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Negotiating Contentious Claims to Water:

Shifting Institutional Dynamics for the Allocation of Water
Between the Eel and Russian River Basins

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Introduction and Problem Statement¹

“In the American West, history has been a succession of struggles over dominion, of claims and counterclaims on the legitimate possession and use of resources bound up with the land, subsoil, water, air, and the natural environment generally, and, in particular, with the social groups that won and lost in the struggle.”

John Walton²

“California’s rich history has always been tied to its water supply.”

Arthur Littleworth and Eric L. Garner³

In California, the control of water has shaped the destiny of the land and its inhabitants.⁴ Today, when Californians require that water satisfy an increasing array of diverse values, it is essential to understand how control over water is achieved and maintained, how strategies to manage water become defined, and how these strategies influence water allocations.

Despite often held assumptions of local rights to water, a central theme in California since the adoption of the doctrine of prior appropriation has been the diversion of water from its originating watershed to an out-of-origin area. In a state where control over water represents security, power and wealth,⁵ inter-basin diversions are highly contested, and there are continuous debates over water rights and the consequences and valuation of different allocation regimes.⁶ Exemplifying these ongoing conflicts over water, the Potter Valley Hydropower Project (PVP), diverting Eel River water into the Russian River since 1908, serves as a pivotal point of contention where two associated regions with multiple interests battle over claims to Eel River water.

This research utilized an in-depth study of negotiations over the Eel – Russian River inter-basin water diversion to explain *why particular groups achieve, maintain and lose control over a region’s water, and how shifting power relations affect water allocation decisions.*

¹This research resulted in a Ph.D. dissertation; Ruth Langridge (2003) *Negotiating Contentious Claims to Water: Shifting Institutional Dynamics for the Allocation of Water Between the Eel and Russian River Basins*, UC Berkeley.

² John Walton (1992:5) *Western Times and Water Wars*.

³ Arthur L. Littleworth and Eric L. Garner, (1995:vii) *California Water*.

⁴ See Gottlieb (1988) and Worster (1985)

⁵ Helen Ingram has written extensively and powerfully on the meaning and politics of water in the west, see for example Helen Ingram, 1990, *Water Politics: Continuity and Change*. University of New Mexico Press: Albuquerque.

⁶ Joseph Sax frames the debate as, “Should water stay “where it is to be treated as an asset of the local people, or to protect natural values *in situ*? Or is it an asset of some larger community...” in Sax, Joseph L., Robert H. Abrams and Barton H. Thompson, Jr. (1991:263).

Objectives

The objectives of this research were to establish a theoretical framework to explain *why particular groups achieve, maintain and lose control over a region's water, and how shifting power relations affect water allocation decisions*, and to examine empirical evidence to support this framework through a case study analysis. The overall goal was to expand the theoretical and empirical understanding of why control over resources changes over time, and the different conditions under which the interactions between institutions and social movements produce policy change

Research focused on:

- I. Establishing a theoretical framework to explain policy change
- II. Grounding the framework in the history of an inter-basin water diversion.

The following questions specific to the case study were examined:

Since the construction of the Potter Valley Project in 1908:

- How were legitimate claims to Eel River water diverted by the Potter Valley Project established and how have they been redefined?
- How were institutional relationships affecting the management of this water established, how did they facilitate control over and access to this water, under what conditions were they altered, and with what impacts?
- What groups challenged legitimate claims to this water, and under what conditions did they succeed in altering policy?
- What improvements are likely to enhance the resilience of institutional arrangements that will both respond to the changing water needs and goals of the Eel and Russian River watersheds and that will create and maintain a fair and enduring allocation arrangement?

Procedures

The methodology utilized for this research examined the conditions and circumstances under which control over water occurred, with the goal of creating a theoretical and empirical understanding of when, how and why the interactions between institutions and opposition movements produce policy change. Research was conducted over a two-year period beginning July 2000. Methods included a combination of archival and field research.

