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Water Dispute Resolution in the West: Process Elements for the Modern Era in Basin-Wide Problem Solving

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WATER DISPUTE RESOLUTION IN THE WEST:
PROCESS ELEMENTS FOR THE MODERN ERA
IN BASIN-WIDE PROBLEM SOLVING

BY
BARBARA COSENS*

Growing urban water demand, recent recognition of tribal water rights, and needs for critical aquatic habitat in the face of the archaic law governing water allocation are driving people in the western United States to seek alternative methods to resolve water allocation disputes. The current ad-hoc and locally driven approach to negotiation of basin-wide water issues runs the risk of overlooking broader interests. Whereas water use is local and drives local economies, the continued viability of our water resources and the legacy we leave to future generations in water infrastructure, social stability, and environmental amenities is national in scope. To ensure consideration of these broader interests, criteria for the evaluation of processes to negotiate the allocation of water and the resulting outcomes are necessary and can be defined as: efficiency, in terms of the cost of resolution; fairness in allocation of the benefits of use of the water resource; and durability as defined by the sustainability of both the institutions established to manage water and enforce water rights and the environmental health of the riparian system. Application of these criteria to the Milk River Basin of Montana and the Truckee River Basin of California and Nevada indicates that the Milk River negotiations provided an efficient process resulting in a much fairer allocation of the benefits of use of the water resource and established durable institutions for management and enforcement of water rights. Nevertheless, the Milk River process

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may not result in a sustainable use of the water resource because solutions remain heavily reliant on state and federal subsidy and may do nothing to restore the environmental integrity of the aquatic system. In contrast, due to a shifting of power through litigation, negotiation on the Truckee River took place against a backdrop that gave equal voice to restoration of aquatic health. Nevertheless, institutions established to implement the Truckee River agreement may not provide sufficient flexibility to adapt to future change in water supply and demand, and the absence of a key party from the table during final negotiations may render the solutions vulnerable or at least more difficult to implement. The recommended criteria for evaluation attempts to span the gap between local and national objectives, between the reality that water use is local and drives local economies, and the fact that the continued viability of our water resources and the legacy we leave to future generations in water infrastructure, social stability, and environmental amenities is truly national in scope. In spanning that gap, the growing use of negotiation may herald a new era for water distribution and management in the West.

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I. INTRODUCTION

The allocation, management, and development of water in the West are dynamic. Yet the basic law governing allocation of western water has not changed substantially in over one hundred years, and is steeped in archaic concepts fashioned to address situations no longer relevant.¹ Why this dichotomy between reality and the law? In short, the resource itself, our demands on it, and our view of its value are changing at a rate that outpaces the law's ability to adapt. Supply fluctuates on both a seasonal and a long-term basis. Estimates indicate that 1.2 billion people globally experience a shortage of potable water, and given current population trends that number will only increase.² Many Indian reservations in the United States, like the developing world, lack potable water.³ In the West, growing urban demand, recent recognition of tribal rights, and needs for critical habitat place increasing strain on this scarce resource.⁴

To meet these needs in the face of growing concern with the cost of water development on the integrity of ecosystems and the federal pocketbook, the focus in water policy both globally and in the West has moved away from the twentieth century emphasis on water development and toward improvements in management and efficiency.⁵ Yet many of these efforts in the western United States run headlong into the archaic law governing water allocation. Western water policy makers and practitioners find themselves in a constant struggle to introduce sufficient flexibility into the law to address changes in supply, demand, and values.⁶ In the effort to address modern problems, negotiation plays an

¹ See, e.g., CHARLES F. WILKINSON, *CROSSING THE NEXT MERIDIAN: LAND, WATER, AND THE FUTURE OF THE WEST* 25 (1992) (referring to prior appropriation as a "lord of yesterday").

² Arun P. Elhance, *Water Scarcity in the Third World*, in *HYDROPOLITICS IN THE THIRD WORLD: CONFLICT AND COOPERATION IN INTERNATIONAL RIVER BASINS* 8 (1999).

