework that positions Indigenous and traditional communities as anachronistic characters rather than as dynamic contemporary actors with legitimate claims to both tradition and modernity.

This temporal displacement functions as a governance technology that delegitimizes *acequia* members' participation in decision-making processes by coding their knowledge as archaic, and therefore illogical, rather than relevant and beneficial (evidenced by comments such as: *"this is typical Taos local's nonsense. Sadly nothing new and these people have nothing better to do"* or *"Oh, honey, education is really important. Agree?"* in response to local community members voicing concerns about the risk of increased wildfire due to human presence and activity in the watershed).

The essentialized assumptions of what constitutes modernity that surfaced during the Talpa Trails process (i.e. recreational activities, notions of economic development and progress) are rooted in a colonial perspective that consistently frames *acequia* members as 'other.' This ongoing colonial perspective also serves to position modernity (including in this instance, notions of 'health,' 'education,' and 'exercise') as the exclusive domain of the Anglo culture, denying the possibility that *acequia* communities might engage with both tradition and innovation on their own terms, or through what Rivera-Collazo et al. (2020) describe as "continuous, living traditions" that adapt to changing circumstances while maintaining core cultural values and practices.[27] This persistent characterization aligns with Chakrabarty's (2000) identification of the "waiting room of history" - wherein non-Western subjects are perpetually positioned as not-yet-modern, requiring development to catch up to an idealized Western present (in this case, a present that lauds specific forms of engagement with nature in idealized recreational 'public' landscapes). This same type of discourse operates through what Tuck and Yang (2012) identify as "settler moves to innocence," where legitimate historical grievances about land dispossession and contemporary concerns about

[27] To put it simply: an acequia community member might enjoy riding their mountain bike, understand the health benefits of outdoor recreation, and *still* not want a spaghetti-map of trail development density to be built in their ancestral territory and contemporary *acequia* watershed. This is not NIMBY-ism; it is a pragmatic response to the infliction of colonial violence and environmental degradation in a territory. Moreover, an *acequia parciante's* ability to enjoy mountain biking, be simultaneously critical of non-thoughtful trail development, and have a livelihood that exists outside of agriculture and farming does not negate the power or authenticity of their *querencia*: *querencia* is not a monolithic relationship to place that adheres to specific aesthetics or expressions: it is diverse, multi-faceted, and unique for every individual. To categorize expressions of *querencia* into narrowly determined boxes is itself an act of colonial violence. It should also be noted, however, that through this same lens, a mountain-biking proponent's development of *querencia* may itself be found in riding on trails, and 'getting outside' to connect with nature. Thus, the central argument lies not in '*querencia* vs. *querencia'* or in preferences-vs.-preferences, but rather in understanding which nature value frameworks and visions of development are prioritized within a racialized environmental hierarchy, and the ways in which *acequia* communities contest such hierarchies through diverse practices of *autonomía*.

gentrification and environmental degradation are reframed as nostalgia or resistance to progress, denying both the authenticity of the claim as well as the dynamic, hybrid, and non-essentialized identities of *acequia* communities.

7.4.7 Resolution and Implications

The working group process culminated in a series of decisive meetings in May and June 2023, where the group was tasked with voting on final trail development plans to forward to the USFS for environmental review. After months of continuous meetings and significant time commitments during peak irrigation season, five working group members—all local community representatives—withdrew their proposals from the project in an act of collective protest. Rather than continuing to participate in what they deemed to be a false participatory process, community representatives chose strategic withdrawal, citing ongoing disrespect, the shame they had endured, and persistent environmental racism.

The strategic nature of this withdrawal is crucial to understanding it as an action of *autonomía* rather than simple resistance. Community representatives had spent months demonstrating their territorial knowledge, building coalitions with varying representatives, engaging in extensive community outreach, and using their status as political subdivisions of the state to assert legitimate governance claims. When these efforts were systematically marginalized through procedural constraints and cultural dominance, withdrawal became a means of preserving the relational networks and territorial knowledge that the participatory process threatened to co-opt. This reflects a form of negotiation wherein *acequia* communities neither fully rejected the working group process nor completely accepted its terms. Instead, they strategically participated until the contradictions became irreconcilable. This demonstrates a refusal to further legitimize colonial processes that systematically marginalize community knowledge and territorial relationships, while simultaneously acknowledging participation as a means of exercising autonomy, political agency, the rights of the people, and territorial control.

Thus, whilst participation was used as a strategy to protect relationality and renavigate the system, withdrawal also revealed the generative potential of *querencia* as a foundation for political action.

Throughout the process, community members consistently articulated concerns rooted in the interlinked relationships between watershed health, cultural practice, and spiritual connection – naming this as their *querencia*. When the working group process proved incapable of recognizing these relational realities, community representatives chose to preserve the integrity of their *querencia* and to utilize their political standing to halt the development process through their withdrawal. Had representatives not participated in the process, however, this type of impact would not have been possible.

Significantly, the withdrawal did not mark the end of territorial defense but rather a shift in strategy. The *acequia* networks that had mobilized in defense of the landscape continued to maintain coalitions, this time linking their concerns to wider narratives of oppressed peoples worldwide.

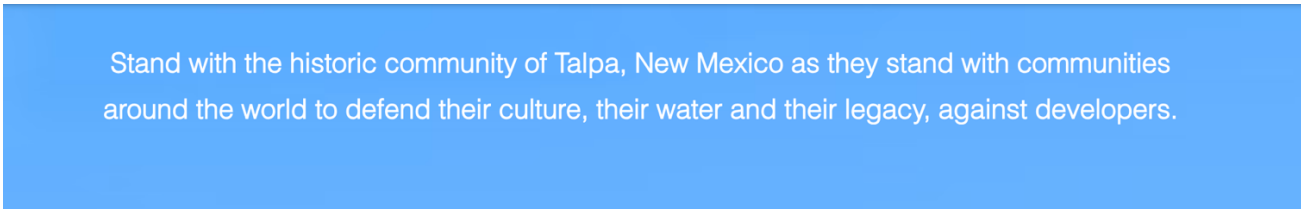


Figure 7.12: New website developed by the Talpa communities to elevate public awareness of the issue. (Source: Friends of the Talpa Foothills, 2024)

The *acequia*'s role as a political subdivision of the state proved crucial throughout this process—providing the institutional legitimacy necessary for territorial defense. Through *acequia* membership, community representatives could speak not merely as individual residents concerned about recreational impacts, but as rights-holders to the irrigation system – or, as democratically elected officials with governance authority over critical infrastructure. This legal standing enabled them to articulate *querencia* not just as a cultural ethos, but rather as a legitimate basis for environmental governance.

The case reveals three interconnected dimensions of *acequia* territorial politics: first, how community concerns articulated through *acequia* networks demonstrate place-based ontologies that challenge and come into tension with recreational planning frameworks (a meeting of

worldviews regarding environmental stewardship and use); second, how participatory processes can function as mechanisms of coloniality that appear inclusive while systematically reproducing existing power relations; and third, how strategic withdrawal constitutes a form of *autonomía* that preserves territorial relationships while refusing co-optation by hegemonic frameworks.

Through the assertation of alternative environmental values against dominant recreation-based narratives, the Talpa Trails controversy illustrates Kosek's (2006) concept of 'symbolic natures,' wherein landscapes become sites in which competing racial, class, and cultural identities are negotiated and contested. Through this lens, community opposition to recreational development moves beyond 'environmental protection,' and instead encompasses the defense of a relational understanding of nature that contrasts with a view of nature as a backdrop for recreation. In doing so, the process of environmental contestation 'remakes racialized citizens and politicized landscapes' (Kosek, 2006, p. 184), while demonstrating the contentious natures that are central to both environmental politics and the formation of modern governance regimes in northern New Mexico.

7.5 *Parciantes Have Standing!* On Taos Ski Valley Development and the Evolution of a Collaborative Watershed Agreement

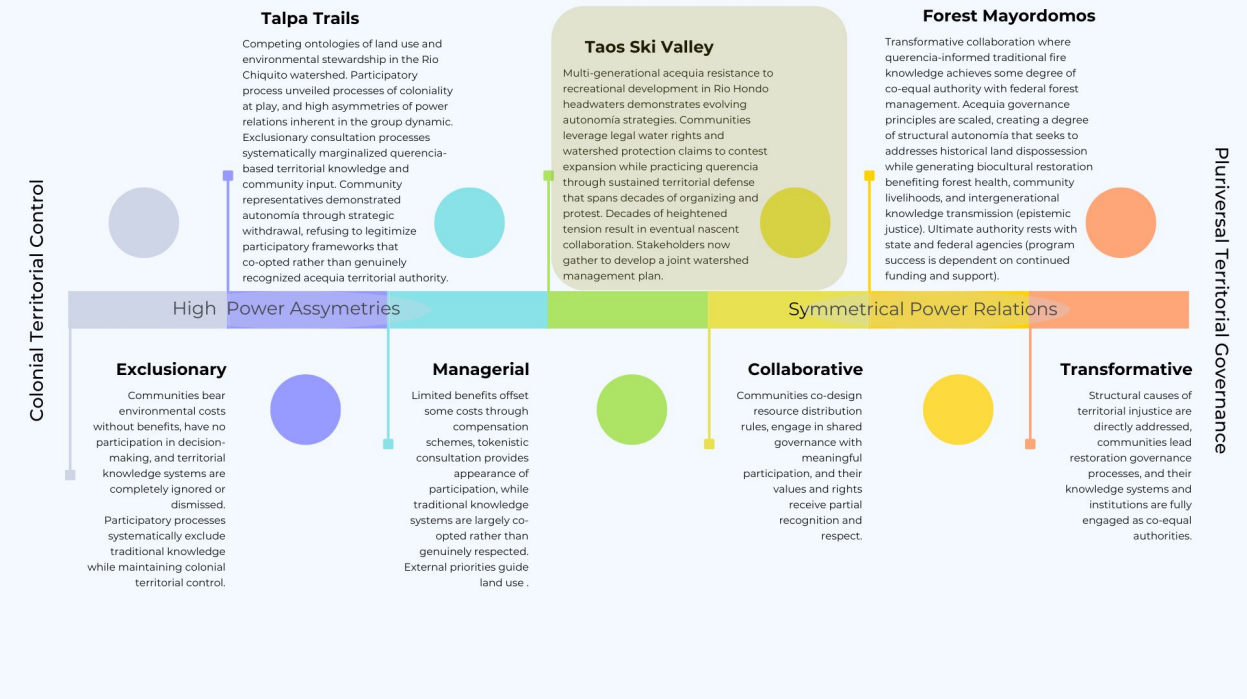


Figure 7.13: Just Transformations Framework for Acequia Territorial Defense. Taos Ski Valley. (Source: Author, Adapted from IUCN WCPA Justice Typology for Restoration, Martin et al., 2025).

In the headwaters of the Rio Hondo watershed, sits the corporation of the Taos Ski Valley (TSV) – notable for becoming the first B-Corp Certified ski resort in the world.[28] Nearby, Taos Pueblo's Creation lake is nestled in the mountain tops. If one follows the river down through the watershed, one will find themselves winding through thick forest, crossing through old *placitas*, meandering through wealthy neighborhoods, and spreading out over verdant agricultural fields. Eventually, the river joins with the Rio Grande and makes its way to the sea (or, as close to the sea as the Rio Grande will ever flow again). Within this landscape, there is much contested ground: to whom do the forests belong, by whom should the river be governed? Amongst this contestation, one story emerges stronger than others: that of *acequia* protest against the expansion and development of TSV.

[28] B-Corp certification is given to those corporations which demonstrate social and ecological responsibility, accountability, and transparency according to the certification criteria of the B Lab, a non profit organization responsible for awarding the status.

7.5.1 Historic Foundation

The story of *acequia* resistance to Taos Ski Valley spans decades and represents a multi-generational, sustained environmental justice struggle over water, territory, and the commons. Beginning in the late 1960s, *acequia* communities suspected that upstream recreational development was degrading their downstream water quality. By 1974, after six years of sewage pollution of the Rio Hondo by TSV, *acequias* strategically partnered with regional water scientists to advocate for water quality monitoring along the Rio Hondo and pollution regulations for the contaminants that were indeed found.

As development and corresponding pollution continued relatively unchecked, downstream residents—Hispanic farmers, ditch officers, Chicano activists, and Anglo environmentalists—protested *en masse* at public hearings (Rodríguez, 1987). Despite years of community opposition and litigation, federal and state agencies failed to enforce their own sanitation standards: TSV continued to discharge wastewater into the Rio Hondo—which feeds both *acequia* systems and domestic household water supplies—for more than fourteen years. Communities began to identify the relationship between regulatory failure and private industry expansion as 'systematic agency collusion with developers' (Rodríguez, 1987, 355), leading to increased tensions between upstream development and downstream water users – and echoing ongoing environmental justice struggles in northern New Mexico.

Yet water quality was not *acequia* communities' only concern. A significant portion of TSV is situated on USFS land – operating through a special use permit which allows for the private resort to utilize federal land for its operations, whilst USFS retains specific oversight obligations. As demonstrated throughout this chapter, the utilization of USFS land for recreational development (particularly, in this case, for a private ski resort), carries significant political questions – particularly, when this land is considered to be unrightfully usurped from the *acequia* commons (see context chapter on land grant dispossession). Thus, as witnessed also in the case of the Talpa Trails, community objection to recreational development exceeds mere ecological impacts, and instead also touches upon questions over environmental 'claims', knowledges, legitimacies and use.

As resort development has grown, so too has the extent of resistance. In the 1980s, two significant protest movements emerged from Rio Hondo *acequia* communities: the "Valdez Condo Wars" mobilized opposition to luxury condominium development that symbolized excessive gentrification and wrongful water appropriation, while the 1982 "Funeral for the River" saw more than 300 downstream residents disrupt Ski Valley operations by holding a full procession and funeral for the Rio Hondo—complete with 150-vehicle motorcade, hearse, coffin, and the parish priest's blessing—to highlight the detrimental impacts of unchecked development on their river, watershed, and *acequias* (Rodríguez, 1987).



Figure 7.14: The 1982 Funeral for a River – Rio Hondo (Source: Dr. Sylvia Rodríguez, Reprinted With Permission)

The resistance intensified around water rights transfers, as TSV sought to appropriate seventeen acre-feet of *priority* water rights from Arroyo Hondo *acequias* for commercial purposes including snow-making. These transfers threatened *acequia* system viability by removing both water and the collective labor of *parciantes*, resultingly weakening the entire chain of community water control with the greatest burden falling on those lowest on the ditch. Moreover, the priority date of these water rights introduced the possibility of a "priority call" wherein the resort corporation would receive water fulfillment before downstream users—a hierarchical system that stands in stark contrast to the legally adjudicated Rio Hondo Administrative Flow Sharing Agreement (Appendix

B), which divides water among downstream *acequias* based on percentage rather than static acre-feet (see Chapter 6). Such transfers were historically approved *de facto* by the Office of the State Engineer, who considered each transfer in isolation rather than examining cumulative detrimental impacts of water rights removal. The regulatory system placed the burden of proof on *acequia* communities to demonstrate potential damage, rather than requiring developers to prove transfers would cause no harm.

7.5.2 A Loudening of the Pulse

In the following decades, resistance has become akin to a pulse: ever present, sometimes subtle, and synchronous with the system as a whole. In 2023, concurrent to my community observations, I began to hear word of a quickening of this pulse: the Ski Valley had proposed a new development, this time of a 7,300 foot base-to-base gondola system, to be built to ferry skiers between lift stations. Within the proposed development package came additional expansion of the Ski Valley footprint: the construction of 5 million gallon water storage tank, a new sewer line, and new restaurant/café, and two new trails (Carson National Forest Environmental Assessment, 2025). In a time of increasing water scarcity within the watershed, downstream users cited these developments as significant strains on the watershed's water resources, both in terms of quantity and potential quality concerns. Whilst downstream *acequia* users adhered to legally enforceable water sharing protocols based on percentages of available water, questions arose as to whether TSV would be entitled to take its full static-quantity share of 200 acre/feet of water per year – would a priority call be made on the river that would leave downstream *acequias* dry? In addition, for many *acequia* members and residents, concerns arose over the process through which the development proposal was proceeding. As TSV utilized USFS lands, the proposal was required to pass through some degree of federal mandated environmental evaluation. Rather than conducting a full Environmental Impact Statement (EIS), the proposal was ushered through a more-rapid and significantly less-rigorous Environmental Assessment process – which environmental advocates and *acequia* members alike critiqued as insufficient. Moreover, within the process itself (which requires community input, public comment, and an unbiased impact assessment), *acequia* members felt that their input was inadequately addressed – raising questions about TSV's narrative

of sustainability, transparency, and accountability – hallmarks of its well-documented B-Corp status.

This historical foundation of watershed tension revealed the entrenched power dynamics that *acequia* communities continued to confront on multiple occasions: federal land management systems that prioritize private recreation, state water law that facilitates corporate appropriation, and environmental review processes designed to legitimize predetermined development decisions. Understanding these structural constraints is essential for analyzing how *acequia* organizers developed innovative dual-track strategies that challenged power relations while building alternative governance models. It is also important to note that many characters involved in the Talpa Trails controversy – although in a distinct watershed – also came to play a role in the 2023 process, due to their interwoven roles as *acequia* organizers within the wider community.

7.5.3 From Exclusionary Tactics to a Transformative Response? A People's Forum.

In May of 2023, a community listening session was announced by TSV and the USFS in order to garner community input for the Environmental Assessment, and to provide response to community concerns. Inside, despite the meeting's designated purpose to garner public comment, there was – remarkably – little-to-no structure for this to occur. An armored truck was parked outside, and a '*pistola'* patrolled the room.

There were no chairs present in the building, nor a microphone; there was no presentation, nor a discernable listener. Instead, tables were set up along the walls, reminiscent of a college job-fair: community members could approach USFS/TSV representatives, but would not be able to hear one another speak nor listen to responses provided to collective community concerns.

After brief deliberation, and refusing the format imposed upon them, *acequia* organizers turned the meeting into a people's forum, transforming an exclusionary space into one governed by their own relational norms. Microphones were brought in from a nearby shop, and an *acequia alabanza* (ballad) called the meeting to order.

"We are here, and we are convening our public meeting! Time after time this happens, and I wish they [the USFS] would understand – we have these meetings so that we can share our concerns! So that we can build a resistance that will maintain the balance in our beautiful, beautiful watershed.

We have to do this ourselves – we know that this planning process is mandated by law, but they think seem to think they can get away with an environmental assessment that does not even begin to address the cumulative impacts of what's happening right now, and the cumulative impacts of what happens when they build these so-called improvements." — Acequia representative, Community Comment Meeting, May 2023

The meeting was filled with cross-cultural comments, most of which centered on watershed and *acequia* health – but also questioned the continued paradigm of inadequate consultation processes.

"Buenas dias a todos y gracias a Díos. To follow what our elders said, en verdad…nada eso vale 'cax' … a ponela…none of this matters, what we're doing here tonight. I asked the facilitators, how will this [community input] be quantified? How will this be taken as qualitative data and submitted on behalf of the community? They said 'they don't know.' This brings up something interesting to me: after generations and decades of this community speaking up, and asking for things to be changed, and also asking for some things not to be changed – asking for things to be under the accordance of our cultural practices – todavía nada. They still don't do anything, they still don't care."

"They set up public meetings, and unless you have got the ability to come up here, and speak publicly, you're not gonna be heard. Unless you can get on a website and write something in good English, you're not gonna be heard. But we are talking about a governmental agency and about a corporation that has limitless resources: todavía no les importa nada. They still show us they don't care." — Community and Land Grant Representative (Arroyo Hondo de Arriba Land Grant), Community Comment Meeting, May 2023

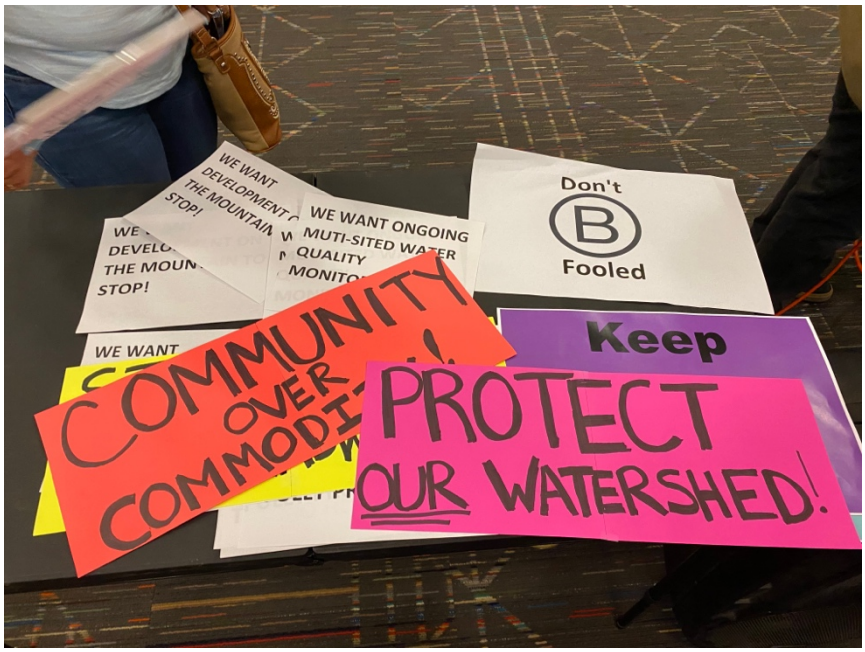


Figure 7.15: Protest signs at 2023 EA Community Meeting to Discuss Expansion of Taos Ski Valley. (Source: Author)



Figure 7.16: Protest signs at 2023 EA Community Meeting to Discuss Expansion of Taos Ski Valley. (Source: Author)

The inadequacy of the EA process – mirroring that of the concurrent Talpa Trails issue – exemplified what Martin et al. (2025) term 'managerial' approaches to environmental justice - tokenistic consultation that provides the appearance of participation while external development priorities guide decision-making. Rather than accepting exclusion or abandoning engagement

entirely, due to the longstanding nature of the conflict, *acequia* communities demonstrated strategic movement through two parallel routes of seemingly opposite engagement: legal escalation and collaborative watershed planning.