Archival Research

Archival sources were used to trace the evolution of relevant legal doctrines and institutions under which legal claims were made for Eel River water after the project's construction. Included were changes in case law and statutory law, as these laws both shaped, and were shaped by, shifting ideological orientations towards water management over the century. The development of state, federal, and local institutions and interests affecting the distribution of water between the two regions were examined. Data was

drawn from newspapers, interviews and historical documents, as well as biological and hydrological information already accumulated by researchers, including the trends and status of anadromous salmonids. Historical societies and private collections provided information on continuous efforts by local interests to effect changes in the water allocation regime between the two rivers.

Archival material was gathered from the following sources:

- Special archival collections, including the California State Library and Historical Society and the Bancroft Library at UC Berkeley, that contain historical information on the Potter Valley Project and the development of communities in the two river basins. The Water Resources Library at UC Berkeley that contains collections of documents on the PVP, and information on federal, state and local institutions as well as individuals and groups involved with water allocation in the two basins. These included reports by the Federal Energy Regulatory Commission, the U. S. Army Corps of Engineers, the U. S. Fish and Wildlife Service, and the California Department of Water Resources. Also examined were reports by consultants such as Steiner Environmental Consulting that contained ecological and hydrological data, as well as books and articles that detailed the history of water management in California.
- City and County Historical Societies that had information on local community development, and state and county historical archives that contained legislative minutes, correspondences, and records of legislation.
- Courthouse records that contained disputes over claims to water in the two basins.
- Documents and correspondence from individual government agencies. These included the Sonoma County Water Agency, North Marin Water District, Mendocino County Water Agency, the Redwood County Water District, and Potter Valley Irrigation District, Mendocino Inland Water and Power Commission, Sonoma County Water Contractors, California State Water Resources Control Board, California Department of Water Resources, National Marine Fisheries Service, Federal Energy Regulatory Commission, U.S. Fish and Wildlife Service, US Army Corps of Engineers, US Forest Service, CA Fish and Game, and Pacific Gas and Electric Company. These were used to chart: the general plans for development of the State's water resource and for the Eel and Russian River Basins, specific legal claims to Eel and Russian River water affected by the PVP, citizen protests to claims, permit filings, and the decision making processes of these agencies with respect to water allocation and use.
- Local newspapers, including The Press Democrat and the Sonoma County Independent, Santa Rosa, the Marin Independent Journal, the Dispatch Democrat, Mendocino County, and the Humboldt Times, Humboldt County.

Field Research

Field research included the use of semi-structured interviews and oral histories with key informants from:

- Government Agencies including the Federal Power Commission, the US Army Corps of Engineers, the State Water Resources Control Board, the National Marine Fisheries Service, the US Forest Service, the U. S. Fish and Wildlife Service, and the California Department of Fish and Game;

- Water Institutions including the Sonoma County Water Agency, the North Marin Water District, the Mendocino County Water Agency, the Redwood County Water District, and the Potter Valley Irrigation District;
- The Round Valley Indian Tribes;
- Sonoma, Mendocino, Humboldt, Lake and Marin Counties, and local cities;
- Agricultural Groups and business organizations including PG&E;
- Environmental Groups including California Trout, Northcoast Environmental Center, Friends of the Eel River, Friends of the Russian River, the Russian River Environmental Forum; and Watershed Councils.

In addition, research included participant observation at meetings including FERC hearings, Sonoma County Water Agency Section 7 Consultation Hearings, Eel Russian River Commission meetings, Sonoma County Water Agency Water Contractor meetings, Town Hall Coalition meetings, Salmonid Restoration Federation meetings, and watershed group meetings. This information was used together with interviews and archival information to construct a narrative of the Project and to analyze shifting institutional relationships and strategies of access and control embodied in the ongoing process of negotiating claims.