³ See, e.g., MSE-HKM ENGINEERING, *CHIPPEWA CREE TRIBE ROCKY BOY'S INDIAN RESERVATION: MUNICIPAL, RURAL AND INDUSTRIAL (MR&I) WATER SUPPLY SYSTEM NEEDS ASSESSMENT* 31 (1996) (stating that the Chippewa Cree Tribe Rocky Boy's Indian Reservation municipal water supply has been subject "to decreasing yields and/or poor water quality").

⁴ Charles F. Wilkinson, *Western Water Law in Transition*, 56 U. COLO. L. REV. 317, 321-22 (1985).

⁵ Peter H. Gleick, *The Changing Water Paradigm*, in *THE WORLD'S WATER 1998-1999: THE BIENNIAL REPORT ON FRESHWATER RESOURCES* 5, 9-10 (1998).

⁶ See, e.g., LAWRENCE J. MACDONNELL, *FROM RECLAMATION TO SUSTAINABILITY: WATER, AGRICULTURE, AND THE ENVIRONMENT IN THE AMERICAN WEST* 232 (1999) (discussing the problem created by a rigid legal system that has not kept pace with change in water-use preferences); Joseph W. Dellapenna, *The Importance of Getting Names Right: The Myth of Markets for Water*, 25 WM. & MARY ENVTL. L. & POL'Y REV. 317, 324-25 (2000) (discussing the growing need to reallocate water from agricultural to urban and environmental uses); David H. Getches, *From Askhabad, to Wellton-Mohawk, to Los Angeles: The Drought in Water Policy*, 64 U. COLO. L. REV. 523, 523 (1993) ("The goals of water policy tend to be confined to respecting existing rights and rewarding development. Western states are lately realizing that economic stability, human health, ecological balance, and survival of urban and rural communities all have a nexus in water."); Janet C. Neuman, *Adaptive Management: How Water Law Needs to Change*, 31 *Envtl. L. Rep.* 11,432, 11,434 (*Envtl. L. Inst.*) (Dec. 2001) (discussing the need to introduce flexible "adaptive" management into the prior appropriation system).

increasingly important role. Collaborative processes aimed at resolving local issues are taking place in many of the water basins in the West. Frequently, what began as a focused process to settle, for example, tribal water right claims, has expanded to cover basin-wide issues. This expansion is a natural result of the fact that despite jurisdictional barriers, use of water in one part of a basin affects its availability in other parts. The current ad hoc approach to settlement has given rise to a variety of processes, thus providing a fertile ground for testing concepts for change in water dispute resolution.⁷ The growing use of negotiation to solve problems not adequately addressed by existing law may very well herald a new era for water distribution and management in the West, one tailored to the problems faced by specific water basins and structured around governance that mimics basin boundaries.⁸

This Article is the final installment of a three-part series examining water dispute resolution in the West.⁹ Part I explored one negotiated water rights settlement in the Milk River Basin in Montana, where the threat of development of senior tribal water rights and growing frustration over water distribution inefficiencies brought people to the table to negotiate a basin-wide approach to distribution and management of water. Part I concludes that two of the measures agreed to in the Milk River negotiations—establishment of an intergovernmental committee to coordinate the management of water across jurisdictional boundaries and development of a program to bank water for redistribution during drought—are major steps in efforts to introduce both basin-wide governance and flexibility in water management. In addition, the Milk River negotiations reversed the inequity brought on by federal emphasis on development of water surrounding an Indian reservation at the expense of tribal water rights.

Part II moved West to the Great Basin, where the threat of reallocation of water to meet the needs of endangered species and growing urban needs in the Truckee River Basin of California and Nevada

⁷ See, e.g., David H. Getches, *The Metamorphosis of Western Water Policy: Have Federal Laws and Local Decisions Eclipsed the States' Role?*, 20 STAN. ENVTL. L.J. 3, 5–6 (2001) (“These [locally-driven] approaches . . . can serve as laboratories for incubating proposals for systematic change at the state level.”); see also, A. Dan Tarlock, *Reconnecting Property Rights to Watersheds*, 25 WM. & MARY ENVTL. L. & POL’Y REV. 69, 75 (2000) (“Watershed management is once again in vogue but in a more decentralized, ad hoc, stakeholder-driven form than previous hydrologic governance efforts.”).