7.5.4 Towards Legal Recognition and Watershed Collaboration

Following the exclusionary planning processes experienced in spring of 2023, that same autumn *acequia* communities joined with local watershed residents and Taos Ski Valley officials to form the Rio Hondo Watershed Group – a group dedicated to conflict resolution, co-education, and eventual collaborative stewardship of the Rio Hondo watershed. The first 18months of the group's formation were dedicated to collaborative trust building, and transparent information sharing. The second stage of the group's process has been to initiate the development of a joint management plan for the Rio Hondo watershed, valuing cultural use, ecological integrity, responsible recreational development, and water conservation planning. This process moves toward recognizing *acequia* governance systems as legitimate, and *acequia* organizations as partners in watershed management, rather than stakeholders to be managed. As a component of this plan, is the development of a Taos Ski Valley Water Conservation Plan, for the special use permit zone of the land leased from the USFS.

Whilst concern over co-optation within the group process has remained high, Rio Hondo *acequias* have concurrently engaged in a parallel approach: that is, leveraging their state recognized authority to bring forward legal autonomy and treaty rights violation allegations to the Taos Ski Valley, through the New Mexico Department of Justice – Treaty of Guadalupe Hidalgo Division. This litigious approach represents a new wave of *acequia* autonomy – leveraging the logic of the state (and the power of a Treaty whose incomplete ratification was previously used to expropriate communities from their common lands) to now demand authentic representation and consultation.

This litigious action varies from legal involvement of the past (where *acequias* were brought into litigation *by* the state) – as this time *acequia* communities themselves bring forward the power of the State on their behalf. Through this assertion of autonomous authority, *acequias* position themselves as treaty-rights holders with federal standing (despite historic disregard for said rights),

rather than merely local water users subject to state regulation (or abandonment). Importantly – this marks a new wave of advocacy by the Treaty Division on behalf of *acequias*, largely made possible through the appointment of a long-time New Mexico *Acequia* Association Attorney as the Division Director – recognizing, also, decades of *acequia* education and organizing that has made this new form of state power possible.

Table 1: Progressive Justice Dimensions in the Rio Hondo Watershed (1970s-2025)

Dimension Level	Distributional Justice	Procedural Justice	Recognition Justice
Exclusionary	*Acequia* communities bear all environmental costs (14+ years of sewage pollution, water quality degradation) while TSV captures economic benefits from federal land use permits and water appropriation. Downstream users receive contaminated water while resort profits from public land.	Public hearings for development exclude meaningful *acequia* participation. Water rights transfer approvals by State Engineer consider each application in isolation, ignoring cumulative impacts on *acequia* systems. Years of opposition and litigation result in very few meaningful pollution regulation enforcements.	Traditional *acequia* water governance and apportionment, ecological knowledge of watershed health, and cultural relationships to Rio Hondo ignored in federal permitting and state water allocation processes. Protective stance of marginalized communities ignored.
Managerial	TSV eventually builds $1.5 million sewage treatment plant after years of violations, but maintains water rights appropriation plans. State/federal agencies levy minimal fines ($4,500 to Twining Water District) while allowing continued expansion. Small settlement ($5,000) goes to *acequias* for "improvements" – while $25,000 goes to EPA.	Community experience of 'agency collusion with developers' provides appearance of environmental oversight and regulatory pathway, while facilitating continued expansion, ongoing pollution, and water rights transfers.	*Acequia* water quality concerns acknowledged through required monitoring, but no system for recognizing environmental justice impacts to *acequia* health, culture, continuity, and community wellbeing.
Collaborative	Joint water quality management and monitoring plan developed between federal agencies, nonprofit partners, *acequia* communities, Taos Ski Valley, and the Village of Taos Ski Valley. Water quality is monitored at seven sites, and any exceedances are corrected	Rio Hondo Watershed Group develops joint management plan that includes water conservation requirements for TSV operations. *Acequias* gain certain level of joint decision-making authority over watershed management alongside TSV rather than being solely positioned as	Cultural use values integrated into watershed management alongside ecological integrity and recreational development. Traditional *acequia* knowledge systems partially recognized as legitimate environmental science through collaborative planning process and co-education

	with near immediacy. Community members are able to bring concerns to nonprofit partners, who will sample water on emergency basis if quality concerns are found.	external stakeholders to TSV development plans. *Acequias* utilize power of NM DoJ to secure meaningful participation in planning frameworks.	initiatives. Trust building and reconciliation processes underway through watershed collaborative approach.

7.5.5 Synthesis: Querencia and Autonomía in Practice

The Rio Hondo watershed struggle illuminates how *querencia* operates as both foundation and strategic resource for *acequia autonomía*. The decades-long resistance to TSV expansion demonstrates that *querencia*—the deep embodied relationship to place—provides the persistent motivation for territorial defense, enabling communities to sustain multi-generational struggle despite repeated exclusion and regulatory failure.

The community's strategic progression from protest to collaborative watershed governance reveals how *autonomía* operates through tactical flexibility while maintaining core territorial relationships. By simultaneously pursuing legal recognition through Treaty rights and engaging in collaborative planning, *acequia* organizers demonstrate dynamic and strategic *autonomía*—leveraging state power when beneficial, while building alternative governance structures that more closely align with relational and collaborative values. This dual-track approach—legal assertion and collaborative engagement—demonstrates the ways in which *acequia* communities navigate the tension between working within dominant systems and creating alternatives. Through the strategic expansion of spaces where relational knowledge can be recognized as legitimate, the process has moved incrementally toward transformative justice. This includes, also, the good will of actors working within a space of corporate hegemony, who themselves develop and sustain their own process of *querencia*.

7.6 Fire on the Mountain: The Forest *Mayordomo* Project and the Re-Integration of *Acequia*-Based Forestry

"We have been taught to fear fire…but fire is the greatest gift that has ever been given to Indigenous people – and to all people. Coming from a point of fear is not a way to approach fire. We have to start teaching people. The agencies need to do more education."

(Rene Romero, Taos Pueblo Forestry – The Nature Conservancy, June 2024).

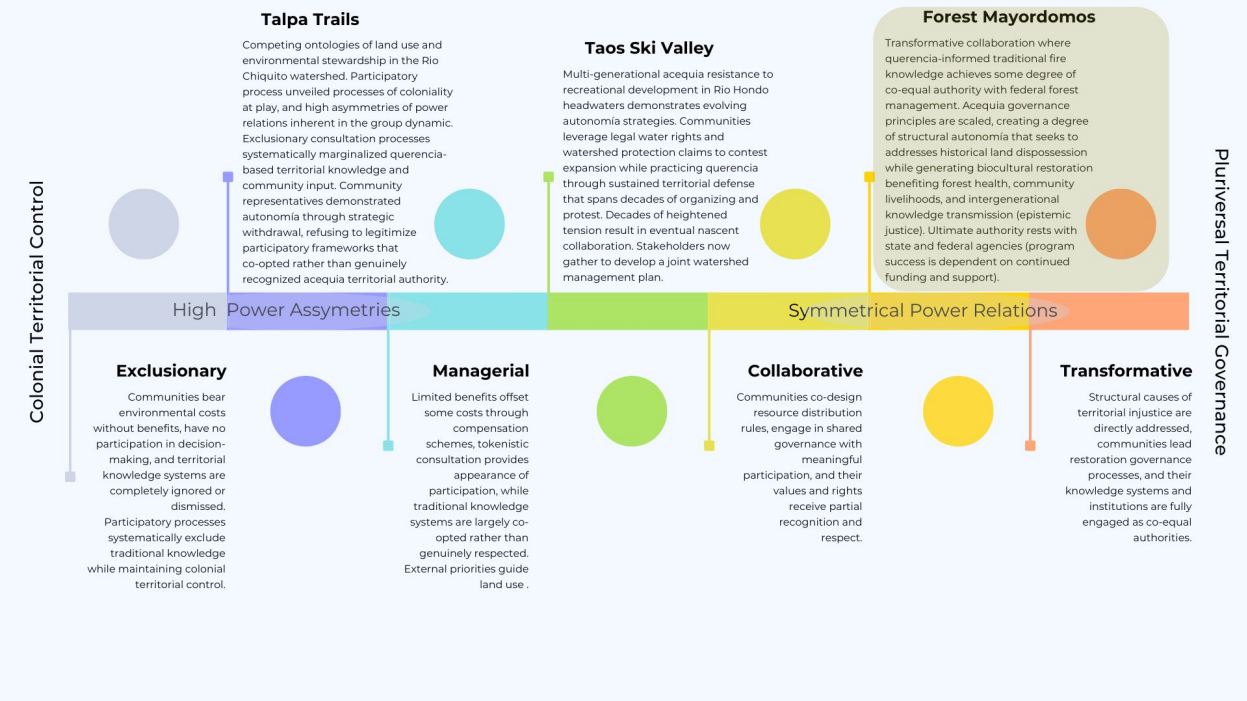


Figure 7.17: Just Transformations Framework for Acequia Territorial Defense. Forest Mayordomo Project). (Source: Author, Adapted from IUCN WCPA Justice Typology for Restoration, Martin et al., 2025).

Fire in New Mexico is as old as time. For centuries, traditional forest management in northern New Mexico centered on small-scale, adaptive forestry practices that integrated rotational grazing, controlled burning, and selective harvesting techniques in order to ensure forest health and community well-being (Roos et al., 2022). These methods have been lauded for their ability to create mosaic-landscapes that integrate natural fire breaks, diverse canopy age, and fuel-load reductions, whilst supporting community relations to the forested land and subsistence livelihoods. Such forms of community management integrate local ecological knowledge with subsistence

needs, and in doing so manage forests as interconnected systems alongside *acequias* and agricultural practice.

Beginning in the early 1900s, parallel to the exclosure of New Mexican common lands, came severe fire suppression policies employed by the USFS, characteristic of Anglo forestry practices and corresponding fire knowledge at the time (Margolis and Balmot, 2009). This knowledge, which was not rooted in the specific needs of the cultural and ecological landscape, was predicated on a 'no burn' protocol that dramatically altered the presence of fire in the landscape, and eliminated (or greatly reduced) natural and cultural forest management practices (including cultural burning, rotational grazing, and selective harvesting). Such practices of fire suppression have resulted in extreme levels of fuel accumulation – and a paradox of more extreme (destructive) fire on the landscape. In doing so, a historically fire-adapted ecosystem was transformed into a landscape highly vulnerable to catastrophic wildfire (and, in the case of New Mexico – severe post-fire flooding). Moreover, the forest management practices employed by the USFS served to justify colonial land management decisions that largely severed traditional communities from stewarding their historic landscapes – and in doing so upheld a hierarchy of Anglo 'scientific' knowledge (Lane, 2024). The impacts of these fire suppression policies, coupled with the realities of persistent drought and increasing climate change, have led to an increasing number of extreme fires in the recent decades, many of which have occurred in traditional *acequia* or tribal lands.

In response, many *acequia* communities today articulate fires as symptoms of environmental injustice rooted in colonial forest management practices and land appropriation. One example is the recent Hermit's Peak / Calf Canyon wildfire, the first half of which ignited on a dry and windy day in April of 2022 following a 'controlled' burn issue by the United States Forest Service – despite warnings from community members that the season was too parched for a burn. Days later, the Calf Canyon Fire erupted when winds re-ignited smoldering slash piles from a USFS thinning project. The two fires merged into one, and resulted in the largest recorded wildfire in New Mexico history – raging for over five months, covering more than 350,000 acres (141,639.975 hectares), burning more than 900 structures, and putting 186 miles (299.338 km) of *acequias* at risk (Metz, 2023).

As Paula Garcia, Director of the New Mexico *Acequia* Association writes,

> *"The summer rains that extinguished the fire were the start of the next chapter…With each rain, raging waters would bring burned soil and trees down the mountains into the valleys and rivers. Acequias were hit hard, with over 80 acequias damaged across 60 square miles in over a dozen watersheds. No words can describe the feeling of loss seeing acequias that took generations to build and maintain destroyed by flooding and debris flows. After the flooding, some of them were barely recognizable with destroyed ditch banks, diversion structures, buried waterways, and broken/buried headgates. Some had extreme damage while many others had significant damage to make them inoperable.*
>
> *We are still in that moment. We are still digging out from the 2022 and 2023 floods."*
>
> *– Paula Garcia, New Mexico Acequia Association, April 2024 (Exerpted from "Acequia Recovery after the Hermit's Peak Calf Canyon Fire: Part 1" via the New Mexico Acequia Association Blog)*

Following the fire, anger soared within *acequia* communities at the immeasurable loss caused by a fire that many considered preventable, had communities been able to maintain traditional stewardship and forest management practices in their traditional territories, or had their ecological knowledge been included in the burn prescription management plan. As one *acequia* leader recounted, when speaking with a forestry official regarding a previous prescribed burn,

> *"So I called a meeting together with…the Santa Fe National Forest, and the District Ranger, he started saying, 'oh, well, we have to…when we burn, it's in the fall and the spring.'*
>
> *'Those are the worst times,' I'm telling him.*

‘Well, this, that and the other..’

...and I told him, ‘I don't even know why you guys burn in the spring, period, because since I was on this planet, we always knew that it was windy during the Quaresma [lent]. It's windy. It's always about the Quaresma, and the wind. So that has been a constant. That didn't start yesterday, no….So now we have the drought on top of it….and you're going to go start fires? Really.’

So acequias, part of the sharing system in some places…you know, they'll get together. They'll see, they’ll assess how their winter was. They know their fields, they know if they have to clean the acequia early or later. They know if they're going to have a good season or not. And the Forest Service needs to do the same. ***They need to come together with community leaders that are in touch with what's going on that are actually on the ground, that are actually farming,*** *not policy people that…. don't work the land… They don't see that those changes as much, and they're not as connected or dependent upon it. They get paid whether it's dry or not.” — Commissioner of the New Mexico Acequia Commission, November 2022*



~~~~

Our homeland is burning — now what?

"We will forever measure our lives as "before the fire" and "after the fire."

The mountains that nurtured our communities for centuries and that gave us joy and belonging are being destroyed because of wildfires — one of which we know was a fire ignited by the U.S. Forest Service…Our region is forever changed as a result.

The people are devastated. We lost more than a beautiful landscape. We lost a place that will live only in our memories, and we lost a way of life.

These mountains are the homeland of the families who live here and of a diaspora of generations who consider these valleys and mountains their ancestral home.

The villages and small ranches of Mora and San Miguel counties are the last refuge of the rural poor … The loss is immeasurable.

For many of us, our assets consist of mobile homes with additions for intergenerational families and freezers full of meat from our small herds of cattle or last season's hunt. We are told the Federal Emergency Management Agency might cover damages from the fire if you have the right documentation. There will be paperwork.

What are the damages to a whole region, dozens of villages, who lost their forest and watersheds? How do we quantify the value of a future without a watershed that provides us with water? How do we place a value on communities of intergenerational families?

No, we cannot. FEMA payments for "wildfire damages" with narrow regulations and procedures will not suffice. FEMA is not equipped to compensate for the devastation of a region, numerous communities and a way of life.

Who bears the blame? Is it the U.S. Forest Service bureaucrat who decided it was a good day to burn? Is it over a hundred years of federal management of our former common lands (stolen through Manifest Destiny) that resulted in a tinder box? Is it the lack of political will to put the brakes on climate change?

It certainly is not the fault of the local people who lost livelihoods due to restrictions on access to the forests. It is not the fault of wood gatherers who could have helped harvest and thin our forests.

Our communities will never be made whole, and we will never be the same. But we will stay and we will rebuild in a tragically different landscape.

We will love this land with her burn scars, and we will resolve to heal the place that nurtured our communities for generations."

~~~

Paula Garcia, Director of the New Mexico *Acequia* Association, May 2022.

Excerpted from "My View" (The Santa Fe New Mexican Newspaper)

7.6.1 The Forest *Mayordomo* Project: *Acequia*-Based Forest Management

In response to the complex and interrelated impacts of devastating fire on the landscape, restricted forest access, disconnection from ancestral lands, and the need for integrated forest management, community members developed the Forest *Mayordomo* Project (FMP) which has piloted an '*acequia* based' approach to forest management in northern New Mexico, blending traditional *acequia* governance practices with contemporary forest restoration needs. The project was initially born in the hills of the Taos County *acequia* communities of San Cristobal and Valdez, through the establishment of the Cerro Negro Forest Council (CNFC) by community residents, in 2018. The project is established in partnership with federal agencies, insofar as that forestry action occurs on federally managed lands – but is deeply rooted in community practices of land management and territorial stewardship.

Governance Structure and Operations

The CNFC/FMP is modeled after *acequia* governance principles and adapts these same principles to forest stewardship. Through the project, the community forestry council appoints a forest *mayordomo*, who in turn coordinates activities amongst community woodcutters (*leñeros*). Akin to their *acequia* counterparts, forest *mayordomos* are charged with overseeing forest thinning projects, facilitating conflict resolution, developing plot assignments, and are "respected as a pillar of forest knowledge" (Gerber, 2024). The *leñeros*, in turn, work within one-acre plots, perform selective thinning of small diameter trees, and in doing so support the forest in returning to a natural state of health, thereby reducing the risk of high-intensity fire.

The *acequia*-based forestry model addresses several interconnected issues, including the need for forest thinning to counterbalance a century of fire suppression, as well as the resulting restoration of natural low-intensity fire patterns. The project also serves to restore cultural management practices, and results in increased access for communities to their traditional landscapes and corresponding livelihood sustenance, as current regulations generated an enduring sense of displacement from ancestral territories, even when those territories exist right outside the front door.

"Previous forest regulations and current management practices have also caused many residents to feel like spectators rather than co-managers of the forest that has been their home for generations" (Gerber, 2024).

The livelihood dimension of the project is significant, as over 70% of local residents rely on traditional firewood for winter heating (Gerber, 2024). Existing harvesting restrictions have resulted in a diminished ability for community members to access firewood close to their homes or in their traditional territories – instead receiving harvesting permits for forests far away, or paying market price for firewood – at times close to a half month's salary (See Figure 7.18). Through the project, fuelwood collection is integrated as part of the restoration work, recognizing it as a form of stewardship rather than an illegal resource extraction to be penalized. In addition, *leñeros* earn $300 per acre, and are able to retain all harvested wood.

This practice directly responds to calls from across the state to better integrate forestry and livelihood practices within traditional community forest lands, as recounted by one acequia commissioner regarding discussions over forestry thinning with federal and state representatives.

"'And what do you do with that material?' I told him,

'Oh, well, we burn it…'

'And…why aren't you giving this to the community? Why aren't you letting people come in here? Take the trees you need to be taken out. Then you could come and burn the underbrush. If it's not windy and if it's not too dry.'"

— *Commissioner of the New Mexico Acequia Commission, November 2022, speaking on the need for integrated forestry and livelihood practices.*



Figure 7.18: Begging Sign for Firewood – Taos, New Mexico, 2023 (Source: Author)

Ecological and Social Outcomes

The nascent results of the project demonstrate the effectiveness of co-merging traditional forestry knowledge with contemporary forest management. Treated areas show significant improvement in understory conditions and an increase of herbaceous ground cover, supporting a transition from high-intensity fire risk zones to low-intensity fuel levels.

Many *leñeros* have involved family members in the thinning work, resulting in a strengthening of intergenerational connections to the land and the ability to pass on traditional land management practices to younger generations. Moreover, through the program structure, *leñeros* have set up wood-sharing networks within their respective *acequia* communities, strengthening community traditions of mutualism and assisting elderly community members in receiving wood.

Through the project, meaningful exchanges of knowledge systems between *leñeros* and USFS personnel have begun to emerge. Local high school students are brought into the project to conduct forest health surveys, and the resultant data is used by program participants to assess the project's effectiveness.