Results

*Case Study Summary*⁷

The setting is Northern California and two watersheds connected by the Potter Valley Hydropower Project (PVP). In 1908, the completion of Cape Horn Dam (Van Arsdale Reservoir)⁸ on the upper Eel River that diverted water through a tunnel into a 4,000 kilowatt power plant in the town of Potter Valley in the Russian River Basin,⁹ resulted in the diversion 160,000 afa of Eel River water into the Russian River. The hydropower project created a linkage between the two watersheds that continues to have dramatic consequences today. Constructed by the Snow Mountain Water and Power Company to provide electricity to the Russian River watershed town of Ukiah, the project reflected a clear alignment of Progressive Era values and institutional objectives for development of the State's water resource. Law, policy, and institutions supported the positive economic benefits gained by the increased energy output, agricultural production, and urban development that extended throughout the Russian River watershed from the Potter Valley Irrigation District in Mendocino County to the Santa Rosa plain in southern Sonoma County, and eventually to the North Marin County Water District.¹⁰

⁷ See Ruth Langridge (2002) "Changing Legal Regimes and the Allocation of Water Between Two Northern California Watersheds," for a discussion of the legal issues in the negotiations.

⁸ In 1921 Scott Dam was added diverting the entire flow of the Eel River up to the capacity of the tunnel except for a minimum of 2 cubic feet per second for downstream users Department of Water Resources (1976). Water that passed through the powerhouse was then "abandoned" into the Russian River.

⁹ Today the power plant is expanded to a present installed capacity of 9.4 megawatts (FERC 1999).

¹⁰ State of California Resources Agency (1976).

However, the project was opposed by communities in the Eel River watershed. In 1928, Snow Mountain Power and Water applied to the state for appropriative water rights for hydropower and irrigation,¹¹ and in 1930, the Project was purchased by Pacific Gas and Electric Company (PG&E) who applied to the Federal Power Commission for a 50 year license for the project. Eel River communities protested, stating that they were “entitled to the use of their own natural resources to assist in their future development.”¹² Eel River watershed attributes, including the former extensive Chinook salmon and steelhead fisheries and the general recreation use of the river, declined over the years as Eel water was diverted to the Russian River basin.¹³

By the 1970s, these protests were bolstered by new and re-emergent interests, including the Round Valley Tribes and local Eel and Russian Basin grassroots environmental groups, who pushed for a modification of the diversion that would increase flows down the Eel River. However in the Russian River watershed, the construction of the PVP and its diversion led to reliable access to a new source of water. The water diversion facilitated both the development of agriculture, resort and urban communities, and the growth of the Sonoma County Water Agency, who by 1960 controlled the allocation of most of the diverted water now stored in Lake Mendocino reservoir in the Russian River watershed.¹⁴ By the early 1970s, concerned that their rights to the diverted water were contingent on the presence of the diversion, these Russian River interests were strongly promoting policies to keep the diversion flowing, including the purchase of the project.¹⁵

When the project came up for re-licensing by the Federal Energy Regulatory Commission (FERC) in 1972, a key stipulation was that PG&E initiate a study of ways to improve low-flow conditions in the Eel River so as to assure the continuation and maintenance of the declining anadromous fishery in the upper Eel River in Lake and Mendocino Counties. This involved reconsidering the stream flow regime of the project, and became the pivotal point for more extended negotiations over access to and control over the distribution of water between the two watersheds.

For 10 years the PVP operated under annual licenses from the Commission and in 1983, a 50-year license was issued¹⁶ requiring a ten year study of the effects of the project

¹¹ In 1922 the Federal Power Commission issued a 50 year license for the entire project. In 1926, the Potter Valley Irrigation District entered into a contract with Snow Mountain Water and Power Company for storage rights in Lake Pillsbury of 4,908 acre-feet per year for hydropower (DWR 1976).

¹² Cal. Division of Water Rights, (January 8, 1926:9).

¹³ The only requirement was that 2 cfs was required to return to the Eel River downstream of the dams.

¹⁴ In 1958 the U.S. Army Corps of Engineers completed Coyote Dam on the Russian River forming Lake Mendocino to regulate inflow from the PVP. An important legal note is that the Sonoma County Water Agency only receives appropriative rights to Lake Mendocino water. Its application to the CA State Water Resources Control Board for direct rights in Lake Pillsbury was turned down. As a result of the court decision in *Stevens v. Oakdale Irrigation District*, 90 P.2d 61 (1939), should the owner of the PVP decide to stop the inter-basin diversion, Russian River watershed groups now receiving this water would not have a legal claim to keep it flowing.