⁸ “Negotiation” in this article refers to a voluntary process used by parties to resolve disputes without the imposition of a solution by a third party. It may include the use of a mediator or facilitator. As discussed in Part II and in further detail in this Part, the threat of litigation or shifting of power by litigation of preliminary issues may be necessary to make the dispute ripe for negotiation. Nevertheless, it is the negotiation process that often leads to the actual solutions.

⁹ The other two installments await publication. See Barbara Cosens, *A New Approach in Water Management or Business as Usual? The Milk River, Montana* (pt. 1), 18 J. ENVTL. L. & LITIG. (forthcoming 2003) [hereinafter Part I]; Barbara Cosens, *Farmers, Fish, Tribal Power, and Poker: Reallocating Water in the Truckee River Basin, Nevada and California* (pt. 2), 10 HASTINGS W.-NW. J. ENVTL. L. & POL’Y (forthcoming 2003) [hereinafter Part II].

is giving rise to a negotiated plan governing operation of the heavily developed river. By introducing flexible management to existing infrastructure, the Truckee River negotiations are overcoming substantial barriers to reallocation of water.

Because efforts to alter river governance, reallocate water, and reverse environmental harm to riparian systems are taking place on most major water basins in the West, this Article evaluates the efficacy of the negotiation process in this context and seeks a framework within which the results of local negotiation processes can be evaluated, recommending a process to assure that the broader interest in the fair and efficient use of water resources and the durability of the solutions are not overlooked. The processes used and the issues addressed on the Milk and Truckee Rivers are sufficiently different to provide a broad spectrum for this analysis.

The negotiated settlement of tribal water rights in the Milk River Basin occurred within the context of a statewide general stream adjudication and resulted in the establishment of a basin-wide water coordinating committee and joint federal-state-tribal mechanisms for water distribution and dispute resolution. The Montana process brings only governmental entities to the table, but includes extensive public involvement and interdisciplinary problem solving to arrive at solutions. Finalization of agreements requires legislative, congressional, and Tribal Council (or tribal referendum) approval in addition to entry of the agreement in a Montana Water Court decree.

In contrast, negotiation of interstate water allocation, new basin-wide storage operating criteria, and modifications to storage allocation in the Truckee River Basin of Nevada and California occurs within a process established by Congress designed to resolve years of litigation and earlier failed attempts at negotiation. Federal representatives participated at a higher level and played a stronger role in achieving resolution than in the Milk River negotiations. Also, unlike the Milk River negotiations, public involvement is minimal until a final agreement is reached; however, governmental entities at the table strive to represent the public interest. Participants at the table include all major water users and managers of stored water, whether private or governmental. Finalization of agreements requires approval by governmental parties specified by Congress as necessary.

Both the Milk and the Truckee River Basin processes resulted in agreements that will substantially improve water management, allocation, and use. Yet the results of both negotiations have flaws. The opportunity to learn from the achievements and failings of these processes and apply them to other basins provides the impetus for this series of Articles.

Section II of this Article looks at the broader question of whether negotiation in general is a useful approach to resolving basin-wide water management and distribution issues. Section II concludes that, while litigation may be necessary to force consideration of noneconomic interests such as aquatic habitat, and negotiation offers the best means to

arrive at solutions to improve water governance and allocation in the West.

Section III establishes a set of criteria within which the adequacy of a particular basin-wide collaborative process may be evaluated. These criteria include evaluation of the efficiency and fairness of the process itself, as well as the durability of the outcome. Efficiency relates to the cost of resolution; fairness concerns the allocation of the benefits of use of the water resource; durability pertains to the sustainability of both the institutions established to manage water and enforce water rights, and to the environmental health of the riparian system.

Section IV applies these criteria to evaluate the approaches used in the Milk River Basin of Montana and the Truckee River Basin of California and Nevada. Section IV concludes that the Milk River negotiations provided an efficient process resulting in a much fairer allocation of the benefits of use of the water resource and established durable institutions for management and enforcement of water rights. Nevertheless, the Milk River process may not result in a sustainable use of the water resource because solutions remain heavily reliant on state and federal subsidy and may do nothing to restore the environmental integrity of the aquatic system. In contrast, due to a shifting of power through litigation, negotiation on the Truckee River took place against a backdrop that gave equal voice to restoration of aquatic health. Nevertheless, institutions established to implement the Truckee River agreement may not provide sufficient flexibility to adapt to future change in water supply and demand, and the absence of a key party from the table during final negotiations may render the solutions vulnerable or at least more difficult to implement.