The project has now been adopted in four other New Mexico watersheds, including on state lands. The approach's emphasis on working through existing community leadership structures – that of the *acequia* – rather than imposing external governance systems upon *acequia* communities is highlighted as key to its adaptability and effectiveness – as well as its community acceptance as a method of grassroots, *acequia*-driven forest management in partnership with the USFS (Gerber, 2024).

7.6.2 Steppingstones of Territorial Self-Management

Although access to and stewardship of traditional territories is still limited (these territories are still, after all, managed by the federal or state government, the project's success depends on funding, and the physical reach of the project remains proportionately limited), through the FMP *acequia* communities have succeeded in leveraging existing governance structures and cultural practices to expand their sphere of territorial self-determination and knowledge recognition. In doing so, the program has succeeded in achieving a larger degree of parallel governance structures within traditional territories, thereby elevating and institutionalizing *acequia* knowledge systems that are rooted in *querencia* as legitimate, alongside federal forest management practices. This represents a new wave of epistemic autonomy (albeit limited), wherein local ways of knowing are recognized and integrated into official decision-making systems (acknowledging, however, that this still functions to 'integrate' knowledge into an existing hegemonic structure, rather than pure plurality). This type of 'partial' autonomy (incremental autonomy – *autonomía*), reflects both the possibilities and constraints of working within a dominant environmental management paradigm. The project's success stems from its deep grounding in relational *acequia* culture and governance – scaling up existing practices towards broader territorial self-management, both spatially (from irrigation ditches to surrounding watersheds) and functionally (from water to forest management). The project also demonstrates the role of strategic collaboration – that is, working within and beyond state structures to gradually extend community control, rather than engage in direct confrontation with the state. This type of negotiation – continual, evolving – reflects what Escobar et al. refer to as moving from a 'One-World world' to a pluriversal and relational one (Escobar et al 2024, 115). In doing so, such practices of *autonomía* can become a portal – or a bridge from which to transform – insofar as that the goal of relational (or pluriversal) politics is not necessarily

the politics themselves, but rather to serve as "a way of crossing over: to make life and ensure that life can be continuously made and remade…" (Escobar et al., 2024, p117).

The Forest *Mayordomo* Project demonstrates how *acequia*-based territorial stewardship can transform federal-community relations. Through an ongoing dialogue of knowledge systems, traditional forest management practices gain institutional recognition not as supplementary but as co-equal expertise. In doing so, this model points towards more-authentic co-governance arrangements that honor *querencia* within hegemonic environmental management frameworks—suggesting pathways for reimagining state-community relationships across scale.

7.7 Conclusion

This chapter has demonstrated that *acequia* territorial politics extend far beyond irrigation infrastructure to encompass sophisticated practices of *autonomía* that challenge binary and onto-epistemological frameworks. Through strategic navigation of power structures—from withdrawal in exclusionary processes to the development of collaborative co-governance arrangements within the forestry projects—*acequia* communities maintain *querencia*-based relationships to territory while engaging with state systems in hybrid, often complex, and ever-dynamic ways.

The justice spectrum analysis reveals that transformation is neither linear nor uniform. Instead, *acequia* communities deploy context-specific strategies that preserve relational values while developing and articulating alternative visions and forms of territorial governance. The Forest *Mayordomo* Project's success in "institutionalizing" traditional ecological knowledge suggests pathways toward more pluriversal approaches to environmental governance—or, governance arrangements where multiple ways of knowing and stewarding territory can coexist.

Rather than viewing state engagement through binary frameworks, *acequia* practices of *autonomía* reveal the transformative potential of strategic relationality. Such relational autonomy reflects a form of grounded normativity (or 'place-based solidarity') (Coulthard and Simpson, 2016), that is an ethical framework and corresponding mode of political action that emerges directly through (and from) reciprocal relationship with territory.

The *acequia*'s institutional standing as a political subdivision of the state proves crucial across all contexts, insofar as that this standing provides a form of legal legitimacy necessary for anchoring concerns about the broader territory into the recognizable unit of the *acequia*. Thus, irrigation infrastructure is revealed as a relational, political, and pluriversal institution that supports communities to defend the wider landscape through the ethos of *querencia*. Moving forward, this analysis points toward explorations of institutional frameworks that better support the recognition of multiple territorial knowledge systems, and the integration of *querencia* as a foundation for environmental governance.

Lastly, the territorial struggles examined here ultimately reveal that the defense of *querencia* is a practice of world-making— that is, creating spaces where alternative visions of development, relationality, and environmental stewardship can flourish.

Chapter 8. Conclusion — Towards a Generative Framework of Love

8.1 Introduction

This thesis has undertaken an examination of the role of relationality in shaping water governance, within the *acequia* realm of northern New Mexico. Through thirteen months of immersive fieldwork practice, and drawing on lived experience, the research has traced the relational governance norms of *acequia* systems, as well as the relational practices through which these norms are sustained. Together, such systems of relationality are understood as constitutive of *querencia* — a deep, reciprocal, and embodied relationship to place that is made and remade through recursive practice, and that is foundational to *acequia* governance and response.

The thesis has established a conceptual intervention within current hydrosocial scholarship, reaffirming the relational governance practices of *acequias* as formative of their hydrosocial standing, whilst diverging from predominant hydrosocial territories frameworks by proposing an understanding of territory as pluriversal space rather than primarily a site of competition or control (whilst remaining attentive to material politics). By applying a decolonial and relational lens to a hydrosocial inquiry, histories and mechanisms of power relations and coloniality are made visible. Simultaneously, through this lens, *querencia* and *autonomía* come to the fore as core analytical concepts through which to examine *acequia* action and response — findings born of empirical analysis and deep observation rather than functioning as imposed analytical categories. Through this framework, the thesis reveals *acequias* not merely as irrigation institutions, but as culturally rooted systems of governance, and as spaces of ontological politics and world-making possibility that transcend 'traditional' and 'modern' irrigation binaries.

The core empirical findings of the thesis demonstrate that *acequia* communities practice water sharing and governance through relational frameworks that transcend logics of mere resource allocation; that state-imposed water management structures interact with and disrupt *querencia* through mechanisms of coloniality and racialized hierarchies of knowledge; and that *acequia* communities respond to these disruptions through diverse and evolving strategies of relational autonomy — enabling wider defense over territory, and demonstrating the 'irrigation system's' function as a broader ontological and political institution. Together, these findings evidence plural and generative governance possibilities within spaces of ontological and territorial encounter, and highlight relational autonomy as providing a more nuanced understanding of community-state relations than traditional resistance frameworks alone (Armijos, 2013). Through this framing, the thesis explores the ways in which communities strategically navigate multiple governance systems while advancing core values and practices, and – in turn – points toward more symmetrical power relations and epistemically just outcomes, for both nature and society.

The discussion chapter is structured as follows. The introduction summarizes core contributions and the research focus of the thesis: namely, the role of relationality in shaping *acequia* water governance across scale, as well as the ways in which this relationality subsequently informs broader territorial defense and world-making projects. Section two synthesizes the key empirical findings in relation to the three guiding research questions. Section three discusses contributions to theory and literature, while section four covers methodological questions, limitations, and scope of the study. Section five closes with a contemplative inquiry as to the role of *querencia*, mutuality, and relationality in meeting the uncertain future.

8.2 Summary of Key Findings

The thesis has been informed by three guiding research questions, which explore, in sequence, a) the nature of *acequia* water sharing and governance, and the role of relationality throughout, b) the structure of state water management, and the ways in which this affects the *acequia*, and c) how *acequia* communities respond to processes and logics that impact *querencia*. The following section serves to synthesize the key findings in relation to these research questions, before moving towards a more imaginative future.

8.2.1 Revisiting the Research Aims and Questions

Question One: Relationality in Practice – Visibilizing Querencia

The first research question, centered on understanding the role of relationality in shaping *acequia* governance, asks: *what is the nature of acequia water sharing and governance, and how does querencia inform relational practices?*

Whilst relationality is threaded throughout the thesis, this question is most fundamentally examined through Chapter Five, helping to establish the material, embodied, and relational foundation from which the analytical argument builds. Remembering that the research began with a question of resilience, and resulted in an answer of relationality, relationality as the thesis' central principle is understood as both a guiding question and a result of empirical inquiry.

The exploration of *acequia* water governance presented within the thesis reveals relational governance norms, including inter and intra-*acequia* water sharing agreements, joint governance structures, and democratic decision making — as well as relational *acequia* practices that mirror cultural ritual and principles of mutualism: the communal cleaning of the ditch (*limpia*), the collective harvest of hay, the celebration of San Ysidro, and the intergenerational exchange of knowledge and technique. These practices are framed not as supplementary to 'water governance,' or 'irrigation' but rather as constitutive of them, insofar as that these relational practices represent the material and affective means through which *querencia* is made and remade through contemporary, historic, and recursive practice.

In *acequia* communities, relationality is borne through, and reinforced by, the aforementioned practices and principles of governance (Rivera, 1998; Rodríguez, 2006; Arellano, 2014; Trott, 2017). Each relational practice and governance norm serves both a materially pragmatic as well as relational role: where the collective labor required for the *limpia* prepares the physical infrastructure of the *acequia* for irrigation deliveries, it also serves as a mechanism through which

knowledge is exchanged, and in turn strengthens relational bonds across sectors, including within the *acequia* as an institution, as well as relationships between land, people, water, and territory.

Water Sharing

In regard to *acequia* water governance, the role of water sharing is highlighted throughout the thesis as an adaptive, dynamic, relational, and culturally embedded practice – rooted in both ethical responsibility and mutualism, as well as political and environmental pragmatism about managing water in the arid Southwest. Water sharing practices thus both perform as, and transcend, resource allocation, functioning simultaneously as adaptive governance mechanisms and as relational practices through which *querencia* is fostered and sustained — anchoring the *acequia* as a social, material, political, and relational centerpiece of northern New Mexico.

Water sharing occurs across scale, attending to both inter and intra-*acequia* structures, indigenous and non-indigenous community governance practices, and changing material conditions of water availability. Predicated on principles of proportion, equity, and need, the thesis also demonstrates, however, the ways in which water sharing structures may contract or collapse under conditions of scarcity when faced with competing claims and culturally incongruous mechanisms of dispute resolution (i.e. legalistic measures predicated on adjudicated 'claims' to water). This is made visible, for instance, through the case of the Rio Fernando, where such water sharing practices are strained when confronted with claims to water rooted in uneven histories, identities, and legacies of water use and maintenance — demonstrating that *querencia* and relational governance are not static guarantees, but rather are living, contested, and at times fragile practices, that must be made and remade over time.

Understanding relational water governance practices helps to situate the logics of the *acequia* in relation to the hegemonic governance structure of the state, establishing a baseline against which the territorial and legal encounters examined in chapters six and seven become legible.

Querencia

The recursive relational practices of the *acequia* (i.e. the *limpia*, irrigation, the *reparto*) visibilize and name *querencia* as a living concept-practice: a means of living with and relating to the world,

and of enacting nature-society relations differently. *Querencia*, as revealed through this examination, is not a romantic or a nostalgic notion, but rather a recursive and relational practice, and an active, generative, and embodied framework that transcends abstracted material resource management to encompass complex hydrosocial, territorial, and ontological relations. While *querencia* is recognized as non-monolithic, with diverse manifestations and expressions, it is proposed as a conceptual foundation for understanding *acequia* territorial relations and lifeways, as well as a means of understanding and enacting alternative governance practices.

Thus, the first guiding question, and corresponding empirical chapter, help to provide an embodied understanding of the *acequia*: rooting, materially and emotionally, the thesis and subject of the *acequias* in the every-day embodied realities and ontological terrain of this hydrosocial system. In doing so, this metaphoric rooting helps to identify and name *querencia* as foundational to informing *acequia* water governance practice, as well as broader territorial and ontological endeavors, therefore demonstrating relationality as the animating force behind *acequia* governance and practice.

Accordingly, through an examination of water sharing practices, governance structures, and cultural relational practices of the *acequia*, Chapter Five demonstrates the ways in which *acequias* transcend material resource management to concomitantly embody complex hydrosocial relations. In doing so, the role of relationality in underpinning *acequia* governance and practice grounds the political and territorial analysis that follows — as themes of *querencia*, relational autonomy and wider territorial protection emerge as central components of *acequia* organizing in the chapters ahead.

Question Two: Relational Meets Hegemonic – Understanding State Systems and Implications

The second research question asks, *what is the structure of water management imposed by the State, and how does this influence querencia and water sharing practices over time?*

Concurrent to the examination of relational *acequia* water governance practices presented in Chapter Five, Chapter Six presents a consideration of the contemporary conditions of hegemonic

state water governance institutions and norms, and their role in affecting the *acequia*. This includes understanding aspects of state water law, such as processes of prior appropriation, adjudication, and marketization of water resources, as well as their ontological histories, hierarchies of knowledge, and the ways in which such legalized norms stand in stark contrast with the relational logics of the *acequia*.

Core to this contrast is the treatment of water as "H2O" (Li, 2007; Linton and Budds, 2014), that is, a material resource rendered technical, and therefore able to be abstracted from territory and relation as a measurable and transferable resource, rather than as a relational entity and system component that carries varying cultural, spiritual, political, and ecological meaning depending on its source, form, and use (Yates et al., 2017; Wilson and Inkster, 2018; Campbell and Gurney, 2020)

Through an analytical framework that attends to power and coloniality, the seemingly neutral, efficient, or sustainable processes of water management upheld through state frameworks are revealed as privileging specific modernist environmental management knowledges and ontologies, as rooted in an environmental racial order and hierarchy (Wilmsen, 2007; Lane, 2024). These, knowledges are in turn codified and upheld through the imposition of the U.S. legal system — a system that, in regard to water and resource management, stands largely on abstracted ground rather than empirical water-management reality. This process renders certain logics as enforceable law and norms, whilst marginalizing alternative or relational ways of knowing and relating to water — interpreting them not only subordinate, but also historically illegible. Thus, the hegemonic water management system becomes both representative and generative of the U.S. settler-colonial project, materially and emblematically (Lane, 2024).

The juxtaposition of abstracted versus relational management norms is made visible, for example, through the contrast of static and pre-apportioned water delivery obligations versus the dynamic and adaptive water sharing strategies of the *acequia*. Whilst this occurs across scale, an example may be derived at the interstate level, wherein river compacts apportion water in fixed volumetric amounts that are rendered perpetually undeliverable under contemporary climate and development conditions (see, for instance, the interstate Rio Grande Compact, or Colorado River Compact). In

response, the *acequia's* adaptive method of water division, rooted in proportion, equity, and need – and responsive to material conditions – demonstrates alternative pathways for managing and distributing resources in a context of scarcity (real or produced), albeit still imbued with power relations and the production of complex subjectivities (Elmhirst, 2015).

Through this chapter, relationality's role in environmental management can be read to function not only as an ontological or cosmological backdrop, but also as a pragmatic method of managing water in an uncertain and arid environment. Acequias represent irrigators who are 'farming on the boundaries and margins of resource availability' (Lankford, 2013a) — and who know their empirical reality very well. Abstracted water expertise, by contrast, continues to privilege specific notions of efficiency gains without grounding in the wet-water reality of managing water in a high desert.

Lastly, and significantly, the chapter invokes an exploration as to the role of state water management in producing social and political difference — through the oppositional and differential adjudication of indigenous and non-indigenous *acequia* water rights. Through mechanisms of adversarial dispute resolution, differential prioritization, and the privatization of water rights, adjudication disrupts horizontal relationships between water users on the ground (Perramond, 2016b), and positions federally recognized indigenous water keepers in opposition to non-indigenous *acequia* users, who are in turn positioned against municipalities, private landowners, and other claimants (Perramond, 2018). The process divides not only land and water, but community itself (Levine, 1990; Rodríguez, 2006; Perramond, 2012).

Returning to the research question, the disruption to *querencia* can therefore be understood as both epistemic and relational. State water governance frameworks disrupt *querencia* by privileging abstracted knowledge hierarchies over embodied, place-based expertise, and also by fracturing hydrosocial relations through which *querencia* is sustained.

Previewing Relational Autonomy

Through this examination of state water norms, a series of *acequia* counter-weights are seen to emerge – strategic negotiations through the use of the legal system, where *acequia* communities

secure water protections, including, for example, water banking to accommodate for conditions of drought, *acequia* provisions that prohibit the transfer of water rights *outside* of the system (and thereby keep water rights within the system), the formalization of mayordomo and *comisionado* structures through legally recognized bylaws, and efforts to redefine public welfare in favor of community rights for ecological wellbeing. Each of these actions works to defend the governance structure of the *acequia*, and form a preview of larger notions of relational autonomy explored later in the thesis.

These efforts recognize and demonstrate the ways in which *acequia* communities – after decades of disenfranchisement by the hands of state legal structures and institutions (including the loss of land grant lands through processes of adjudication that did not recognize community ownership structures), now utilize the role of the state, its legal institutions, and the *acequia's* legal standing to increase formal control over their water resources, and – in doing so – to legitimize local ways of managing them (Armijos, 2013, 94). Alongside these processes of relational autonomy, *acequia* communities have also engaged in processes of relational healing — working to repair the community fractures generated by adjudication, whilst remaining pragmatically wary of the differential market treatment of indigenous and non-indigenous water rights within a context of ongoing shortage.

Ultimately, the chapter demonstrates that state water governance does not merely regulate water — it upholds and privileges specific environmental knowledges, and, in doing so, reshapes the backdrop through which *acequia* communities relate to themselves, their territory, and one another. The regulatory landscape is thus revealed as a deeply political terrain, one that is both reflective and reproductive of knowledge hierarchies and a coloniality of power.

Question Three: Relational Autonomy as an Understanding of Acequia Response

The final research question of the thesis asks, *how do acequias respond to projects/structures/paradigms which threaten to fragment querencia?*

Through examination of three distinctive case studies, positioned along a spectrum of just transformations, the final empirical chapter demonstrates the ways in which *acequia* communities contest, adapt, and transform existing power structures in order to engage in wider processes of territorial defense. In doing so, the unit of the *acequia* is upheld as foundational in legitimizing claims over, and *querencia* with, territory. In demonstrating the ways in which communities utilize the unit of the *acequia* to engage in broader territorial defense, the notion of relational autonomy (*autonomía*) – rooted in, and responsive to, *querencia* – comes forward as the central conceptual intervention of the thesis.

Through a progression of case studies — mapped on a spectrum from exclusionary, to collaborative, to transformative power relations — *acequia* communities are shown to respond to processes which threaten or jeopardize *querencia* through processes of relational autonomy, wherein communities navigate existing power structures through *querencia*-based practices in order to engage in wider territorial protection, that affects relationality between people, place, land, and water. Through this process, relational autonomy is seen not as a pure negation, but rather as a strategic negotiation and navigation that is fluid, multivalent, and ever evolving – recognizing the ways in which new realms of autonomy, governance, and being are borne and brought forward through the relational interactions between communities and differing spaces of power (Armijos, 2013). This process, however, is neither linear nor guaranteed — as the Talpa Trails case demonstrates, strategic withdrawal can itself constitute a form of *autonomía* when participatory processes prove irreconcilable with relational values.

Importantly, relational autonomy makes space for understanding territory as an affective and ontological terrain, while opening conceptualizations of pluriversality. Through examination of *acequia* relational autonomy and territorial practice, the thesis addresses the transformative and generative potentials of pluriversal governance approaches — recognizing the ways in which *acequia* communities actively enact pluriversal politics through their *querencia*-rooted practices in dialogue with hegemonic land and water management regimes. In doing so, relational autonomy is revealed not only as a mode of territorial defense, but as a means of elevating relational knowledge systems as legitimate bases for environmental governance and decision-making. Such practices, in turn, make way for pluriversal and transformative possibilities of territorial

relationships and land management — possibilities that emerge because *querencia*, as a living and generative framework, does not conform to the singular logics of the dominant governance system, and instead insists on multiple ways of knowing, relating, and being with the land.

Through the dynamic interplay of *querencia* and *autonomía*, the thesis recognizes and promotes a progression from understanding the *acequia* as an irrigation system, to a cultural and political institution, to a worldmaking project.

The chapter now turns to an examination of literature and theory.

8.3 Contributions to Literature and Theory

8.3.1 Applications of the Decolonial Lens

The above findings – of *querencia*, and the role relationality plays in the embodied, material, and ontological practices of the *acequia*; of asymmetrical power relations, state hegemonies, and the ways through which specific knowledges assume hierarchy and power; and of *autonomía*, transformation, pluriversality, and their corresponding generative possibilities, are made visible through a decolonial and relational lens.

Through this examination, the *acequia* is revealed as more than an irrigation system or institution. Rather, it is seen as a space of ontological politics and world-making possibility, recognizing it as a locus of enunciation (Mignolo and Walsh, 2018) from which communities articulate and practice alternative relationships to water, territory, and governance rooted in *querencia*.