¹⁵ Butchert (1970), Federal Power Commission (1972)

¹⁶ Federal Energy Regulatory Commission (Oct. 4, 1983). The flow regime was temporarily modified at this time through a settlement agreement that required minimum releases to the Eel River in normal years of

flow regime on anadromous salmonids.¹⁷ This flow regime is still under contention today. However, almost 100 years after the project was constructed, in a significant 2002 policy change, FERC agreed to implement a National Marine Fisheries Service (NMFS) Biological Opinion under the Endangered Species Act (ESA) that will increase flows in the Eel River below the project's dams to protect endangered salmon.¹⁸ In addition, the most recent negotiations included a dramatic new proposal, the actual decommissioning of the project. Thus, despite initial significant setbacks, today communities protesting the diversion have greater parity in negotiations over the diverted water, and a new allocation policy divides the water more equitably, providing more water for the Eel River and its communities. This research integrated ideas from social movement theory and historical institutionalism to explain why control over the diverted Eel River water shifted over the century.

Framework

Integrating ideas from historical institutionalism and social movement theory, a new theoretical framework was developed to explain how institutional shifts occurred, how citizen groups both influenced and responded to these shifts, and how this iterative interaction affected policy change. The framework is summarized as follows:

Citizen groups that are successful in lobbying for change can serve as catalysts for the creation of new institutions with new mandates. This expanded polity will consist of layers of rules, each layer derived from a combination that includes for example, judicial precedent, new legislation, administrative pronouncements and budgetary decisions, and is shaped by a unique temporal underpinning reflecting specific historical contingencies. This can result in conflicts over principles, procedures and jurisdictions, and create tensions within the institutional regime that provide new openings or political opportunities, for citizen action, both locally and on a national scale. Groups that are able to take advantage of such political opportunities to challenge authority can then represent their claims and, if successful, potentially affect changes in policy that lead to further institutional modifications. This iterative interplay between social protesters and power holders, often conducted at local scales, is embedded in the broader social and political landscape that, as it evolves over time, also affects the perception and framing of ideological principles and political action for both elites and challengers.¹⁹