Finally, Section V looks at potential problems with the current ad hoc, locally driven approach to negotiation of basin-wide water issues and provides recommendations for key elements necessary to assure accountability to a broad range of interests. Section V recommends changes to the current federal team process for participation in water negotiations to provide accountability to national interests rather than to only the proprietary interests in the particular basin, which are the focus of the current process. In addition, Section V recommends congressional criteria for approval of water settlements and authorization of federal funding to implement them to promote fair allocation of the benefits of use of the water resource and movement toward sustainable use of the resource, and the use of federal subsidies only to these ends. These recommendations attempt to span the gap between local and national objectives, between the reality that water use is local and drives local economies and the fact that the continued viability of our water resources and the legacy we leave to future generations in water infrastructure, social stability, and environmental amenities is truly national in scope.

II. WHY NEGOTIATE?

Growing frustration with the inability of current institutions and legal rules to solve modern problems of water allocation and management in the West is driving people to the negotiation table in an effort to fashion a new approach to resolution of water issues. This section examines the types of problems people seek to resolve in a basin-wide forum and why the process of negotiation is emerging as the dominant forum for their resolution.

A. The Problems

The problems facing the two water basins studied in Parts I and II of this series—the Milk River Basin of Montana, and the Truckee River Basin of California and Nevada—serve to illustrate the water issues giving rise to new approaches. Thus, it is useful to return to those two basins before discussing water issues in the West in general.

1. The Milk River Basin, Montana

Lack of a mechanism to coordinate water management among jurisdictions, inability to respond to drought, and underdevelopment of tribal water resources are three of the major issues that brought people together to seek solutions in the Milk River Basin of Montana. To summarize the jurisdictional morass: The Milk River has its headwaters in Glacier National Park in the United States, and becomes the Milk River on the Blackfeet Reservation where it receives water from the St. Mary River as part of the Milk River Reclamation Project, one of the first Reclamation projects approved in 1903 by the newly formed Reclamation Service.¹⁰ The river then leaves the United States, crossing the Canadian provinces of Alberta and Saskatchewan before returning to the United States at what is referred to as the Eastern Crossing.¹¹ “Downstream from this point, the river serves seven private irrigation districts and one United States Bureau of Indian Affairs (BIA) irrigation district, and flows past three Indian reservations, numerous Indian allotments, and two National Wildlife Refuges before it joins the Missouri River below Fort Peck Dam.”¹² Thus, four federal agencies, five Indian reservations, seven irrigation districts, one state, two Canadian provinces, and two countries manage or claim a right to water from the Milk River.¹³

¹⁰ MONTANA RESERVED WATER RIGHTS COMPACT COMMISSION STAFF, DRAFT TECHNICAL REPORT ON THE COMPACT WITH THE GROS VENTRE AND ASSINIBOINE TRIBES OF THE FORT BELKNAP RESERVATION 8 (2002) [hereinafter COMMISSION STAFF, TECHNICAL REPORT: FORT BELKNAP] (unpublished report, manuscript on file with the Montana Reserved Water Rights Compact Commission, Helena, Montana).

¹¹ *Id.* at 8.

¹² *Id.* at 2.