A decolonial approach to hydrosocial inquiry enables the examination of asymmetrical power relations and hierarchies of knowledge within the water governance realm as both historically situated and contemporary conditions, recognizing state water management structures not as neutral, but rather as constitutive of a racialized environmental hierarchy of knowledge.

Through this inquiry, *querencia* and *autonomía* emerge not merely as analytical categories, but also as living concept-practices that inform *acequia* practice, action, and response. Correspondingly, the thesis contends that *acequia* world-making practices are not merely reactive to coloniality, but rather are generative in their own right — rooted in ethos of reciprocity, responsibility, and relational being with territory (*querencia*). This decolonial distinction understands *querencia* as carrying its own ontological foundation and temporality that precedes, exceeds, and evolves in relation to structures of coloniality (Maldonado-Torres, 2016).

Lastly, by applying a primarily Latin American decolonial framework to non-indigenous yet land-based and sub-altern communities within the 'Global North,' the thesis develops an intercultural discourse that situates New Mexico's *acequia* communities in broader continental struggles over territory, water, and knowledge justice.

8.3.2 Contributions to New Mexico's Acequia Literature

This thesis seeks to bridge theoretical insights from contemporary water justice movements and decolonial theory with the concrete practices of *acequia* governance, demonstrating how locally-rooted systems can embody pluriversal approaches to water governance. Much *acequia* research can be largely categorized into three primary realms: that of cultural and political study (e.g. Rivera, 1998; Arellano, 2014; LaMadrid et al., 2023) and accompanying critical anthropology (e.g. Rodríguez, 2006; Trott, 2017; Trott-Jaramillo, 2020); that of hydrologic and coupled human-environmental systems research (e.g. Fernald et al., 2007; Raheem et al., 2015; Guldan et al., 2015; Ochoa et al., 2020; Rosenberg et al., 2020); and that of political-economic analysis regarding water rights and their corresponding adjudication (e.g. Perramond, 2012; 2018; Feldblum, 2025). Additional branches of research have examined *acequias* as common-pool resource systems (e.g. Cox, 2014) and spaces of hydroethics (e.g. Groenfeldt, 2019). This thesis contributes to this existing body of work through the incorporation of relational and decolonial frameworks that bring these perspectives into conversation, moving past the examination of institutional design into a territory of relational ontology.

In doing so, the thesis seeks to build upon and contribute to New Mexican *acequia* scholarship in several keyways. First, the inclusion of *querencia* as a theoretical foundation moves beyond cultural identity frameworks, to examine the affective and ontological dimensions of place-based relationalities that inform *acequia* governance practices. In doing so, *querencia* is positioned as the foundational ground from which territorial authority and environmental stewardship emerge. Second, the concept of relational autonomy is used to develop an integrated analysis of *acequia*-state relations, as compared to traditional resistance frameworks. Through this conceptual framework, the thesis demonstrates the ways in which communities strategically navigate plural governance systems while asserting relationality, understanding that territorial conflicts are also spaces of ontological encounter and transformation. Correspondingly, this approach demonstrates how relational ontologies challenge colonial matrices of power — revealing the ways in which 'water governance' becomes a mechanism for broader territorial defense and alternative world-making within contexts of ongoing coloniality and asymmetric power relations.

On Commoning and the Uncommons

Whilst *acequias* have been examined as a space of common pool resource (CPR) management (see, for instance, Cox and Ross, 2011) and, concomitantly, as 'pre-capitalist organizations that convey important lessons for a post-capitalist world' (Gunn, 2016, p. 1), this thesis extends prior conceptualizations of the *acequia* commons by introducing decolonial and relational perspectives that go beyond, and challenge, the premise of 'rationality' underpinning much of CPR and Institutional Analysis and Development (IAD) literature. In doing so, it reconceptualizes the foundation and success of the *acequia* 'commons' from a different epistemic and ontological viewpoint.

Seminal work on the commons (i.e. Ostrom, 1990 — including her research on self-governing irrigation systems**)** demonstrated that local communities can successfully manage shared resources (such as fisheries, forests, and irrigation systems) without state intervention or total privatization. Through an Ostromian lens, the success and viability of Taos' *acequias* are explained through rational choice and adherence to principles of institutional design that foster collective wellbeing. Cox and Ross (2011) demonstrate this viability through the *acequias*' alignment with Ostrom's eight principles, including democratic control, recognized authority granted through state

structures, checks and balances on member behavior (for instance, through the *Mayordomo* model of rule-enforcement), and delineated boundaries (water 'rights' as well as the bounded space of the *acequia*).

Thus, whilst *acequia* function aligns with, and can be read through, CPR and IAD theory, and while rational, self-interested behavior is certainly present within *acequia* systems, these frameworks still engage with nature through an objective lens, understanding common pool resources as systems to be managed through individual and collective rationality and self-interest. In other words, "common property debates are dominated by approaches that seek to demonstrate how cooperation is 'rational'; by working together under appropriate institutions, the commons becomes a viable management strategy" (Nightingale, 2011b, p. 119).

This thesis, however, engages with *acequias* not simply as common property systems under collective management, but rather as systems of relationality and autonomy. Alternative views of commons and commoning point out that for many land-based peoples, material assemblages of human and more-than-human beings are not simply systems to be managed for human benefit, but active, living entities with whom society is interconnected. Theories of relationality and land-based ontology thus shift *acequia* governance from a method of common property resource management to a network and process of relationships, kinship, and thinking-feeling with the earth. This does not deny the 'success' of *acequias* as CPR systems, nor the material reality of resource management; however, it shifts the focal point from rationality to relationality.

In shifting away from seminal frameworks for analyzing 'the commons,' this thesis aligns more with literature on 'commoning' (i.e., Nightingale, 2019; Nightingale and Paris González, 2026) and the 'uncommons' (e.g., Blaser and de la Cadena, 2017). Such literature recognizes the role of emotionality and embodiment in the relationship between human and more-than-human assemblages, including how these inform and constitute governance choice. Through this lens, the commons are not merely a space of collective resources to be managed, but a space of co-becoming and co-relating, wherein the 'natural world' is an active and living entity, or "an earth-being with its own agency" (Blaser and de la Cadena, 2017). As Linebaugh puts it, "to speak of the commons as if it were a natural resource is misleading at best and dangerous at worst – the commons is an

activity and, if anything, it expresses relationships in society that are inseparable from relations to nature. It might be better to keep the word as a verb, an activity, rather than as a noun, a substantive" (Linebaugh, 2009, p. 279).

My position follows Nightingale's, insofar as I do not seek to reject CPR or IAD principles, "… or the excellent work that has been done on conceptualizing the commons to date. Rather, I want to build from this work, most of which has been done within a broadly defined rational choice framework, and open up the debate to alternative rationalities" (2011, p. 120), namely, *relationalities*. Following Nightingale, I argue that "more attention is needed on the emotional and 'ir-rational' reasons people cooperate" (2011, p. 119), including embodied and reciprocal relationships to place. Drawing from decolonial theory, and from ideas of relationality, querencia, and political ontology, I suggest that *acequia* modes of cooperation originate from a deeper starting point than is visible through a resource economics or institutional design framework, alone: that is, reciprocal responsibility towards people and place, understood as *querencia*.

This relational understanding shifts the core value of nature and of nature value frameworks, from a subject/object relationship in which humans 'manage' resources and nature, towards relationality, kinship, reciprocity, and co-becoming. It includes ideas of animism and respect for the rights and autonomy of non-human entities to exist. *Querencia* and other Indigenous political ontologies thus mark a paradigm shift towards relational worldviews, distinct from the origination point of CPR/IAD theory.

8.3.3 Relational Autonomy and Hydrosocial Scholarship

A core theoretical contribution of this thesis is the development of relational autonomy — or *autonomía* — as a contribution to hydrosocial and water governance scholarship. Drawing on previous work that explores the relationship between autonomy and territory (e.g. Armijos, 2013; Ulloa, 2011), the thesis advances an understanding of *autonomía* not as static sovereignty or complete independence from the state, but rather as a strategic negotiation enacted through ongoing, context-specific practice. Within this space of engagement, generative possibilities

emerge, including new governance forms, hybrid arrangements, and pluriversal encounters that would not exist without the relational interaction between communities and the state.

This contribution aligns with hydrosocial theory's attention to relationality and power (Linton and Budds, 2014), yet expands hydrosocial scholarship in several interconnected ways. First, rather than positioning *acequia* communities as either resisting or complying with hegemonic water governance regimes, the thesis examines a more complex and generative terrain, where multiple ontologies of water and territory co-exist. This departs from binary frameworks that position *acequia* communities as either resisting or being oppressed by state power, towards a more relational and pluriversal understanding of how communities, states, frameworks, and ontologies engage. Rather than rendering the relationship between *acequia* governance and hegemonic water management as fundamentally distinct or oppositional, the thesis explores the space where these systems meet — recognizing them as co-existing, co-informing, and at times co-producing new governance possibilities through their encounter.

Second, whilst prevailing frameworks of hydrosocial territorial pluralism have tended to understand overlapping territories primarily through logics of competition, domination, and control (Boelens et al., 2025), the thesis challenges and disrupts this framing, proposing instead that hydrosocial territories are also pluriversal spaces – or, sites where multiple territorial ontologies and governance worldviews coexist and interact. This does not negate the material politics of water control, nor the asymmetries of power that shape *acequia* communities' lives, but rather insists that by attending to plurality, hybridity, and the generative potential of ontological encounter, more accurate and perhaps ontologically complex readings of *acequia* territorial politics emerge.

Third, the thesis demonstrates how irrigation infrastructure itself enables communities to extend their ontological claims across wider territory, as the *acequia* becomes a conduit not only for water and power, but also for the assertion of relational values and governance practices across the watershed as a whole.

Through these framings, the thesis demonstrates the ways in which *autonomía* uplifts situated, place-based knowledge systems (and *querencia* informed governance) as legitimate and materially

effective bases for environmental decision-making, while also centering epistemic justice as a core component of water justice struggles.

Land and Territory as Spaces of Ontological Encounter

Extending this pluriversal framing, the thesis affirms that struggles over land and territory in northern New Mexico are not merely disputes over resources or legal rights, but encounters between distinct ontologies and worldviews. Following de la Cadena (2015) and Escobar (2020), the thesis understands territorial conflicts as sites where multiple world-making projects interact, and where the outcomes of these encounters shape not only material conditions but ontological possibilities.

The relational worldview embodied through *querencia* challenges the coloniality/modernity project, which has historically depended on the erasure of such ontologies in order to render land legible, administrable, and commodifiable. Thus, territory, in this reading, remains the space upon which ontologies are 'projected and performed, borne and transformed.'

8.4 Methodological Considerations, Limits, and Scope

8.4.1 Methodological Considerations

The contributions of the thesis are grounded in a methodological approach that brings forward a feminist, hydrosocial, and relational approach to the study of irrigation systems. Through this, the research emphasizes the role that deep and immersive field practice plays in both developing an embodied awareness of irrigation systems, as well as in centering trust and reciprocity as central research components. In doing so, the research reflects an epistemological and ethical commitment to reciprocal and responsible research practice in 'the field at home,' supporting concepts of 'theorizing from where we stand' (Rocheleau and Nirmal, 2015) and an applied commitment to decolonial and relational research praxis (Cahill, 2007; Armijos et al., 2024).

Core to this methodological approach are philosophies of relationality and reciprocity in research practice (Tynan, 2021; Armijos et al., 2024), each of which align with and respond to *acequia* concepts of *querencia*. The thesis argues that immersive, embodied participation in irrigation and labor activities constitutes a foundational prerequisite for ethical and effective research within irrigation systems (Armijos and Walnycki, 2014), whilst also supporting Lankford's (2013) contention over the importance of thinking like a 'waterist': that is, approaching water not as an abstracted resource to be analyzed from a distance, but as a relational network to be understood from within, including from water's own perspective. Within the field study, this required learning to irrigate, to clean the ditch, to bail hay, and to participate in the seasonal rhythms of the *acequia* — whilst also centering trust and mutuality as both the process and the outcome (Trott-Jaramillo, 2024).

These approaches are supported by the argument that embodied, situated engagement with place is of core importance when studying systems whose governance logics are themselves rooted in practice, reciprocity, and presence – and that, in doing so, such research supports and promotes social and ecological transformation whilst challenging abstracted or masculinist logics of knowledge production (Rocheleau, 2011; Elmhirst, 2015).

Lastly, these methodological considerations result in a re-writing of the traditional doctoral dissertation, emphasizing the role of stories and narratives as means positioning the thesis as a relational production. In doing so, the thesis engages with the act of writing as a process of *querencia*, understanding the research and thesis as a space of accountability to people, place, community, and landscape. This is mirrored by Tynan, who writes on the role of relationality with research, and the importance of centering the thesis as kin (Tynan, 2020).

8.4.2 Scope, Scale, and Limits to the Research Study

The scope and scale of this study has been limited to the northern *acequias* of New Mexico, specifically those within the five primary watersheds of Taos County, and in particular, those along two primary *acequia* watersheds, that of the *Rio Fernando* and the *Rio Chiquito*. Whilst this close examination has enabled inquiry into water sharing and governance practice across scale, it has

also limited the study to a relatively small geographic area, and a culturally and politically specific bioregion. The study has sought to explore the ways in which processes and interactions shift and manifest within, between, and amongst neighboring, upper and lower, and watershed-adjacent *acequias*, however it remains highly specific to the northern New Mexico context and corresponding *acequia* culture. In doing so, it does not account for *acequia* experiences in other political contexts of New Mexico (such as those in the Middle Rio Grande Water Conservation District of the metropolitan Albuquerque area, nor those in the southern reaches of the state which experience even greater water scarcity). Thus, the place-based focus of the thesis enables scalar examination but cannot claim representativeness across New Mexico's 600-700 *acequias*, which vary significantly by watershed geography, cultural composition, adjudication status, and governance maturity. Moreover, the study does not engage with other types of irrigation institutions within New Mexico, or, more broadly, throughout the Western United States. It further does not engage with *acequia* systems across the continent, nor those in Latin America. In this way, while the study seeks to generate a cross-contextual application of the role of relationality in underpinning environmental governance, it is inherently limited to the contexts and perspectives from which it arises. Thus, the thesis findings should be read as potentially *transferable* rather than generalizable, as the concepts of *querencia* and relational autonomy may be shown to help illuminate dynamics in other *acequia* or irrigation commons contexts, without being directly exchangeable.

The exclusion of Taos Pueblo from formal research inclusion remains a significant gap in the research. As articulated within the methodology chapter, this has been an ethical choice, however it remains an analytical constraint. A more even account of water sharing and governance across boundary lines – as directed by Taos Pueblo community voice and perspectives – would greatly enrich the depth and understanding of the thesis.

Several methodological considerations shape the findings of this research. These include my positionality, as a researcher, as described in chapter four, as well as my research approach. Whilst the relational methodology developed throughout the research period generated a development of trust and reciprocity with *acequia* communities, it also means that no findings or methods of the thesis are replicable in any standardized sense. Moreover, my own positionality, worldview,

perspective, and life history colors the ways in which I interpret and relate to the data generated, and, of course, situates the results within this given context. Specific notes include the use of English as the primary interview language, as well as the role of my gender and ethnicity as a young, female, Anglo researcher, within a primarily elder, male, *Nuevomexicano* research context.

Lastly, while the research draws on long-scale lived experience, the specific research period is limited to thirteen months of fieldwork practice between 2022-2023, representing a snapshot in time, and a specific political and climatic moment.

8.4.3 Areas for Future Research

Though a relational inquiry, the thesis has discovered linkages and bricolage. Amongst the many future directions of research this study has inspired, four are selected below for their relevance and timeliness to the thesis.

Engagement with State Policy Frameworks

More systematic engagement with state policy frameworks — including comparative analysis of water management structures across New Mexico's regions — would yield more comprehensive insights into just transformation approaches and adaptive governance mechanisms already underway, particularly in the context of the State's emergent 50 Year Water Plan.

Gender and Acequia Governance

The Women and Water Plática presented within the thesis opened questions about a feminist moral economy of water, however a full engagement with gender has been excluded from this study. This represents a dynamic focus for future research — one that would illuminate not only feminist influences on *acequia* governance practice at scale, but also, based on limited analysis conducted thus far, may help to understand and articulate a discernible shift in *acequia* advocacy from resistance and oppositional politics toward more generative community-building processes, such as those rooted in arts, fiber-work, storytelling, and food sovereignty. Moreover, an explicit

engagement with gender would help to highlight the role of *acequia* relations in producing gendered subjectivities.

Climate Adaptation and Fire Forestry Management

As climate conditions intensify, the study gestures towards understanding how *querencia*-informed governance practices adapt and evolve over time, recognizing that the accelerating impacts of drought, fire, and political-economic change present unprecedented challenges to these systems as a whole. The Forest Mayordomo Project represents the most transformative case study examined in this thesis, and provides a model for future research into the ways in which *querencia*-based practices that transcend the materiality of water may yield insights for adaptive and relational governance at scale under conditions of environmental stress.

Intercultural Comparisons

Finally, comparative study connecting *acequia* governance to water commons traditions in the Andes, Morocco, or Spain would extend the intercultural discourse this thesis opens, situating New Mexico's *acequias* within a broader global conversation about relational water governance and decolonial theory.

8.5 Significance: What is the role of *querencia* (mutuality, relationality) in meeting the uncertain future?

In addition to the research questions outlined in section two, the thesis closes with two contemplative canons. The first asks, what is the role of *querencia* (mutuality, relationality, and place-based responsibility) in meeting the uncertain future? The second, drawing from the relational principles set forth in the thesis, asks: how do our actions change when we understand land and water as a system of relationships and obligations? How do relational understandings unveil the multiple and complex histories of place, unsettle processes of coloniality, and contribute to pathways for justice? How do such practices respond to, and challenge, singular narratives of progress and development, instead yielding way for plurality and hybridity?

The following section now turns towards, and sits with, these goals.

8.5.1 What is the role of *querencia* (mutuality, relationality) in meeting the uncertain future?

Within the realm of environmental governance, colonial legacies shape the landscape in material ways. Legacies of fire suppression and land use change, coupled with the impacts of climate change, have spurred catastrophic wildfires, whilst water commodification and persistent drought transform fluid geographies. This tale exists in New Mexico, but also across the globe. Looking only at the contemporary Western United States, we see that in 2023, the Lahaina Fires devastated the west side of Maui, where I spent many days of my youth wandering beneath the Banyon Tree. These fires were not natural, rather they were produced by legacies of water dispossession to sustain sugar cane plantations in central Maui, as well as through the introduction of invasive grass species in order for Anglo settlers and businessmen to grow cattle ranching industry on the island (Riley et al., 2024). These conditions of produced drought then met the climatic present, and resulted in catastrophic fires of unprecedented impact, and one hundred and two deaths. The consequences, of course, are still untold. In 2025, Los Angeles alit, again sparked by conditions of unnatural development and water exportations. In New Mexico, the stories of fire are much the same – and have resulted from land dispossession, inappropriate applications of abstracted scientific 'expertise,' the exclusion of communities from their traditional lands, and designations of wilderness that are relegated to fit an aesthetic appeal, rather than functioning as living, working, landscapes (deBuys, 1985; Lane, 2024).

Within this context, it becomes clear that contemporary processes do not achieve just outcomes, nor do they ensure livability, adaptability, or long-term sustainability. The current system operates through logics rooted in the abstraction of nature, which sees the landscape as ordained by separable and discrete categories, rather than functioning as a relational whole (Wilson and Inkster, 2018). Within this space, interconnected environmental and social crises are often framed as 'solvable' through technological or governance interventions, yet such interventions are often rooted in the same logic as that which produces distinct forms of marginalization in the first place:

that is, one disconnected from place, reciprocity, and relationality, and from the specific senses of time and longevity that relational stewardship requires (Elmhirst, 2015; Kimmerer, 2024).

No framework holds all the answers. As demonstrated previously within the thesis, *querencia* and *acequia* governance are spaces of hybridity, imbued with their own power relations, struggles, and internal contradictions. Certainly, as people "engage with and reproduce the material 'things' of the waterscape, they produce and reproduce power relations" (Elmhirst, 2015, p. 524). Yet, through tracing legacies of environmental dispossession, alongside the relational ontologies practiced within the New Mexican *acequia* terrain, this thesis argues that centering relationality with land as a governing practice opens new environmental possibilities and relations that bring forward both greater justice and environmental outcomes – and, that these possibilities exist here and now. Within this context, *querencia* is positioned as a counter-logic – as an alternative means of living with and as territory that beckons towards *another possible*.

8.5.2 Relational and Pluriversal Governance for Just Transformations

The thesis proposes that a *querencia*-informed approach to water and environmental management brings forward an enactment of relational and pluriversal governance systems, which in turn leads towards potentially more just water-land management outcomes within the territorial context of the US. This includes centering questions of epistemic justice, and how relational approaches create space for multiple ways of knowing.