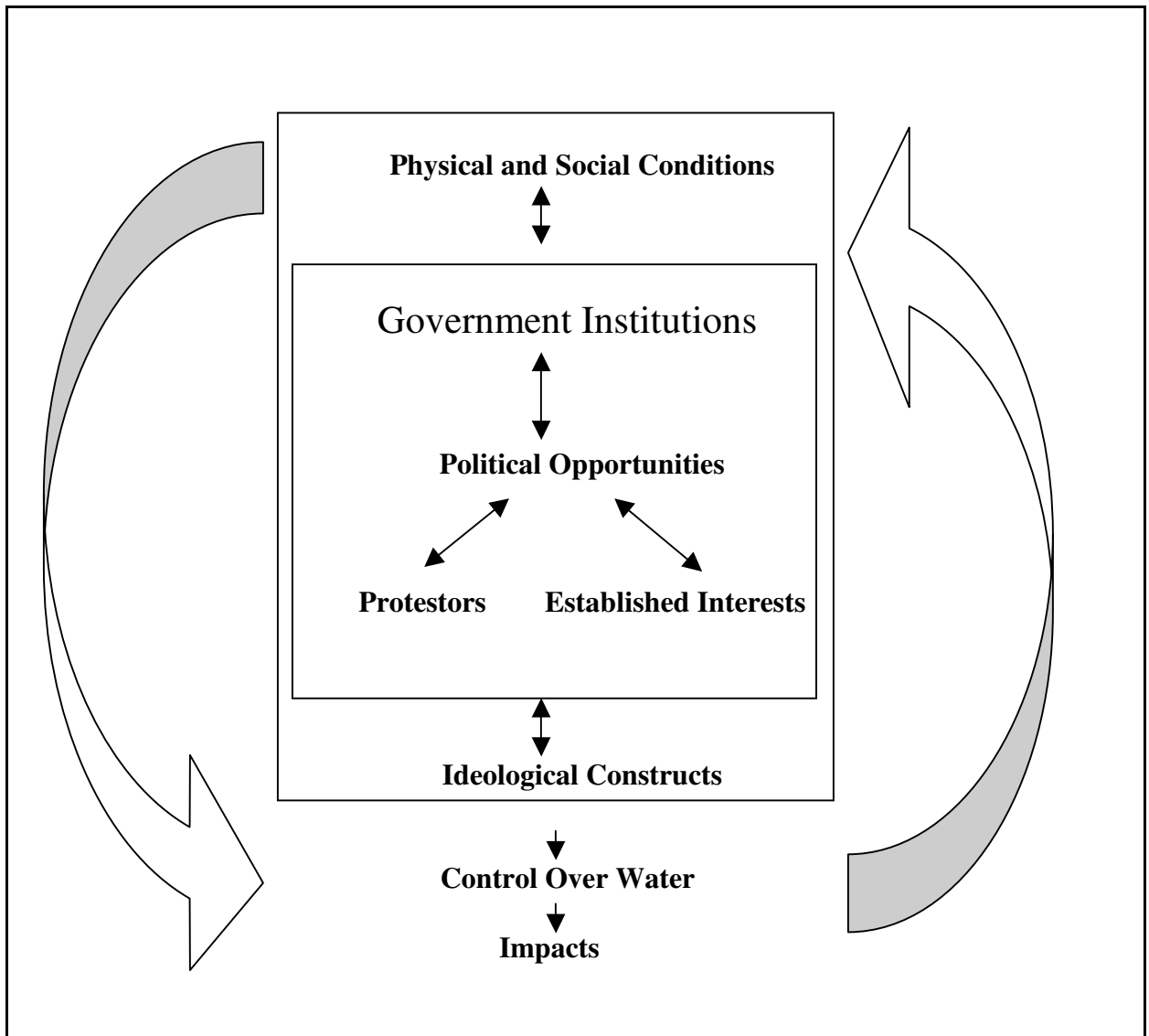
between 5 cfs during the summer months to 100 cfs in the fall, winter, and early spring months (FERC 1999).

¹⁷ Article 39 of the license required the study, FERC Draft EIS Project 77-110 (1999).

¹⁸ National Marine Fisheries Service (November 2002) "Biological Opinion for the Proposed License Amendment for the Potter Valley Project," in (FERC No. 77-110). ESA Section 7 Consultation . Listings under ESA are: Central California Coastal Evolutionary Significant Unit (ESU) of Coho Salmon , 61 Fed. Reg. 56,138 (Oct. 31, 1996); Southern Oregon/Northern California Coast ESU of Coho Salmon, 62 Fed. Reg. 24,588 (May 6, 1997); California Coastal ESU of Chinook Salmon , 64 Fed. Reg. 5,039 (Sept. 16, 1999); Northern California Steelhead ESU, 65 Fed. Reg. 6,960 (Feb. 11, 2000).

¹⁹ This framework integrates ideas drawn from the theoretical literature in political science (Orren and Skowronek 1995, Thelen and Steinmo 1992) and in social movement theory (McAdam, Tarrow and Tilley 2001, Tarrow 1998).

Theoretical Framework



This framework proposes that policy change, rather than occurring as a strong “punctuation,”²⁰ as a rational process by institutional actors, or as an incremental “muddling through,”²¹ is rather the product of a gradual evolutionary process where the accumulated tensions between a complex array of institutions and institutional actors can over time produce new political opportunities. Challengers with both financial and ideological resources can then utilize such sites to mobilize and effect policy change. This synergy between shifts in the institutional regime, and the ability of groups to take advantage of the resulting political opportunities, offers an explanation for the change in both the decision making process and the allocation of water between the Eel and Russian

²⁰ Stephen Krasner (1984)

²¹ Charles E. Lindblum (1986) “The Science of Muddling Through”

River watersheds. The result will be more water in the Eel River and a greater emphasis on the restoration of both rivers and their fisheries.