As Lane (2024) argues, "if we want our water management to supersede its settler-colonial foundations, the first step is to shift from an engineering-based approach to a relationship-based approach that has room for multiple knowledge forms and fosters social repair" (p. 210). Moving towards a vision of true pluralism makes way for such frameworks to unfold.

Employing a just transformations framework to the thesis provides an analytical foundation for demonstrating this claim. Such a framework necessitates a preoccupation with power, and in particular an examination into the ways in which communities negotiate for interculturality, epistemic plurality, and procedural visibility within the realm of territorial and environmental

management in New Mexico. Moreover, through a generative framing of environmental conflict—and a corresponding recognition of conditions through which asymmetrical power relations can be transformed—such a framework resonates directly with concepts of relational autonomy, wherein engagement with hegemonic power structures yields new governance possibilities rather than simple opposition or defeat.

Rodríguez and Inturias (2018), through their work with *Grupo Confluencias*, develop a matrix of power types and strategies that document the mechanisms through which communities impact different spheres of hegemonic power — incorporating principles of interculturality (Walsh, 2005), epistemic pluralism, and justice to understand how power relations both produce and transform environmental conflicts. Martin et al. (2025) extend this through a justice typology for restoration that examines distributional, procedural, and recognition dimensions of justice, and their corresponding progressions from exclusionary to collaborative and transformative governance arrangements. Drawing on both frameworks, this thesis maps *acequia* territorial engagements along a gradient from asymmetrical to more symmetrical power relations — demonstrating that *querencia*-informed practices of autonomy produce measurable movement toward epistemic recognition, procedural justice, and more ecologically effective environmental governance. Crucially, this movement is not only political but material: the *acequia's* role as irrigation infrastructure enables communities to extend their ontological claims and governance practices across wider territory, expanding hydrosocial relations beyond the ditch to encompass forest, fire, watershed, and ancestral belonging — demonstrating that there is both a material politics of water control, and a relational environmental ontology.

Acequias may not consciously strategize around how to impact upon specific typologies of hegemonic power, however their actions of relational autonomy, as outlined in the empirical chapters, can be seen to respond to multiple dimensions simultaneously (Rodríguez et al., 2023). For example, the Talpa Trails controversy underscores the ways in which *acequia* communities direct attention to procedural injustices occurring through agency-regulated frameworks for participation, elevates the role of *querencia* as a legitimate basis of environmental management through cultural discourse and community response, and highlights legacies of environmental and cultural racism as manifest through contemporary, ‘innocuous,’ recreational proposals within

acequia watersheds. Concurrently, the Rio Hondo watershed example documents *acequia* strategy across five decades of struggle, and sees a progression from water quality litigation, to visible protest and opposition, to negotiated trust building processes to develop joint watershed management initiatives. The Forest Mayordomo example highlights epistemic plurality, and how traditional ecological knowledge, when institutionally recognized as symmetrical to scientific 'expertise,' produces both more effective forest management outcomes as well as a measurable expansion of community self-determination over ancestral territory.

The thesis argues that through *acequias*' enactment of relational autonomy, including through strategic employment of—and in some cases ultimate rejection of—state frameworks, they "open up participation for marginalized sectors in already established institutions" but also, more fundamentally, assert and strengthen "customary decision-making procedures and approaches for managing the commons, such as autonomous or customary forms of government" (Rodríguez et al., 2023, p. 16).

Transformation scholars argue that meaningful change requires fundamentally reconfiguring development structures and challenging the dominant global political economy and colonial matrix of power (Pelling and Manuel-Navarrete, 2011; Kothari et al., 2014; Pelling et al., 2015; Scoones, 2016; Rodríguez et al., 2023). Transformation, within the *acequia* context, thus involves addressing the deeper roots of coloniality, including its influence on water management, techno-managerial hierarchies, and orders of knowledge, each of which span social, cultural, economic, and political realms that intersect to produce unequal relations of power and worldview. In doing so, relational understandings unveil the multiple and complex histories of place — making visible the colonial matrices that have shaped water governance in New Mexico, and also inform pathways for justice that center plural ways of knowing.

8.5.3 *Querencia*: A Generative Framework of Love

The root verb of *querencia* is *querer*: to love. Therefore *querencia*, at its root, is a discourse about love. It is a discussion about ways in which reciprocal responsibility towards and with place shapes actions that attend to mutualism, and the ways in which *querencia* teaches us to love our landscape

as a relational entity with which we are intertwined. Fostering and nurturing our own *querencia* I believe, in turn, also helps us to respect and foster the *querencia* of another: understanding the rights of communities to engage in their (our) own relationship with nature (and water) on their (our) own terms. Such a framework leads towards a generative, plural, and relational framework for understanding and enacting water governance.

While remaining attentive to the romanticization of traditional knowledges, it is simultaneously evident that relational ways of engaging with and governing territory produce different environmental results than frameworks that treat water as separable from land, or nature as an extractable entity. Living with and as nature (e.g. Martin et al., 2025) returns the landscape to a co-creative and relational entity that is mutually co-constitutive of hydrosocial relations – in the forests, in the stream systems, in the headwaters, and with the community.

Where discourse over sustainability has flourished in the recent decade, the thesis looks towards what a *querencia*-informed approach suggests about sustainable land and water management when *relationality* is held as the primary orienting value. What systems, then, are sustained, reproduced, dismantled, or reaffirmed? In what ways do relationships with land and nature shift as a result of this re-centering*? When we understand land and water as a system of relationships and obligations, our actions fundamentally change. This is demonstrated concretely through acequia territorial governance, as well as through contemporary structures of management.* Acequia water sharing practices, which center an adaptive and dynamic apportionment of water through principles of proportion, equity, and need, exist in stark relief as compared to contemporary water rights adjudications proceedings; simultaneously, community forest management initiatives reintegrate traditional stewardship knowledge into landscape governance at scale, demonstrating the ways in which living, active, engagement with territory results not only in a re-defined cultural relationship with place, but also yields more sustainable, and more adaptive forestry outcomes.

Drawing on these principles, and in dialogue with the conceptual anchors outlined within the thesis, the research suggests a turn toward generative world-making led by an ethos of relationality and *querencia*.

The modernist abstracted scientific foundation that has served to govern and apportion New Mexico's waters over the past century-plus is not natural or inevitable. Rather, it is a produced phenomenon of expertise that has been used (and documented) to maintain distinct hierarchies of environmental knowledge, which have in turn been used to largely dispossess traditional communities of their land and management systems, in favor of colonial expertise and amassment (Lane, 2024). Yet, as Lane notes, it is no longer sufficient to simply document the structure of coloniality. Rather, we must move towards the building of new relations and futures. Indeed, "for modernist science to maintain even a shred of dignity in the face of social disruptions triggered by warming, drought, wildfire, extinction, and other ecological disturbances, its practitioners must engage with the idea of multiple knowledges and seek to detach from the settler-colonial framework" (Lane, 2024, p. 210). A *querencia*-informed governance framework provides such a pathway forward.

Through enactments of *querencia*, *acequia* communities respond to and challenge singular narratives of progress and development — insisting instead on plurality, hybridity, and the coexistence of other ways of knowing and relating to the land. *Querencia* reminds us of a different framework: of other ways of knowing and relating to territory that are already present in there here and now – of other ways of understanding the environment, and relating to structures of power.

Thus, in sum, what is the role of *querencia* in meeting the uncertain future? I believe the role is about relationality and love – of beckoning us towards, and reminding us of, alternative nature-society relations that are rooted in relationality, reciprocity, and respect. It is about being attentive to intersectional power relations, and also their potential for transformation. No framework has all of the answers – but I think this one holds some. It is at least – in my opinion – worthy of a try.

So, I end, with a call that you will hear mimicked in any *acequia cancíon*, election, meeting, or protest. It is one that I learned to shout as the *marchistas* walked by. That is:

Que Vivan Las Acequias – Que Vivan. Que Viva La Querencia – Que Viva. And, for me, Que Viva La Relationalidad – Que Viva La Pluriversalidad – Que Viva La Feminidad! - Que Viva, Que Viva, Que Viva.

References

2025 New Mexico Statutes Chapter 72 - Water Law Article 8 - Offenses and Penalties Under Water Act of 1907 Section 72-8-4 - Unauthorized use or waste of water; constructing works without permit.

2025 New Mexico Statutes Chapter 73 - Special Districts Article 2 - Ditches or Acequias Section 73-2-55.1 - Water banking; acequias and community ditches.

Abeyta Water Rights Adjudication Settlement Agreement (2016) Settlement Agreement Among the United States of America, Taos Pueblo, the State of New Mexico, the Taos Valley Acequia Association and its 55 Member Acequias, the Town of Taos, El Prado Water and Sanitation District, and the 12 Taos Area Mutual Domestic Water Consumer's Associations. United States District Court, District of New Mexico.

Abu-Lughod, L. (2008) 'Writing against culture', in The Cultural Geography Reader. London: Routledge, pp. 62-71.

Agarwal, A., delos Angeles, M.S., Bhatia, R., Chéret, I., Davila-Poblete, S., Falkenmark, M., Villarreal, F.G., Jønch-Clausen, T., Kadi, M.A., Kindler, J. and Rees, J. (2000) *Integrated Water Resources Management*. Stockholm: Global Water Partnership.

Agarwal, B. (1992) 'The gender and environment debate: lessons from India', *Feminist Studies*, 18(1), pp. 119-158.

Aguilar, J.R., Preucel, R.W., Schmidt, P. and Mrozowski, S.A. (2013) 'Sacred mesas: Pueblo time, space, and history in the aftermath of the Pueblo Revolt of 1680', in *The Death of Prehistory*. pp. 267-289.

Ahlborg, H. and Nightingale, A.J. (2018) 'Theorizing power in political ecology: the where of power in resource governance projects', *Journal of Political Ecology*, 25(1), pp. 381-401.

Ahlers, R. and Zwarteveen, M. (2009) 'The water question in feminism: water control and gender inequities in a neo-liberal era', *Gender, Place and Culture*, 16(4), pp. 409-426.

Álvarez, L. and Coolsaet, B. (2020) 'Decolonizing environmental justice studies: a Latin American perspective', *Capitalism Nature Socialism*, 31(2), pp. 50-69.

Amigos Bravos (2019) *Rio Fernando de Taos Watershed Based Plan*. Prepared for the New Mexico Environment Department and U.S. EPA Region 6.

Anaya, R. (2020) 'Querencia', in Fonseca-Chávez, V., Romero, L. and Herrera, S.R. (eds.) *Querencia: Reflections on the New Mexico Homeland*. Albuquerque: University of New Mexico Press.

Angel, J. and Loftus, A. (2019) 'With-against-and-beyond the human right to water', *Geoforum*, 98, pp. 206-213.

Arellano, J.E. (1997) 'La querencia: La raza bioregionalism', *New Mexico Historical Review*, 72(1), p. 6.

Arellano, J.E. (2007) 'Taos: where cultures met four hundred years ago', *Grantmakers in the Arts Reader*, 18(3), pp. 49-56.

Arellano, J.E. (2014) *Enduring Acequias: Wisdom of the Land, Knowledge of the Water*. Albuquerque: UNM Press.

Armijos, M.T. (2013) '"They cannot come and impose on us": Indigenous autonomy and resource control through collective water management in Highland Ecuador', *Radical History Review*, 2013(116), pp. 86-103.

Armijos, M.T. and Walnycki, A.M. (2014) 'Why participation matters: communal drinking water management in Bolivia and Ecuador', *IDS Bulletin*, 45(2-3), pp. 43-55.

Armijos, M.T., Acosta, L.D., Calder, E.S., Gaviria, W., Giraldo, D., Pineda, J., Rabe, C., Sanaguano, P. and Zambrano, L.A. (2024) 'Assuming power in new forms: learning to feel "with the other" in decolonial research', in *Challenging Global Development: Towards Decoloniality and Justice*. Cham: Springer Nature Switzerland, pp. 165-192.

Arora-Jonsson, S. (2011) 'Virtue and vulnerability: discourses on women, gender and climate change', *Global Environmental Change*, 21(2), pp. 744-751.

Bakker, K. (2003) 'A political ecology of water privatization', *Studies in Political Economy*, 70(1), pp. 35-58.

Bakker, K. (2012) 'Water: political, biopolitical, material', *Social Studies of Science*, 42(4), pp. 616-623.

Barnes, J. and Alatout, S. (2012) 'Water worlds: introduction to the special issue of Social Studies of Science', *Social Studies of Science*, 42(4), pp. 483-488.

Basso, K.H. (1996) *Wisdom Sits in Places: Landscape and Language among the Western Apache*. Albuquerque: UNM Press.

Bear, C. and Bull, J. (2011) 'Guest editorial: water matters: agency, flows, and frictions', *Environment and Planning A*, 43, pp. 2261-2266.

Bebbington, A. and Perreault, T. (1999) 'Social capital, development, and access to resources in highland Ecuador', *Economic Geography*, 75(4), pp. 395-418.

Blaser, M. and De La Cadena, M. (2017) ‘The uncommons: An introduction.’ *Anthropologica*, *59*(2), pp.185-193.

Bodine, J.J. (1968) *A Tri-Ethnic Trap: The Spanish Americans in Taos*. Seattle: University of Washington Press.

Bodine, J.J. (1973) 'Blue Lake: a struggle for Indian rights', *American Indian Law Review*, 1, p. 23.

Bodine, J.J. (1978) 'Taos Blue Lake Controversy', *The Journal of Ethnic Studies*, 6(1), p. 42.

Boelens, R. (2014) 'Cultural politics and the hydrosocial cycle: water, power and identity in the Andean highlands', *Geoforum*, 57, pp. 234-247.

Boelens, R. (2015) *Water, Power and Identity: The Cultural Politics of Water in the Andes*. London: Routledge.

Boelens, R., Escobar, A., Bakker, K., Hommes, L., Swyngedouw, E., Hogenboom, B., Huijbens, E.H., Jackson, S., Vos, J., Harris, L.M. and Joy, K.J. (2022) 'Riverhood: political ecologies of socionature commoning and translocal struggles for water justice', *The Journal of Peasant Studies*, 50(3), pp. 1125-1156.

Boelens, R., Hoogesteger, J., Swyngedouw, E., Vos, J. and Wester, P. (2016) 'Hydrosocial territories: a political ecology perspective', *Water International*, 41(1), pp. 1-14.

Boelens, R., Hommes, L., Hoogesteger, J., Swyngedouw, E., Vos, J. and Wester, P. (2025) 'Hydrosocial territories: imaginaries, materialities, and struggles over knowledge, order and meaning', *Water International*, 50(5), pp. 426-462.

Boelens, R., Perreault, T. and Vos, J. (eds.) (2018) *Water Justice*. Cambridge: Cambridge University Press.

Boelens, R., Vos, J. and Perreault, T. (2018) 'Introduction: the multiple challenges and layers of water justice struggles', in Boelens, R., Perreault, T. and Vos, J. (eds.) *Water Justice*. Cambridge: Cambridge University Press, pp. 1-32.

Bogardi, J.J., Dudgeon, D., Lawford, R., Flinkerbusch, E., Meyn, A., Pahl-Wostl, C., Vielhauer, K. and Vörösmarty, C. (2012) 'Water security for a planet under pressure: interconnected challenges of a changing world call for sustainable solutions', *Current Opinion in Environmental Sustainability*, 4(1), pp. 35-43.

Bridge, G. and Perreault, T. (2009) 'Environmental governance', in *A Companion to Environmental Geography*. pp. 475-497.

Budds, J. (2004) 'Power, nature and neoliberalism: the political ecology of water in Chile', *Singapore Journal of Tropical Geography*, 25(3), pp. 322-342.

Budds, J. (2016) 'Whose scarcity? The hydrosocial cycle and the changing waterscape of La Ligua river basin, Chile', in *Contentious Geographies*. London: Routledge, pp. 59-78.

Budds, J. and Hinojosa-Valencia, L. (2012) 'Restructuring and rescaling water governance in mining contexts: the co-production of waterscapes in Peru', *Water Alternatives*, 5(1), pp. 119-137.

Budds, J. and McGranahan, G. (2003) 'Are the debates on water privatization missing the point? Experiences from Africa, Asia and Latin America', *Environment and Urbanization*, 15(2), pp. 87-114.

Budds, J. and Sultana, F. (2013) 'Exploring political ecologies of water and development', *Environment and Planning D: Society and Space*, 31(2), pp. 275-279.

Bukamal, H. (2022) 'Deconstructing insider-outsider researcher positionality', *British Journal of Special Education*, 49(3), pp. 327-349.

Buynak, B. and Tsosie, S. (2015) 'Strategic water reserve', *Water Matters!*, 1, pp. 29-1-29-4.

Cadaval Narezo, M. (2022) 'Methodologies for collaborative, respectful and caring research: conversations with professional Indigenous women from Mexico', in *Feminist Methodologies*. Cham: Palgrave Macmillan, pp. 139-161.

Cahill, C. (2007) 'Repositioning ethical commitments: participatory action research as a relational praxis of social change', *ACME: An International Journal for Critical Geographies*, 6(3), pp. 360-373.

Campbell, S. and Gurney, L. (2020) 'Mapping and navigating ontologies in water governance: the case of the Ganges', *Water International*, 45(7-8), pp. 847-864.

Cantor, A., Stoddard, E.A., Rocheleau, D., Brewer, J.F., Roth, R., Birkenholtz, T., Foo, K. and Nirmal, P. (2018) 'Putting rooted networks into practice', *ACME: An International Journal for Critical Geographies*, 17(4), pp. 958-987.

Carr, E.R., Abrahams, D., De la Poterie, A.T., Suarez, P. and Koelle, B. (2015) 'Vulnerability assessments, identity and spatial scale challenges in disaster-risk reduction', *Jàmbá: Journal of Disaster Risk Studies*, 7(1), pp. 1-17.

Carson National Forest (2025) *Environmental Assessment: Taos Ski Valley Gondola and Other Improvements*. Available at: https://www.fs.usda.gov/r03/carson/projects/61390 (Accessed: 26 March 2026).

Castree, N. and Braun, B. (2001) *Social Nature: Theory, Practice and Politics*. Oxford: Blackwell.

Chacon, C. (2021) 'An Indigenous-informed archaeological approach to dating the Taos Pueblo', *The Yale Undergraduate Research Journal*, 2(1), p. 13.

Chakrabarty, D. (2000) *Provincializing Europe: Postcolonial Thought and Historical Difference*. Princeton: Princeton University Press.

Chapa, A. (2020) *Acequias: The Legacy Lives On* [Film]. Albuquerque: University of New Mexico Center for Regional Studies.

Communities for Clean Water (2024) *Protecting Community Waters Impacted by the Los Alamos National Laboratory*. Available at: https://www.ccwnewmexico.org/ (Accessed: 26 March 2026).

Conrad, L.M., Fernald, A.G., Guldan, S.J. and Ochoa, C.G. (2022) 'A water balancing act: water balances highlight the benefits of community-based adaptive management in northern New Mexico, USA', *Hydrology*, 9(4), p. 64.

Corntassel, J. (2008) 'Toward sustainable self-determination: rethinking the contemporary Indigenous-rights discourse', *Alternatives*, 33(1), pp. 105-132.

Correia, D. (2008) '"Rousers of the Rabble" in the New Mexico Land Grant War: La Alianza Federal De Mercedes and the violence of the state', *Antipode*, 40(4), pp. 561-583.

Coulthard, G.S. (2014) *Red Skin, White Masks: Rejecting the Colonial Politics of Recognition*. Minneapolis: University of Minnesota Press.

Coulthard, G. and Simpson, L.B. (2016) 'Grounded normativity/place-based solidarity', *American Quarterly*, 68(2), pp. 249-255.

Cox, M. (2014) 'Modern disturbances to a long-lasting community-based resource management system: the Taos Valley acequias', *Global Environmental Change*, 24, pp. 213-222.

Cox, M. and Ross, J.M. (2011) 'Robustness and vulnerability of community irrigation systems: the case of the Taos valley acequias', *Journal of Environmental Economics and Management*, 61(3), pp. 254-266.

Crawford, S. (1990) 'Dancing for water', *Journal of the Southwest*, pp. 265-267.

Cruz, J.J., Fernald, A.G., VanLeeuwen, D.M., Guldan, S.J. and Ochoa, C.G. (2019) 'River-ditch flow statistical relationships in a traditionally irrigated valley near Taos, New Mexico', *Journal of Contemporary Water Research and Education*, 168(1), pp. 49-65.

de Bont, C., Komakech, H.C. and Veldwisch, G.J. (2019) 'Neither modern nor traditional: farmer-led irrigation development in Kilimanjaro Region, Tanzania', *World Development*, 116, pp. 15-27.

de Costa, L.B., Icaza, R. and Talero, A.M.O. (2015) 'Knowledge about, knowledge with: dilemmas of researching lives, nature and gender otherwise', in *Practicing Feminist Political Ecologies: Moving Beyond the "Green Economy"*. pp. 260-285.

De la Cadena, M. (2015) *Earth Beings: Ecologies of Practice across Andean Worlds*. Durham: Duke University Press.

De la Cadena, M. and Blaser, M. (eds.) (2018) *A World of Many Worlds*. Durham: Duke University Press.

De Zaldívar, V.B.S. (2008) 'From agrarian reform to ethnodevelopment in the highlands of Ecuador', *Journal of Agrarian Change*, 8(4), pp. 583-617.

DeBuys, W. (1985) *Enchantment and Exploitation: The Life and Hard Times of a New Mexico Mountain Range*. Albuquerque: University of New Mexico Press.

DeLara, C.J. (2000) 'Who controls New Mexico's acequias: acequia government and Wilson v. Denver', *Natural Resources Journal*, 40, p. 727.

Diffenbaugh, N.S., Giorgi, F. and Pal, J.S. (2008) 'Climate change hotspots in the United States', *Geophysical Research Letters*, 35(16).

Dixon, K.C. (2017) Atole de Maíz Azul: Building Climate-Change Resilience with Local Knowledge/Food Sovereignty in Northern New Mexico.

Dixon, K.C. (2026) “Reimagining Resilience: *Querencia* and Relationality in New Mexican Acequia Systems” in *Beyond Resilience: Unstable Terms in Crisis*, ed. Hannah Grayson. Routledge.

Dixon, K.C. (2020) *Working Lands Resiliency Initiative*. Available at: https://storymaps.arcgis.com/stories/13cf6c6cdf164d2ab37ebafd22db6fc8 (Accessed: 26 March 2026).

Dupuis, C., Harcourt, W., Gaybor, J. and van den Berg, K. (2022) 'Introduction: feminism as method — navigating theory and practice', in *Feminist Methodologies*. Cham: Palgrave Macmillan, pp. 1-20.

Ebright, M. (1994) *Land Grant Community Associations in New Mexico*. No. 40. Center for Land Grant Studies.

Elmhirst, R. (2011) 'Introducing new feminist political ecologies', *Geoforum*, 42(2), pp. 129-132.

Elmhirst, R. (2015) 'Feminist political ecology', in *The Routledge Handbook of Political Ecology*. London: Routledge, pp. 519-530.

Enchanted Circle Trails Association (no date) *Talpa Ridge Trail Conceptual Plan* [Map/Planning document]. Available at: https://enchantedcircletrails.org/development/talpa-ridge/ (Accessed: November, 2024). (Note: No longer available)

Endres, D. (2013) 'Animist intersubjectivity as argumentation: Western Shoshone and Southern Paiute arguments against a nuclear waste site at Yucca Mountain', *Argumentation*, 27(2), pp. 183-200.

Escobar, A. (2007) '"Post-development" as concept and social practice', in *Exploring Post-Development*. London: Routledge, pp. 18-31.

Escobar, A. (2008) 'Una ecología de la diferencia: igualdad y conflicto en un mundo "glocalizado"', in *La Cultura, Estrategia de Cooperación al Desarrollo: Girona, 21-24 de noviembre 2007*. Documenta Universitaria, p. 27.

Escobar, A. (2015) 'Territorios de diferencia: la ontología política de los "derechos al territorio"', *Cuadernos de Antropología Social*, 41, pp. 25-38.

Escobar, A. (2016) 'Sentipensar con la tierra: las luchas territoriales y la dimensión ontológica de las epistemologías del sur', *AIBR: Revista de Antropología Iberoamericana*, 11(1), pp. 11-32.

Escobar, A. (2018) *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. Durham: Duke University Press.

Escobar, A. (2019) 'Thinking-feeling with the Earth: territorial struggles and the ontological dimension of the Epistemologies of the South', in *Knowledges Born in the Struggle*. London: Routledge, pp. 41-57.

Escobar, A. (2020) *Pluriversal Politics: The Real and the Possible*. Durham: Duke University Press.

Escobar, A., Osterweil, M. and Sharma, K. (2024) *Relationality: An Emergent Politics of Life beyond the Human*. London: Bloomsbury Publishing.

Fanon, F. (2004) *The Wretched of the Earth*. Translated by R. Philcox. New York: Grove Press.

Feldblum, S.B. (2025) 'Liberal water law against itself: acequias and legal contestation in New Mexico's South Valley', *Geoforum*, 163, 104299.

Fernald, A., Ochoa, C.G. and Guldan, S.J. (2020) 'Coupled natural and human system clues to acequia resilience', in *Acequias of the Southwestern United States: Elements of Resilience in a Coupled Natural and Human System*. pp. 72-78.

Fernald, A.G., Baker, T.T. and Guldan, S.J. (2007) 'Hydrologic, riparian, and agroecosystem functions of traditional acequia irrigation systems', *Journal of Sustainable Agriculture*, 30(2), pp. 147-171.

Fierros, C.O. and Bernal, D.D. (2016) 'Vamos a platicar: the contours of pláticas as Chicana/Latina feminist methodology', *Chicana/Latina Studies*, pp. 98-121.

Flores Carmona, J. and Lopez, A. (2019) *Pláticas~Testimonios: Toward a B/Borderlands Epistemological Movement of Solidarity*. Las Cruces: New Mexico State University.

Flores Carmona, J., Hamzeh, M., Delgado Bernal, D. and Hassan Zareer, I. (2021) 'Theorizing knowledge with pláticas: moving toward transformative qualitative inquiries', *Qualitative Inquiry*, 27(10), pp. 1213-1220.

Fonseca-Chávez, V., Herrera, S., & Romero, L. (Eds.) (2020). *Querencia Reflections on the New Mexico Homeland* (First.). University of New Mexico Press.

Garcia, P. (2022) 'Our homeland is burning — now what?', *The Santa Fe New Mexican*. Available at: https://www.santafenewmexican.com/opinion/my_view/our-homeland-is-burning-now-what/article_43e87570-ce13-11ec-b372-d30a91013d29.html (Accessed: 26 March 2026).

Garcia, P. (2024) 'Acequia recovery after the Hermit's Peak Calf Canyon Fire: Part 1', *New Mexico Acequia Association Blog*. Available at: https://lasacequias.org/2024/04/22/acequia-recovery-after-the-hermits-peak-calf-canyon-fire-part-1/ (Accessed: 26 March 2026).

Garcia, P. and Santistevan, M. (2023) 'Acequia waters: communal resource or commodity?', in Lamadrid, E.R. and Rivera, J.A. (eds.) *Water for the People: The Acequia Heritage of New Mexico in a Global Context*. Albuquerque: University of New Mexico Press, pp. 19-29.

Garcia y Griego (2015) *Community Land Grants in New Mexico: Some Background*. Prepared for the New Mexico State Legislature. Available at: https://www.nmlegis.gov/handouts/LGC%20061015%20Item%202%20Community%20Land%20Grants%20in%20NM%20-%20Professor%20Garcia%20y%20Griego%20615.pdf (Accessed: 26 March 2026).

García, D. (2024) 'Honoring our connection to land and water on San Isidro Day', *New Mexico Acequia Association*. Available at: https://lasacequias.org/2024/05/10/honoring-our-connection-to-land-water-on-san-isidro-day/ (Accessed: 26 March 2026).

Garfin, G. (ed.) (2013) *Assessment of Climate Change in the Southwest United States: A Report Prepared for the National Climate Assessment*, Vol. 531. Washington, DC: Island Press.

Gaventa, J. (2006) 'Finding the spaces for change: a power analysis', *IDS Bulletin*, 37(6), pp. 23-33.

Gaventa, J. (2019) 'Applying power analysis: using the "powercube" to explore forms, levels and spaces', in *Power, Empowerment and Social Change*. London: Routledge, pp. 117-138.

Geertz, C. (1998) 'Deep hanging out', *The New York Review of Books*, 45(16), pp. 69-72.

Gerber, A.L. (2024) 'Forest mayordomos: a collaborative forest management strategy', *CART*. Available at: https://www.fws.gov/project/forest-mayordomos-collaborative-management (Accessed: 26 March 2026).

Giddens, A. (1984) *The Constitution of Society: An Outline of the Theory of Structuration*. Cambridge: Polity Press.

Gonzales, F. (ed.) (2007) *Expressing New Mexico: Nuevomexicano Creativity, Ritual, and Memory*. Tucson: University of Arizona Press.

Gonzales, M. (2020) 'The Genízaro cultural landscape model of community land grants in northern New Mexico', in Fonseca-Chávez, V., Romero, L. and Herrera, S.R. (eds.) *Querencia: Reflections on the New Mexico Homeland*. Albuquerque: University of New Mexico Press.

Gonzales, M. and Lamadrid, E.R. (eds.) (2019) *Nación Genízara: Ethnogenesis, Place, and Identity in New Mexico*. Albuquerque: University of New Mexico Press.

Gonzales, P.B. (1993) 'The political construction of Latino nomenclatures in twentieth-century New Mexico', *Journal of the Southwest*, pp. 158-185.

Gonzales, P.B. (2006) 'Whither the Nuevomexicanos: the career of a southwestern intellectual discourse, 1907-2004', *The Social Science Journal*, 43(2), pp. 273-286.

González-Hidalgo, M. and Zografos, C. (2020) 'Emotions, power, and environmental conflict: expanding the "emotional turn" in political ecology', *Progress in Human Geography*, 44(2), pp. 235-255.

Gonçalves, C.W.P. (2006) *A Globalização da Natureza e a Natureza da Globalização*. Rio de Janeiro: Editora Record.

Graham, M. (2014) 'Aboriginal notions of relationality and positionalism: a reply to Weber', *Global Discourse*, 4(1), pp. 17-22.

Groenfeldt, D. (2019) *Water Ethics: A Values Approach to Solving the Water Crisis*. London: Routledge.

Guldan, S.J., Fernald, A.G. and Ochoa, C.G. (2015) 'Documenting hydrological benefits of traditional acequia irrigation systems: collaborative research in New Mexico, USA', pp. 738-750.

Gunn, C. (2016) 'Acequias as commons: lessons for a post-capitalist world', *Review of Radical Political Economics*, 48(1), pp. 81-92.

Gómez, M. (2022) *Nuclear Nuevo México: Colonialism and the Effects of the Nuclear Industrial Complex on Nuevomexicanos*. Tucson: University of Arizona Press.

Haffey, C., Sisk, T.D., Allen, C.D., Thode, A.E. and Margolis, E.Q. (2018) 'Limits to ponderosa pine regeneration following large high-severity forest fires in the United States Southwest', *Fire Ecology*, 14(1), pp. 143-163.

Hahn, T.N. (1987) *Interbeing: Fourteen Guidelines for Engaged Buddhism*. Berkeley: Parallax Press.

Hanh, T.N. (2021) *Zen and the Art of Saving the Planet*. New York: Random House.

Haraway, D. (2018) 'Staying with the trouble for multispecies environmental justice', *Dialogues in Human Geography*, 8(1), pp. 102-105.

Harcourt, W. (2019) 'Body politics and postdevelopment', in *Postdevelopment in Practice*. London: Routledge, pp. 247-262.

Harcourt, W. (2026) ‘Why feminist political ecology matters.’ *Space and Polity*, pp.1-6.

Harcourt, W. and Nelson, I.L. (eds.) (2015) *Practising Feminist Political Ecologies: Moving beyond the 'Green Economy'*. London: Bloomsbury Publishing.

Harcourt, W., Agostino, A., Elmhirst, R., Gomez, M. and Kotsila, P. (eds.) (2023) *Contours of Feminist Political Ecology*. London: Palgrave.

Harris, L.M. (2009) 'Gender and emergent water governance: comparative overview of neoliberalized natures and gender dimensions of privatization, devolution and marketization', *Gender, Place and Culture*, 16(4), pp. 387-408.

Harris, L.M. and Roa-García, M.C. (2013) 'Recent waves of water governance: constitutional reform and resistance to neoliberalization in Latin America (1990-2012)', *Geoforum*, 50, pp. 20-30.

Harris, L.M., Staddon, C., Wutich, A., Budds, J., Jepson, W., Pearson, A.L. and Adams, E.A. (2020) 'Water sharing and the right to water: refusal, rebellion and everyday resistance', *Political Geography*, 82(C).

Harvey, D. (2003) 'Accumulation by dispossession', in *The New Imperialism*. Oxford: Oxford University Press.

Harvey, D. (2018) *The Limits to Capital*. London: Verso Books.

Hawkins, R., Ojeda, D., Asher, K., Baptiste, B., Harris, L., Mollett, S., Nightingale, A., Rocheleau, D., Seager, J. and Sultana, F. (2011) 'A discussion', *Environment and Planning D: Society and Space*, 29(2), pp. 237-253.

Hay, A. (2023) 'New Mexico trail clash echoes culture war across US West', *Reuters*. Available at: https://www.reuters.com/world/us/new-mexico-trail-clash-echoes-culture-war-across-us-west-2023-07-07/ (Accessed: 26 March 2026).

Henkel, D.S. (2014) 'Community-based water systems: preserving livelihood, ecology, and community', *Human Ecology Review*, pp. 75-95.

Hommes, L., Vos, J. and Boelens, R. (2023) 'The need to acknowledge, study and engage with new water justice movements', *PLOS Water*, 2(5), e0000128. https://doi.org/10.1371/journal.pwat.0000128

Hoogesteger, J. and Verzijl, A. (2015) 'Grassroots scalar politics: insights from peasant water struggles in the Ecuadorian and Peruvian Andes', *Geoforum*, 62, pp. 13-23.

Hoogesteger, J., Boelens, R. and Baud, M., (2016). Territorial pluralism: water users' multi-scalar struggles against state ordering in Ecuador's highlands. In *Hydrosocial Territories and Water Equity* (pp. 266-281). Routledge.

Hurd, B.H. and Mayagoitia, L. (2020) 'Perceptions of drought preparedness and adaptation strategies within acequia communities', in *Acequias of the Southwestern United States: Elements of Resilience in a Coupled Natural and Human System*. p. 48.

IPBES (2022) *Methodological Assessment Report on the Diverse Values and Valuation of Nature of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. Bonn: IPBES Secretariat.

Jepson, W. (2012) 'Claiming space, claiming water: contested legal geographies of water in South Texas', *Annals of the Association of American Geographers*, 102(3), pp. 614-631.

Jepson, W., Wutich, A., Collins, S.M., Boateng, G.O. and Young, S.L. (2017) 'Progress in household water insecurity metrics: a cross-disciplinary approach', *Wiley Interdisciplinary Reviews: Water*, 4(3), e1214.

John Shomaker and Associates, Inc. (2016) *Taos Regional Water Plan*. Prepared for Taos County, NM.

Johnson, L.B. and Margolis, E.Q. (2019) 'Surface fire to crown fire: fire history in the Taos Valley watersheds, New Mexico, USA', *Fire*, 2(1), p. 14.

Kamtam, M., Kalyanwala, K., Gray, H. and Dixon, K.C. (2025) *Labour and Environmental Movements*. Conference: Gender and Development: Debates for a Changing World. University of East Anglia.

Kimmerer, R.W. (2024) *The Serviceberry: Abundance and Reciprocity in the Natural World*. New York: Simon and Schuster.

Kosek, J. (2006) *Understories: The Political Life of Forests in Northern New Mexico*. Durham: Duke University Press.

Kothari, A., Demaria, F. and Acosta, A. (2014) 'Buen Vivir, degrowth and ecological Swaraj: alternatives to sustainable development and the green economy', *Development*, 57(3), pp. 362-375.

Lamadrid, E.R. (2000) *Nuevo México Profundo: Rituals of an Indo-Hispano Homeland*. Santa Fe: Museum of New Mexico Press.

Lamadrid, E.R. and Rivera, J.A. (eds.) (2023) *Water for the People: The Acequia Heritage of New Mexico in a Global Context*. Albuquerque: University of New Mexico Press.

Lane, K.M. (2024) *Fluid geographies: water, science, and settler colonialism in New Mexico.* Chicago: University of Chicago Press.

Lankford, B.A. (2012) 'Fictions, fractions, factorials and fractures: on the framing of irrigation efficiency', *Agricultural Water Management*, 108, pp. 27-38.

Lankford, B.A. (2013a) *Resource Efficiency Complexity and the Commons: The Paracommons and Paradoxes of Natural Resource Losses, Wastes and Wastages*. Abingdon: Earthscan/Routledge.

Lankford, B.A. (2013b) 'Infrastructure hydromentalities: water sharing, water control, and water (in)security', in *Water Security*. London: Routledge, pp. 256-272.

Lankford, B.A. (2024) *Irrigation is Colonising and is Being Colonised: On Research and Teaching Gaps in Irrigation*. Available at: https://brucelankford.org.uk/2024/10/22/irrigation-is-colonising-water-and-is-being-colonised/ (Accessed: 26 March 2026).

Lankford, B.A. (2026) *Principles for Flexible Frugal Flourishing Irrigation in a Pressure-Pot Warming World*. Available at: https://brucelankford.org.uk/2026/01/19/flexible-frugal-flourishing-irrigation-in-a-pressure-pot-warming-world/ (Accessed: 26 March 2026).

Lankford, B.A., Sokile, C., Yawson, D. and Lévite, H. (2004) *The River Basin Game: A Water Dialogue Tool*, Vol. 75. Colombo: IWMI.

Lederach, J.P. (2015) *The Little Book of Conflict Transformation: Clear Articulation of the Guiding Principles by a Pioneer in the Field*. New York: Simon and Schuster.

Leonard, K., David-Chavez, D., Smiles, D., Jennings, L., Alegado, R.A., Tsinnajinnie, L., Manitowabi, J., Arsenault, R., Begay, R.L., Kagawa-Viviani, A. and Davis, D.D. (2023) 'Water back: a review centering rematriation and Indigenous water research sovereignty'.

Levine, F. (1990) 'Dividing the water: the impact of water rights adjudication on New Mexican communities', *Journal of the Southwest*, pp. 268-277.

Li, T.M. (2007) *The Will to Improve: Governmentality, Development, and the Practice of Politics*. Durham: Duke University Press.

Linebaugh, P. (2009) *The Magna Carta manifesto: Liberties and commons for all*. Oakland: University of California Press.

Linton, J. (2010) *What is Water? The History of a Modern Abstraction*. Vancouver: UBC Press.

Linton, J. and Budds, J. (2014) 'The hydrosocial cycle: defining and mobilizing a relational-dialectical approach to water', *Geoforum*, 57, pp. 170-180.

Liverman, D., Moser, S.C., Weiland, P.S., Dilling, L., Boykoff, M.T., Brown, H.E., Gordon, E.S., Greene, C., Holthaus, E., Niemeier, D.A. and Pincetl, S. (2013) 'Climate choices for a sustainable Southwest', in *Assessment of Climate Change in the Southwest United States*. Washington, DC: Island Press, pp. 405-435.

Llewelyn, S. (2007) 'A neutral feminist observer? Observation-based research and the politics of feminist knowledge making', *Gender and Development*, 15(2), pp. 299-310.

Loftus, A. (2009) 'Rethinking political ecologies of water', *Third World Quarterly*, 30(5), pp. 953-968.

Logan, J.R. (2012) 'Troubled Taos, torn apart by a battle over historic Hispano land grants', *High Country News*. Available at: https://www.hcn.org/issues/44-14/troubled-taos-torn-apart-by-a-battle-over-historic-hispano-land-grants/ (Accessed: 26 March 2026).

Lomelí, F.A., Sorell, V.A. and Padilla, G.M. (eds.) (2002) *Nuevomexicano Cultural Legacy: Forms, Agencies, and Discourse*. Albuquerque: UNM Press.

Losada Cubillos, J.J., Trujillo Quintero, H.F. and Lugo Perea, L.J. (2023) 'Extractive logic of the coloniality of nature: feeling-thinking through agroecology as a decolonial project', *Capitalism Nature Socialism*, 34(1), pp. 88-106.

Lugones, M. (2010) 'Toward a decolonial feminism', *Hypatia*, 25(4), pp. 742-759.

Lukes, S. (1974) *Power: A Radical View*. London: Macmillan.

Maldonado-Torres, N. (2007) 'On the coloniality of being: contributions to the development of a concept', *Cultural Studies*, 21(2-3), pp. 240-270.

Maldonado-Torres, N. (2016) *Outline of Ten Theses on Coloniality and Decoloniality*. [Unpublished manuscript].

Mansilla-Quiñones, P., Melín Pehuén, M. and Curamil Millanao, A. (2024) 'Confronting coloniality of nature: strategies to recover water and life in Mapuche territory', *Geoforum*, 148, 103922.

Margolis, E.Q. and Balmat, J. (2009) 'Fire history and fire-climate relationships along a fire regime gradient in the Santa Fe Municipal Watershed, NM, USA', *Forest Ecology and Management*, 258(11), pp. 2416-2430.

Margolis, E.Q., Woodhouse, C. and Swetnam, T. (2017) 'Drought, multi-seasonal climate, and wildfire in northern New Mexico', *Climatic Change*, 142(3), pp. 433-446.