Conclusion

Issues of water allocation have always been nested in broader societal debates and early legal regimes reflected both the dominant ideology of development that existed in the United States at that time and the legacy of conquest that impeded tribal rights. For over 50 years, increased water supply for economic development in the more populated Russian River communities dominated the political agenda at the expense of Eel River communities and the declining fisheries.²² In addition, during these early years the Round Valley Tribes, like Indian tribes throughout the west, had limited resources to lobby for their rights to water and fish.²³

As political culture evolved over the century, however, environmental protection, participation and equity in water allocation decisions, and the legitimacy of tribal rights gained in importance. These shifts ushered in a more complex legal regime and new regulations and case law contributed to a proliferation of agencies with overlapping mandates and jurisdictions. More than the dynamic interrelationship between the states and the federal government often discussed under the heading of “federalism,” growing agency pluralism²⁴ produced increasing tensions between multiple agencies within each level of government as well as between levels. Early in the century, the state had sole responsibility for deciding whether to issue a license to PG&E to appropriate water, and the FPC was the dominant federal agency establishing the conditions for PG&E’s PVP hydropower license. Today a plethora of agencies with new directives contributes to these decisions. This case study demonstrates that agency pluralism contributed to increased entry points for parties that were previously disregarded in water allocation decisions.

Co-evolving with this shift in the institutional regime, the Round Valley Tribes and new environmental groups in both watersheds, increased their resources and benefited from the rise of both national and global indigenous rights and environmental groups. In the negotiations over the diverted Eel River water, the Round Valley Tribes, environmental groups, and Eel River watershed communities are now achieving greater parity at the negotiating table.²⁵ The synergy between agency pluralism and increased resources for previously disregarded groups has resulted in the participation of a wider

²² Cal. DWR (1976:38-39) Bulletin No. 105-5, “Eel-Russian River Streamflow Augmentation Studies.”

²³ See, for example, Wendy Nelson Espeland (1998), for an account of the struggle of the Yavapai People to sustain their fishing culture through years of abuse.

²⁴ See Blumm, Michael C. & Viki A. Nadol, (2001:84).

²⁵ A recent trend has been the proliferation of “outside-the-box” local concern with water issues as manifested in the numerous watershed restoration and anti-growth groups who are already affecting negotiations. There are also gaps in representation where some groups have no voice in the decision-making process. For example, agricultural laborers who make up an increasing portion of Sonoma and Mendocino Counties’ population and who are affected by both agricultural and water decisions have not been represented during the last decade. So there is still no legal or institutional mechanism that serves to integrate all parties into water negotiations.

group of interests in the negotiations for the diverted water, and a more equitable decision-making process.²⁶

While balancing the needs of all communities affected by the diversion is likely to remain central in future negotiations, today control over the diverted water is still contested. Although more parties are now represented in the negotiations, most remain focused on their own requirements and continue to strategize on ways to control the allocation of the diverted water. To achieve a stable and just settlement, all parties need to expand their boundaries of concern to encompass the two linked watersheds, and they should explore a water balance model that incorporates conjunctive use of surface and groundwater in both basins. The existing Eel-Russian River Commission, consisting of representatives from the five counties bordering the two rivers, has been a useful forum for bringing some of the parties together in discussion. A broader membership and a neutral facilitator/chair could strengthen the Commission by creating stronger vertical linkages between county, state and federal representatives and local groups. This could potentially turn the forum into an effective arena to research and negotiate an equitable and enduring allocation regime.

To achieve a stable and just settlement, all parties need to expand their boundaries of concern to encompass the two linked watersheds, and they should explore a water balance model that incorporates conjunctive use of surface and groundwater in both basins.

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²⁶ Blumm and Nadol (2001:85) have proposed that this pluralism has an additional potential to ensure that in the future FERC will re-license only those projects whose net social benefits exceed their net social costs. This new focus could produce not only more efficient hydroelectric decisions, but also improved water quality, fish and wildlife habitat, and recreation areas.

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