Martin, A., Dawson, N., Rodriguez, I., Ajit, S., Carmona, R., Kolahi, M., Nakangu, B. and Pham, T.T. (2025) *Integrating Justice into Restoration Practice*. Technical Note No. 23. Gland: IUCN WCPA Restoration Task Force.

Mehta, L. (2003) 'Contexts and constructions of water scarcity', *Economic and Political Weekly*, pp. 5066-5072.

Mehta, L. (2007) 'Whose scarcity? Whose property? The case of water in western India', *Land Use Policy*, 24(4), pp. 654-663.

Mehta, L. (2014) 'Water and human development', *World Development*, 59, pp. 59-69.

Mehta, L. (2025) 'The challenges of decolonising sustainability and the environment in development studies', *The European Journal of Development Research*, 37(2), pp. 454-466.

Menne, M.J., Durre, I., Korzeniewski, B., McNeill, S., Thomas, K., Yin, X., Anthony, S., Ray, R., Vose, R.S., Gleason, B.E. and Houston, T.G. (2012) *Global Historical Climatology Network - Daily (GHCN-Daily)*, Version 3. NOAA National Climatic Data Center. doi:10.7289/V5D21VHZ (Accessed: 27 March 2026).

Merta, E. (2015) 'Priority administration', *Water Matters!*, 1, pp. 10-1-10-13. Available at: https://digitalrepository.unm.edu/utton_watermatters/vol2015/iss1/15

Metz, L. (2023) *Hermit's Peak/Calf Canyon Fire 2023: Summary of NRCS CEAP-Grazing Lands Rapid EWP Response Assistance*. Available at: https://storymaps.arcgis.com/stories/68221aff26244118b9085e68500b0a3e (Accessed: 26 March 2026).

Meyer, M.C. and Brescia, M.M. (1998) 'The Treaty of Guadalupe Hidalgo as a living document: water and land use issues in northern New Mexico', *New Mexico Historical Review*, 73(4). Available at: https://digitalrepository.unm.edu/nmhr/vol73/iss4/2

Mignolo, W.D. (2007) 'Delinking: the rhetoric of modernity, the logic of coloniality and the grammar of de-coloniality', *Cultural Studies*, 21(2-3), pp. 449-514.

Mignolo, W.D. (2011) 'Geopolitics of sensing and knowing: on (de)coloniality, border thinking and epistemic disobedience', *Postcolonial Studies*, 14(3), pp. 273-283.

Mignolo, W.D. (2012) *Local Histories/Global Designs: Coloniality, Subaltern Knowledges, and Border Thinking*. Princeton: Princeton University Press.

Mignolo, W.D. (2023) 'The colonial matrix of power', in *Talking about Global Inequality: Personal Experiences and Historical Perspectives*. Cham: Springer International Publishing, pp. 39-46.

Mignolo, W.D. (2010) 'The communal and the decolonial', in *Rethinking Intellectuals in Latin America*. pp. 245-261.

Mignolo, W.D. and Walsh, C.E. (2018) *On Decoloniality: Concepts, Analytics, Praxis*. Durham: Duke University Press.

Mitchell, P. (2005) 'The language of blood: the making of Spanish-American identity in New Mexico, 1880s-1930s', pp. 372-373.

Mock, S. (2023) *How to Unbraid a River*. Available at: https://ambrook.com/offrange/environment/acequia-new-mexico-water-rights (Accessed: 26 March 2026).

Mollett, S. and Faria, C. (2013) 'Messing with gender in feminist political ecology', *Geoforum*, 45, pp. 116-125.

Montiel, M., Atencio, T. and Mares, E.A. (2009) *Resolana: Emerging Chicano Dialogues on Community and Globalization*. Tucson: University of Arizona Press.

Montoya, M.E. (2002) *Translating Property: The Maxwell Land Grant and the Conflict over Land in the American West, 1840–1900*. Lawrence: University Press of Kansas.

Mosse, D. (2003) *The Rule of Water: Statecraft, Ecology and Collective Action in South India*. Oxford: Oxford University Press.

Mosse, D. (2006) 'Rule and representation: transformations in the governance of the water commons in British South India', *The Journal of Asian Studies*, 65(1), pp. 61-90.

Nabhan, G.P. (2018) *Food from the Radical Center: Healing Our Land and Communities*. Washington, DC: Island Press.

Narayan, K. (2014) 'How native is a "native" anthropologist?', in *Situated Lives*. London: Routledge, pp. 23-41.

Neuwirth, R. (2019) 'Centuries-old irrigation system shows how to manage scarce water', *National Geographic*, Available at: https://www.nationalgeographic.com/environment/article/acequias (Accessed: 27 March 2026).

New Mexico Acequia Association (2014) *Acequia Governance Handbook*. Revised edn. Santa Fe: New Mexico Acequia Association. Available at: www.lasacequias.org

New Mexico Acequia Association (2020) *Acequia Day at the State Capitol* [Photograph]. New Mexico Acequia Association.

New Mexico Acequia Association (2021) *Map of Regional Acequia Associations in New Mexico* [Map]. Available at: https://lasacequias.org/2021/08/15/acequias-weigh-in-on-redistricting-process-in-new-mexico/map-of-regional-associations/ (Accessed: 27 March 2026).

New Mexico Acequia Association (2022-2024) *Congreso de las Acequias Flyers: 'Tierra Querida' (2022), 'El Agua No Se Vende: Se Ama y Se Defiende' (2023), '¡Somos Acequias! We Are Acequias!' (2024)* [Promotional material]. New Mexico Acequia Association.

New Mexico Constitution (1911) Article XVI, Section 2. Appropriation of water.

New Mexico Constitution (1911) Article XVI, Section 3. Beneficial use of water.

New Mexico Farm and Livestock Bureau (2019) *New Mexico Agricultural Statistics*. Available at: https://www.nmflb.org/About-Us/Counties/Taos (Accessed: 26 March 2026).

New Mexico Fifty Year Water Action Plan (2024) *New Mexico 50-Year Water Action Plan*. Office of the Governor. Available at: https://www.nm.gov/wp-content/uploads/2024/01/New-Mexico-50-Year-WaterAction-Plan.pdf (Accessed: 26 March 2026).

New Mexico Statutes (2025) Chapter 72 - Water Law, Article 8 - Offences and Penalties under Water Act of 1907, Section 72-8-4. Unauthorized use or waste of water; constructing works without permit.

New Mexico Statutes (2025) Chapter 73 - Special Districts, Article 2 - Ditches or Acequias, Section 73-2-55.1. Water banking; acequias and community ditches.

Nieto-Phillips, J.M. (2008) *The Language of Blood: The Making of Spanish-American Identity in New Mexico, 1880s-1930s*. Albuquerque: UNM Press.

Nightingale, A.J. (2003) 'A feminist in the forest: situated knowledges and mixing methods in natural resource management', *ACME: An International E-Journal for Critical Geographies*, 2(1), pp. 77-90.

Nightingale, A.J. (2011a) 'Bounding difference: intersectionality and the material production of gender, caste, class and environment in Nepal', *Geoforum*, 42(2), pp. 153-162.

Nightingale, A.J. (2011b) 'Beyond design principles: Subjectivity, emotion, and the (ir) rational commons.' *Society and Natural Resources*, *24*(2), pp.119-132.

Nightingale, A.J. (2019) 'Commoning for inclusion? Commons, exclusion, property and socio-natural becomings.' *International journal of the commons*, *13*(1).

Nightingale, A.J. and Paris González, C. (2026) 'The commons and commoning.' *The Journal of Peasant Studies*, pp.1-17.

Norman, E.S., Bakker, K. and Cook, C. (2012) 'Introduction to the themed section: water governance and the politics of scale', *Water Alternatives*, 5(1).

Norman, E.S., Cook, C. and Cohen, A. (eds.) (2015) *Negotiating Water Governance: Why the Politics of Scale Matter*. Farnham: Ashgate Publishing.

Nunn, T.M., Vásquez, I. and Carpio, M.V. (2020). Chapter Three Critical Reflections on Chicanx and Indigenous Scholarship and Activism Kevin Brown, Vanessa Fonseca-Chávez. Querencia: Reflections on the New Mexico Homeland, p.54.

Ochoa, C.G., Guldan, S.J. and Fernald, S. (2020) 'Surface water and groundwater interactions in acequia systems of northern New Mexico', in *Acequias of the Southwestern United States: Elements of Resilience in a Coupled Natural and Human System*. pp. 33-40.

Office of the State Engineer (2022) *Water Law 101 Presentation*. Available at: https://www.nmlegis.gov/handouts/EDPC%20071422%20Item%205%20OSE%20water%20law.pdf (Accessed: 26 March 2026).

Office of the State Engineer (2024) 'Sample Water Banking Form', in New Mexico Acequia Association *Acequia Governance Handbook*. Revised edn. Santa Fe: New Mexico Acequia Association. Available at: www.lasacequias.org

Ojeda, D. (2023) 'Feminist thought and environmental defense in Latin America', in *Routledge Handbook of Latin America and the Environment*. London: Routledge, pp. 363-371.

Ostrom, E. (1990) *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press.

Ostrom, E. and Cox, M. (2010) 'Moving beyond panaceas: a multi-tiered diagnostic approach for social-ecological analysis', *Environmental Conservation*, 37(4), pp. 451-463.

Overpeck, J., Garfin, G., Jardine, A., Busch, D.E., Cayan, D., Dettinger, M., Fleishman, E., Gershunov, A., MacDonald, G., Redmond, K.T. and Travis, W.R. (2013) 'Summary for decision makers', in *Assessment of Climate Change in the Southwest United States*. Washington, DC: Island Press, pp. 1-20.

Pahl-Wostl, C., Arthington, A., Bogardi, J., Bunn, S.E., Hoff, H., Lebel, L., Nikitina, E. et al. (2013) 'Environmental flows and water governance: managing sustainable water uses', *Current Opinion in Environmental Sustainability*, 5(3-4), pp. 341-351.

Pallares, A. (2002) *From Peasant Struggles to Indian Resistance: The Ecuadorian Andes in the Late Twentieth Century*. Norman: University of Oklahoma Press.

Pascual, U., Balvanera, P., Anderson, C.B., Chaplin-Kramer, R., Christie, M., González-Jiménez, D., Martin, A. et al. (2023) 'Diverse values of nature for sustainability', *Nature*, 620(7975), pp. 813-823.

Pelling, M. and Manuel-Navarrete, D. (2011) 'From resilience to transformation: the adaptive cycle in two Mexican urban centers', *Ecology and Society*, 16(2).

Pelling, M., O'Brien, K. and Matyas, D. (2015) 'Adaptation and transformation', *Climatic Change*, 133(1), pp. 113-127.

Peluso, N.L. and Lund, C. (2011) 'New frontiers of land control: introduction', *Journal of Peasant Studies*, 38(4), pp. 667-681.

Perramond, E.P. (2012) 'The politics of scaling water governance and adjudication in New Mexico', *Water Alternatives*, 5(1).

Perramond, E.P. (2013) 'Water governance in New Mexico: adjudication, law, and geography', *Geoforum*, 45, pp. 83-93.

Perramond, E.P. (2016a) 'The creation of scaled water rights in New Mexico, USA', in *Negotiating Water Governance*. London: Routledge, pp. 173-188.

Perramond, E.P. (2016b) 'Adjudicating hydrosocial territory in New Mexico', *Water International*, 41(1), pp. 173-188.

Perramond, E.P. (2018) *Unsettled Waters: Rights, Law, and Identity in the American West*, Vol. 5. Oakland: University of California Press.

Perramond, E.P. (2024) 'How Metrics Shape Water Politics in New Mexico: From Quantifying Governance to Active Monitoring.' *Water Alternatives*, *17*(2), p.455.

Perreault, T. (2008) 'Custom and contradiction: rural water governance and the politics of usos y costumbres in Bolivia's irrigators' movement', *Annals of the Association of American Geographers*, 98(4), pp. 834-854.

Perreault, T. (2014) 'What kind of governance for what kind of equity? Towards a theorization of justice in water governance', *Water International*, 39(2), pp. 233-245.

Plant, G. (2022) 'Talpa Foothills Working Group members announced', *The Taos News*. Available at: https://www.taosnews.com/news/environment/talpa-foothills-working-group-members-announced/article_6e8818fa-26b9-563c-82a1-7ecd04b29ba1.html (Accessed: 26 March 2026).

Plant, G. (2023) 'No timeline for Talpa Trails', *The Taos News*. Available at: https://www.taosnews.com/news/environment/no-timeline-for-talpa-trails/article_4e2e1983-3084-5d82-8b2d-ea7f4f6d119e.html (Accessed: 26 March 2026).

Pearson, D. in Plant, G. (2024) 'Tarleton developers appeal permits in court', *The Taos News*, 9 October. Available at: https://www.taosnews.com/news/local-news/tarleton-developers-appeal-permits-in-court/article_84978a58-d0c0-5fbb-b24d-ee16ed358d2c.html (Accessed: 27 March 2026).

Quijano, A. (2000) 'Coloniality of power and Eurocentrism in Latin America', *International Sociology*, 15(2), pp. 215-232.

Quijano, A. (2007) 'Coloniality and modernity/rationality', *Cultural Studies*, 21(2-3), pp. 168-178.

Raheem, N. (2015) 'A common-pool resource experiment in acequia communities', *International Journal of the Commons*, 9(1), pp. 306-321.

Rappaport, R.A. (1999) *Ritual and Religion in the Making of Humanity*, Vol. 110. Cambridge: Cambridge University Press.

Rasmussen, M.B. (2016) 'Unsettling times: living with the changing horizons of the Peruvian Andes', *Latin American Perspectives*, 43(4), pp. 73-86.

Resurrección, B.P. (2017) 'From "women, environment, and development" to feminist political ecology', in *Routledge Handbook of Gender and Environment*, Vol. 1. pp. 71-85.

Rifkin, M. (2017) *Beyond Settler Time: Temporal Sovereignty and Indigenous Self-Determination*. Durham: Duke University Press.

Riley, L., Greywolf, C. and Enos, V.P. (2024) 'The Lahaina fires lasted hours, but the trauma will take generations to heal', *American Journal of Public Health*, 114(S3), pp. S242-S245.

Rivera, J.A. (1998) *Acequia Culture*. Albuquerque: UNM Press.

Rivera-Collazo, I.C., Rodríguez-Franco, C., Garay-Vázquez, J.J., Rivera-Claudio, H.M. and Estremera-Jiménez, R. (2020) 'Towards a definition and practice of communal archaeology: ethics, informal learning, and citizen science in the practice of indigenous archaeology', *Journal of Community Archaeology and Heritage*, 7(2), pp. 120-134.

Rocheleau, D. (2011) 'Rooted networks, webs of relations, and the power of situated science: bringing the models back down to earth', in Goldman, M.J., Turner, M.D. and Nadasdy, P. (eds.) *Knowing Nature: Conversations at the Intersection of Political Ecology*. Chicago: University of Chicago Press, pp. 209-226.

Rocheleau, D. and Nirmal, P. (2015) 'Feminist political ecologies: grounded, networked and rooted on earth', in Baksh, R. and Harcourt, W. (eds.) *Oxford Handbook on Transnational Feminist Movements*. Oxford: Oxford University Press, pp. 792-814.

Rocheleau, D., Thomas-Slayter, B. and Wangari, E. (1996) 'A feminist political ecology perspective', in *Feminist Political Ecology: Global Issues and Local Experiences*. pp. 3-26.

Rocheleau, D., Thomas-Slayter, B. and Wangari, E. (eds.) (2013) *Feminist Political Ecology: Global Issues and Local Experience*. London: Routledge.

Rodriguez, S. (2016) *NM Tradition of Repartimiento in Times of Water Shortage*. New Mexico Acequia Association. Available at: https://lasacequias.org/2016/06/14/nm-tradition-of-repartimiento-in-times-of-water-shortage/ (Accessed: 26 March 2026).

Rodríguez, I. and Inturias, M.L. (2018) 'Conflict transformation in indigenous peoples' territories: doing environmental justice with a "decolonial turn"', *Development Studies Research*, 5(1), pp. 90-105.

Rodriguez, I. (2020) “Latin American decolonial environmental justice.” Environmental justice, 1388, p.1389.

Rodríguez, I., Walter, M. and Temper, L. (eds.) (2023) *Just Transformations: Grassroots Struggles for Alternative Futures*. London: Pluto Books.

Rodríguez, I. and Armijos Burneo, T. (forthcoming, 2026) 'Decolonizing the self in environmental justice research: a conversation about our bodies as territories of knowledge, power and emotions', Paper presented at POLLEN 2026 Conference, Barcelona.

Rodríguez, S. (1987) 'Land, water, and ethnic identity in Taos', in Briggs, C.L. and Van Ness, J.R. (eds.) *Land, Water, and Culture: New Perspectives on Hispanic Land Grants*. Albuquerque: University of New Mexico Press, pp. 313-403.

Rodríguez, S. (1990a) 'Applied research on land and water in New Mexico: a critique', *Journal of the Southwest*, pp. 300-315.

Rodríguez, S. (1990b) 'Ethnic reconstruction in contemporary Taos', *Journal of the Southwest*, pp. 541-555.

Rodríguez, S. (2002) 'Procession and sacred landscape in New Mexico', *New Mexico Historical Review*, 77(1), p. 2.

Rodríguez, S. (2006) *Acequia: Water-Sharing, Sanctity and Place in Hispanic New Mexico*. Santa Fe: School of Advanced Research Press.

Rodríguez, S. (2014) 'Mutuality and the field at home', in *Mutuality: Anthropology's Changing Terms of Engagement*. pp. 45-60.

Rodríguez, S. (2017) 'History, memory, and querencia', in *The Oxford Handbook of Southwest Archaeology*. p. 193.

Rodríguez, S. (2022) 'Acequias: trust and hydrosocial territory', *Journal of the Southwest*, 64(4), pp. 582-615.

Rojo, D.A.L. (2023) 'Relaciones interétnicas, identidad y violencia en Nuevo México, una zona fronteriza multicolonial', in Terrazas y Basante, M. and Radding, C. (coords.) *Naciones entre Fronteras: Hacia una Historia de la Violencia en la Región Fronteriza México-Estados Unidos, Siglos XVIII-XXI*. México: UNAM, Instituto de Investigaciones Históricas.

Romero, L. (2025) 'La nueva resolana', *New Mexico Magazine*. Available at: https://www.newmexicomagazine.org/blog/post/resolana-tradition-new-mexico/ (Accessed: 26 March 2026).

Romero, S. (2023) 'New Mexico is losing a form of Spanish spoken nowhere else on Earth', *The New York Times*. Available at: https://www.nytimes.com/2023/04/09/us/new-mexico-spanish.html (Accessed: 26 March 2026).

Romero, S. (2021) 'Drought hits the Southwest, and New Mexico's canals run dry', *The New York Times*. Available at: https://www.nytimes.com/2021/07/13/us/acequias-drought-new-mexico-southwest.html (Accessed: 27 March 2026).

Romo, O. (2023) 'Bendición del agua', in Lamadrid, E.R. and Rivera, J.A. (eds.) *Water for the People: The Acequia Heritage of New Mexico in a Global Context*. Albuquerque: University of New Mexico Press, pp. xxx-xxxv.

Roos, C.I., Rittenour, T.M., Swetnam, T.W., Loehman, R.A., Hollenback, K.L., Liebmann, M.J. and Rosenstein, D.D. (2020) 'Fire suppression impacts on fuels and fire intensity in the western US: insights from archaeological luminescence dating in northern New Mexico', *Fire*, 3(3), p. 32.

Roos, C.I., Guiterman, C.H., Margolis, E.Q., Swetnam, T.W., Laluk, N.C., Thompson, K.F., Toya, C. et al. (2022) 'Indigenous fire management and cross-scale fire-climate relationships in the Southwest United States from 1500 to 1900 CE', *Science Advances*, 8(49), eabq3221.

Rosenberg, A., Guldan, S., Fernald, A.G. and Rivera, J. (eds.) (2020) 'Acequias of the southwestern United States: elements of resilience in a coupled natural and human system', 20210381115.

Roth, D., Zwarteveen, M., Joy, K.J. and Kulkarni, S. (2018) 'Water governance as a question of justice: politics, rights, and representation', in Boelens, R., Perreault, T. and Vos, J. (eds.) *Water Justice*. Cambridge: Cambridge University Press, pp. 43-58.

Santistevan, M. (2021) *Acequia Apocalypse* [Performance]. PASEO Festival, Taos, New Mexico.

Scoones, I. (2016) 'The politics of sustainability and development', *Annual Review of Environment and Resources*, 41(1), pp. 293-319.

Smith, L.T., Tuck, E. and Yang, K.W. (eds.) (2019) *Indigenous and Decolonizing Studies in Education*. New York: Routledge.

Snær Magnason, A. (2019) 'On time and water: an interview with Andri Snær Magnason', *Emergence Magazine*. Available at: https://emergencemagazine.org/conversation/on-time-and-water/ (Accessed: 26 March 2026).

Styres, S.D. (2011) 'Land as first teacher: a philosophical journeying', *Reflective Practice*, 12(6), pp. 717-731.

Sultana, F. (2009) 'Fluid lives: subjectivities, gender and water in rural Bangladesh', *Gender, Place and Culture*, 16(4), pp. 427-444.

Sultana, F. (2011) 'Suffering for water, suffering from water: emotional geographies of resource access, control and conflict', *Geoforum*, 42(2), pp. 163-172.

Sultana, F. (2015) 'Emotional political ecology', in *The International Handbook of Political Ecology*. Cheltenham: Edward Elgar Publishing, pp. 633-645.

Sultana, F. (2018) 'Water justice: why it matters and how to achieve it', *Water International*, 43(4), pp. 483-493.

Sultana, F. (2020) 'Embodied intersectionalities of urban citizenship: water, infrastructure, and gender in the global south', *Annals of the American Association of Geographers*, 110(5), pp. 1407-1424.

Sultana, F. (2021) 'Political ecology 1: from margins to center', *Progress in Human Geography*, 45(1), pp. 156-165.

Sultana, F. (2022) 'The unbearable heaviness of climate coloniality', *Political Geography*, 99, 102638.

Sundberg, J. (2014) 'Decolonizing posthumanist geographies', *Cultural Geographies*, 21(1), pp. 33-47.

Sundberg, J. (2017) 'Feminist political ecology', in *International Encyclopedia of Geography: People, the Earth, Environment and Technology*, Vol. 1(12). pp. 45-51.

Swyngedouw, E. (1999) 'Modernity and hybridity: nature, regeneracionismo, and the production of the Spanish waterscape, 1890-1930', *Annals of the Association of American Geographers*, 89(3), pp. 443-465.

Swyngedouw, E. (2004) *Social Power and the Urbanization of Water: Flows of Power*. Oxford: Oxford University Press.

Swyngedouw, E. (2014) 'Depoliticization ("the political")', in *Degrowth*. London: Routledge, pp. 90-93.

Tafoya, J. (2022a) *Indian in a Blanket* [Textile Weaving]. Taos, New Mexico.

Tafoya, J. (2022b) *New Mexican American* [Textile Weaving]. Taos, New Mexico.

Taos County and New Mexico Interstate Stream Commission (2016) *Taos Regional Water Plan*. Available at: https://www.taoscounty.org/192/Taos-Regional-Water-Plan (Accessed: 27 March 2026)

Taos County Board of Commissioners (2025) *Taos County Comprehensive Plan* (Resolution 2025-38). Taos County, NM. Available at: https://www.taoscounty.org/194/Comprehensive-Plan (Accessed: 27 March 2026).

Taos Valley Acequia Association (no date) *Glossary of Acequia Terms*. Available at: https://www.taosacequias.org/acequias (Accessed: 27 March 2026).

Taos Valley Acequia Association (2026) *Acequia Parciante Responsibilities*. Available at: https://www.taosacequias.org/single-project (Accessed: 27 March 2026).

Temper, L. (2019) 'Blocking pipelines, unsettling environmental justice: from rights of nature to responsibility to territory', *Local Environment*, 24(2), pp. 94-112.

Temper, L., Walter, M., Rodriguez, I., Kothari, A. and Turhan, E. (2018) 'A perspective on radical transformations to sustainability: resistances, movements and alternatives', *Sustainability Science*, 13(3), pp. 747-764.

Terrazas y Basante, M. and Radding, C. (coords.) (2023) *Naciones entre Fronteras: Hacia una Historia de la Violencia en la Región Fronteriza México-Estados Unidos, Siglos XVIII-XXI*. México: UNAM, Instituto de Investigaciones Históricas. (Serie Historia Moderna y Contemporánea, 80).

The Nature Conservancy (2024) *Future Forests: Living with Fire*. Available at: https://www.nature.org/en-us/about-us/where-we-work/united-states/new-mexico/stories-in-new-mexico/future-forests/ (Accessed: 26 March 2026).

Thomas, J.C. (2017) 'Cultivating culture: youth food movement in the Taos Pueblo Native American community', *Crossing Borders: A Multidisciplinary Journal of Undergraduate Scholarship*, 2(1), p. 4.

Town of Taos (2020) *Affordable Housing Plan – Town of Taos*. Available at: https://www.taosnm.gov/DocumentCenter/View/2637/Town-of-Taos-Affordable-Housing-Plan--FINAL-DRAFT (Accessed: 26 March 2026).

Treaty of Peace, Friendship, Limits, and Settlement between the United States of America and the Mexican Republic (Treaty of Guadalupe Hidalgo), 2 February 1848. Washington, DC: National Archives.

Trott, E. (2017) *Bodies of Water: Politics, Ethics, and Relationships along New Mexico's Acequias*. Doctoral dissertation, The University of New Mexico.

Trott-Jaramillo, E. (2024) 'Place, trust and trustworthiness in Nuevomexicana/o research and practice', paper presented at the Society for Applied Anthropology Annual Meeting, March, Santa Fe, New Mexico.

Trott-Jaramillo, E. (2020) 'Fluid kinship: race, power, and the hydrosocial order of water flow along New Mexico's acequias', *Environment and Planning D: Society and Space*, 38(4), pp. 718-735.

Truelove, Y. (2011) '(Re-)Conceptualizing water inequality in Delhi, India through a feminist political ecology framework', *Geoforum*, 42(2), pp. 143-152.

Truelove, Y. (2019) 'Rethinking water insecurity, inequality and infrastructure through an embodied urban political ecology', *Wiley Interdisciplinary Reviews: Water*, 6(3), e1342.

Truelove, Y. (2021) 'Gendered infrastructure and liminal space in Delhi's unauthorized colonies', *Environment and Planning D: Society and Space*, 39(6), pp. 1009-1025.

Trujillo, A. (2019) 'Exploring living heritage conservation: an ethnography of Taos Pueblo, New Mexico', *Ursidae: The Undergraduate Research Journal at the University of Northern Colorado*, 6(2), p. 11.

Trujillo, M. (2009) *The Land of Disenchantment: Latino Identities, Negations, and Transformations in Northern New Mexico*. Albuquerque: University of New Mexico Press.

Tsing, A.L. (2015) *The mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton University Press.

Tuck, E. and Yang, K.W. (2012) 'Decolonization is not a metaphor', *Decolonization: Indigeneity, Education and Society*, 1(1), pp. 1-40.

Turner, B.L., Tidwell, V., Fernald, A., Rivera, J.A., Rodriguez, S., Guldan, S., Ochoa, C., Hurd, B., Boykin, K. and Cibils, A. (2016) 'Modeling acequia irrigation systems using system dynamics: model development, evaluation, and sensitivity analyses to investigate effects of socio-economic and biophysical feedbacks', *Sustainability*, 8(10), p. 1019.

Tynan, L. (2020) 'Thesis as kin: living relationality with research', *AlterNative: An International Journal of Indigenous Peoples*, 16(3), pp. 163-170.

Tynan, L. (2021) 'What is relationality? Indigenous knowledges, practices and responsibilities with kin', *Cultural Geographies*, 28(4), pp. 597-610.

Ulloa, A. (2011) 'The politics of autonomy of indigenous peoples of the Sierra Nevada de Santa Marta, Colombia: a process of relational indigenous autonomy', *Latin American and Caribbean Ethnic Studies*, 6(1), pp. 79-107.

Ulloa, A. (2017) 'Perspectives of environmental justice from Indigenous peoples of Latin America: a relational Indigenous environmental justice', *Environmental Justice*, 10(6), pp. 175-180.

Ulloa, A. (2020) 'The rights of the Wayúu people and water in the context of mining in La Guajira, Colombia: demands of relational water justice', *Human Geography*, 13(1), pp. 6-15.

UNESCO World Heritage Centre (no date) *Taos Pueblo*, World Heritage List No. 492. Available at: https://whc.unesco.org/en/list/492/ (Accessed: 27 March 2026).

University of East Anglia Climatic Research Unit (2025) *HadCRUT Global Temperature Anomalies* [Map/Dataset]. Available at: https://crudata.uea.ac.uk/cru/data/t2025/ (Accessed: 27 March 2026).

University of New Mexico Earth Data Analysis Center and New Mexico Energy, Minerals, and Natural Resources Department, Energy Conservation and Management Division (no date) *New Mexico Climate Risk Map Tool* [Interactive map]. Available at: https://nmclimaterisk.org (Accessed: 27 March 2026).

USDA Natural Resources Conservation Service (2026) *Taos Powderhorn (1168) Site Information and Reports*. Available at: https://wcc.sc.egov.usda.gov/nwcc/site?sitenum=1168 (Accessed: 27 March 2026).

U.S. Census Bureau (2023) *2022 ACS Demographic and Housing Estimates* [Dataset]. Available at: https://data.census.gov (Accessed: 27 March 2026).

U.S. Geological Survey (2024) *Rio Hondo Near Valdez, NM: Streamflow Data, 2019–2024*, USGS Monitoring Location 08267500 [Dataset]. Available at: https://waterdata.usgs.gov/monitoring-location/USGS-08267500/ (Accessed: 27 March 2026).

Utton Transboundary Resources Center (2013) *Water Marketing*. Albuquerque: University of New Mexico School of Law.

Utton Transboundary Resources Center (2014) *Basic Water Law Concepts*. Albuquerque: University of New Mexico School of Law.

Valdez, J., Harms, P., Nelson, M. and Gagnon, A. (2024) *New Mexico Water Use by Categories 2020*, Technical Report 56. Santa Fe: New Mexico Office of the State Engineer.

Van Note, S. (2021) 'The rights of rivers', *Yes Magazine*. Available at: https://www.yesmagazine.org/environment/2021/12/02/rivers-right-to-flow (Accessed: 26 March 2026).

VeneKlasen, L. and Miller, V. (2002) 'Power and empowerment', *PLA Notes*, 43, pp. 39-41.

Vogler, E. (2024) *Critical Hydro-Spatial Practices: Art and Activism in the Terrain of Water*, LDAR 232G-01 [Course curriculum]. Providence: Rhode Island School of Design (RISD), School of Landscape Architecture.

Vos, J., Boelens, R., Venot, J.P. and Kuper, M. (2020) 'Rooted water collectives: towards an analytical framework', *Ecological Economics*, 173, 106651.

Walsh, C. (2005) 'Interculturalidad, conocimientos y decolonialidad', *Signo y Pensamiento*, 24(46), pp. 39-50.

Walsh, C. (2007) 'Shifting the geopolitics of critical knowledge: decolonial thought and cultural studies "others" in the Andes', *Cultural Studies*, 21(2-3), pp. 224-239.

Weber, M. (1971) 'The three types of legitimate rule', in Etzioni, A. (ed.) *Complex Organizations: A Sociological Reader*. New York: Holt.

Whaley, L. (2022) 'Water governance research in a messy world: a review', *Water Alternatives*, 15(2), pp. 218-250.

White, D.D., Elias, E.H., Thomas, K.A., Bradatan, C.E., Brunson, M.W., Chischilly, A.M., Enquist, C.A.F., Fisher, L.R., Froehlich, H.E., Koebele, E.A., Méndez, M., Ostoja, S.M., Steele, C. and Vanos, J.K. (2023) 'Ch. 28: Southwest', in *Fifth National Climate Assessment*. Washington, DC: U.S. Global Change Research Program.

Williams, A.P., Cook, B.I. and Smerdon, J.E. (2022) 'Rapid intensification of the emerging southwestern North American megadrought in 2020-2021', *Nature Climate Change*, 12(3), pp. 232-234.

Williams, A.P., Cook, E.R., Smerdon, J.E., Cook, B.I., Abatzoglou, J.T., Bolles, K., Baek, S.H., Badger, A.M. and Livneh, B. (2020) 'Large contribution from anthropogenic warming to an emerging North American megadrought', *Science*, 368(6488), pp. 314-318.

Wilmsen, C. (2007) 'Maintaining the environmental-racial order in northern New Mexico', *Environment and Planning D: Society and Space*, 25(2), pp. 236-257.

Wilson, D.V. (2015) 'Panorama del español tradicional de Nuevo México', *A Panorama of Traditional New Mexican Spanish*, pp. 012-06.

Wilson, N.J. and Inkster, J. (2018) 'Respecting water: Indigenous water governance, ontologies, and the politics of kinship on the ground', *Environment and Planning E: Nature and Space*, 1(4), pp. 516-538.

Wilson, N.J., Harris, L.M., Joseph-Rear, A., Beaumont, J. and Satterfield, T. (2019) 'Water is medicine: reimagining water security through Tr'ondëk Hwëch'in relationships to treated and traditional water sources in Yukon, Canada', *Water*, 11(3), p. 624.

Yates, J.S., Harris, L.M. and Wilson, N.J. (2017) 'Multiple ontologies of water: politics, conflict and implications for governance', *Environment and Planning D: Society and Space*, 35(5), pp. 797-815.

Yip, S.Y. (2024) 'Positionality and reflexivity: negotiating insider-outsider positions within and across cultures', *International Journal of Research and Method in Education*, 47(3), pp. 222-232.

Zaragocin, S. and Caretta, M.A. (2021) 'Cuerpo-territorio: a decolonial feminist geographical method for the study of embodiment', *Annals of the American Association of Geographers*, 111(5), pp. 1503-1518.

Zaragocín, S. (2018) 'La geopolítica del útero: hacia una geopolítica feminista decolonial en espacios de muerte lenta', in *Cuerpos, Territorios y Feminismos*. pp. 81-98.

Zeitoun, M., Lankford, B., Krueger, T., Forsyth, T., Carter, R., Hoekstra, A.Y., Taylor, R. et al. (2016) 'Reductionist and integrative research approaches to complex water security policy challenges', *Global Environmental Change*, 39, pp. 143-154.

Zimmerer, K.S. (2000) 'Rescaling irrigation in Latin America: the cultural images and political ecology of water resources', *Ecumene*, 7(2), pp. 150-175.

Zwarteveen, M., Kemerink-Seyoum, J.S., Kooy, M., Evers, J., Guerrero, T.A., Batubara, B., Biza, A., Boakye-Ansah, A., Faber, S., Cabrera Flamini, A. and Cuadrado-Quesada, G. (2017) 'Engaging with the politics of water governance', *Wiley Interdisciplinary Reviews: Water*, 4(6), e1245.

Appendix A

Original Research Questions Used to Guide Semi Structured Interviews

1. How do water-sharing practices, as a method and form of water governance, shape and sustain acequia systems in the face of external change?

a. What is the nature of acequia decision-making and water-sharing, and how are these influenced by climatic and political-economic change?

b. How do acequieros respond to these processes of change, and how does this influence identity and experience?

c. How do acequieros understand and frame resilience in relation to water-sharing?

Appendix B

Rio Hondo Administration Flow Sharing Agreement January 9, 2006

(Extracted Text from Agreement)

The endorsing parties from the Rio Hondo Acequias, identified below in Section 8, enter into the following agreement for the purpose of establishing a cooperative distribution of water supplies among users of water from the Rio Hondo in New Mexico. The Rio Hondo Acequias are from three communities with eight direct diversions from the Rio Hondo. The three communities and their respective acequias are:

Des Montes Community One direct diversion (Cuchilla Diversion) for the Revalse Ditch, Des Montes Ditch, Acequia del Llano Ditch and the Mariposa Ditch

Valdez Community Four direct diversions for the Acequia de San Antonio, Acequia de Los Prandos, Canoncito North Ditch and Canoncito South Ditch

Arroyo Hondo Community Three direct diversions for the Acequia de Atalaya, Acequia Madre del Llano and Acequia de La Plaza

1. Water Diversion Requirements

Water diversion requirements will be based on final adjudicated water rights and presented in tables in the Operations Manual. Nothing in this agreement authorizes any Rio Hondo Acequia or any other person to divert more than the diversion amounts that may hereafter be adjudicated by the Court. The purpose of this agreement is to amicably divide flows of the Rio Hondo among the Rio Hondo Acequias, particularly when the supply is inadequate to serve all water rights on the river.

2. Sharing of Available Supply

The Parties agree that they will share according to a percentage of the available supply. The available supply will be based on the sum of the stream flow measured at the Valdez gage on the Rio Hondo and the gains and losses on the Rio Hondo from the Valdez gage to just above the first Arroyo Hondo diversion.

The endorsing parties agree that the available water supply shall be shared between the three Communities as follows: 41% for Des Montes, 22% for Valdez, and 37% for Arroyo Hondo. Each ditch will be responsible for demonstrating that their diversions do not exceed the diversion amount of their final adjudicated water rights.

The endorsing parties agree to the installation by the communities of weirs and gages equipped to measure and record the diversions at each of their head gates, downstream from the head gate

desagues, at each ditch and such additional gages as are required to calculate gains and losses throughout the system. The communities will install equipment that allows access to the flow data by all users. The Interstate Stream Commission agrees to assist the Communities in developing accurate estimates of water demand, as funding is available.

3. Management of Sharing of Available Supply

The endorsing parties agree to appoint a water management committee known as the Los Mayordomos de Comunidad (LMC) who will oversee the measurement of flows at the Valdez gage and adjust the head gates of each of the eight direct diversions from the Rio Hondo to a total flow rate for each community equal to the percentage of available supply listed in paragraph 2 above. The LMC will be comprised of one member from each of the three communities (Des Montes, Valdez and Arroyo Hondo). The LMC will be guided by a Water Operations Manual, as developed by the Rio Hondo Commissioners and signed on August 30, 2005 or through future revisions, in making adjustments to the head gates.

When a Party does not divert its share of the available supply, that supply may be diverted by the other parties in proportion to their remaining percentage of available supply.

4. Dispute Resolution

The endorsing parties agree to cooperate fully in the implementation of this Water Sharing Agreement and to abide by the limitations provided herein to the extent of their authority and ability. In the event that a dispute should arise regarding the implementation of the Water Sharing Agreement or the performance of an endorsing party under the Agreement, the endorsing parties commit to resolve such dispute in a cooperative, timely and effective manner. If a dispute involves only endorsing parties and cannot be resolved among them, a mediator will be retained to hear and facilitate resolution of the dispute.

5. Cooperative Activities

The parties may request the assistance and cooperation of the Taos Valley Acequia Association and others, such as the Interstate Stream Commission, Office of the State Engineer, US Geologic Survey and US Bureau of Reclamation, to improve their ability to manage diversions as flow conditions change in the Rio Hondo.

6. Term

The principles governing this Water Sharing Agreement are final. However, the percentage sharing of available supply as presented in paragraph 2 above or the Operations Manual may be revised in the future to accommodate the final diversion amounts adjudicated by the Court, transfers or loss of water rights through abandonment or forfeiture, or other changes in water rights made pursuant to state law.

Stream flow and ditch measurements conducted following the installation of gaging equipment may demonstrate that the percentage distribution of flow can not be achieved or is not equitable,

thus creating a basis for revision of the agreement. The parties to this agreement may review streamflow and diversion data two years after gages are installed, then after three years, and every five years thereafter, to assess the functionality and equitability of the sharing agreement. At that time, if a party feels the streamflow and diversion data indicates the current sharing percentages are not attainable or inequitable, the party may request an adjustment in the sharing agreement. The Interstate Stream Commission agrees, as funding is available, to provide technical support and facilitation of any evaluation of or disagreement over streamflow data or percentage sharing.

Any adjustment in the percentage sharing of available flow is only by unanimous consent of all Communities. The Parties agree to not unreasonably withhold approval of a change in the sharing of available supply.

7. Waiver of Liability

No party endorsing this Water Sharing Agreement shall hold another endorsing party responsible or liable for any damages or claims that may occur or arise as a result of implementing the Agreement presented herein, including as a result of analyses, decisions or operations made under the Agreement; provided that the other endorsing party fulfills its commitments and obligations as expressed herein. In the event that an endorsing party does not fulfill its commitments and obligations as expressed herein to the detriment of other endorsing parties and the matter cannot be resolved through dispute resolution as provided in section 4 above, the endorsing parties reserve the right to seek appropriate remedies, if any, under applicable law. An endorsing party's remedies shall not be limited to the enforcement of any commitment or obligation as expressed in the Agreement provided herein and may include remedies that would be available to any party that has not endorsed the Agreement.

8. Endorsing Parties

The following entities are endorsing parties to this Water Sharing Agreement herein:

(Names Removed from Text)

Appendix C

Examples of unified priority dates between and within different acequias, in order to avoid a priority call within the acequia itself (and/or between neighboring acequias).

Exhibit A
Acequia del Llano

Individual Subfile Priority Dates	
Subfile Number	**Priority Date**
2.55	August 1815
2.56	August 1815
2.57	August 1815
2.58	August 1815
2.58A	August 1815
2.58B	August 1815
2.58C	August 1815
2.58D	August 1815
2.59B	August 1815
2.59C	August 1815
2.62	August 1815
2.64A	August 1815
5.15	August 1815
5.16	August 1815
5.17	August 1815
5.18	August 1815
5.19	August 1815
5.20	August 1815