¹³ *Id.*

Three of the four reservations—Blackfeet, Fort Belknap, and Fort Peck—were created by an Act of Congress in 1888 out of a reservation encompassing the entire Milk River Basin in the United States.¹⁴ The Act opened the remaining area in the Milk River Valley to settlement now served by the Milk River Reclamation Project.¹⁵ Prior to development of the Reclamation Project, private farmers had started to divert water from the Milk River upstream from the Fort Belknap Reservation.¹⁶ Three years later, on July 5, 1898, agents of the federal government at Fort Belknap began diverting one thousand miner's inches (approximately 125 cubic feet per second (cfs)) of water from the Milk River for irrigation of reservation land.¹⁷ Insufficient water to serve both diversions during drought left the downstream tribal diversion dry. The resulting lawsuit led to the landmark decision in *Winters v. United States*, recognizing the reserved water rights of the Fort Belknap tribes and setting the stage for reserved water right recognition for other Indian tribes.¹⁸

Almost a century after *Winters*, no comprehensive tool for coordinated water management in the Milk River Basin exists, nor have the Tribes' reserved water rights ever been quantified. Further, despite the reclamation project, water use in the basin remains defined by drought. The United States Bureau of Reclamation estimates that water for irrigation from the Project is short in five out of ten years and that shortage will become even more pronounced when Canada and the Gros Ventre and Assiniboine Tribes develop their shares.¹⁹ Nothing in the allocation scheme defined by the doctrine of prior appropriation, which governs the distribution of non-reserved water rights in Montana, requires that water, during shortage, go to the most productive or least drought tolerant use. Instead, the water user whose ancestors developed the water first takes all.

Moreover, 94 years after the United States Supreme Court ruling in *Winters*, the water rights of the Fort Belknap Reservation remain woefully underdeveloped. Although originally designed to serve over 10,000 acres, the Fort Belknap Indian Irrigation Project serves less than 5,000 acres.²⁰ Absent storage, natural flows on the Milk River during irrigation season

¹⁴ Act of May 1, 1888, ch. 213, 25 Stat. 113 (ratifying and confirming an agreement with the Gros Ventre, Peigan, Blood, Blackfeet, and River Crow Indians).

¹⁵ Two ranches on tributaries to the Milk River claim water right priority dates prior to the May 1, 1888 opening of the land to settlement. Thus, it is clear that settlers had already entered the Milk River Valley at the time of negotiation of the new treaty. Telephone Interview with Bill Greiman, Agricultural Engineer, Montana Reserved Water Rights Compact Commission, Helena, Montana (June 25, 2002).

¹⁶ *Winters v. United States*, 143 F. 740, 742 (9th Cir. 1906) *aff'd*, *Winters v. United States*, 207 U.S. 564 (1908).

¹⁷ *Winters v. United States*, 207 U.S. 564, 566 (1908).

¹⁸ *Id.*

¹⁹ MONTANA DEP'T OF NATURAL RESOURCES AND CONSERVATION ET AL., SPECIAL REPORT SUMMARIZING THE MILK RIVER WATER SUPPLY STUDY, 11-12 (1990) (on file with author); Telephone Interview with Bill Greiman, *supra* note 15.

²⁰ Telephone Interview with Bill Greiman, *supra* note 15.

are simply inadequate to supply water to the entire project.²¹ Tribal lands were among those authorized for service from the Milk River Project; however, the Fort Belknap Agency refused to participate.²²

2. The Truckee River Basin, California and Nevada

The Truckee River takes its water supply from the snowpack of the Sierra Nevada Mountains in California, and terminates in Pyramid Lake in the desert of Nevada. Along the way it serves kayakers, fishermen, hydropower stations, municipal needs, and a major diversion to the Carson River Basin for a federal reclamation project. To even out the cycle of flood and drought typical of rivers fed primarily by snowmelt, the Truckee River is regulated by five major federal reservoirs and several private reservoirs.

The terminus of the Truckee River, Pyramid Lake, is located within the Pyramid Lake Paiute Indian Reservation. In 1844, John C. Fremont observed that the lake and the mouth of the river teemed with Pyramid Lake cutthroat trout (*Oncorhynchus clarki henshawi*)—which is a stock of Lahontan cutthroat trout—and a sucker known as the cui-ui (*Chasmistes cujus*).²³ Diversions of the river to satisfy the reclamation project lowered lake levels, blocking passage of fish to spawning grounds.²⁴ The Pyramid Lake cutthroat trout disappeared entirely from Pyramid Lake in the late 1930s or early 1940s, though a similar strain of Lahontan cutthroat trout was subsequently introduced.²⁵

Years of litigation attempting to reallocate water to Pyramid Lake ultimately upheld the dominance of appropriative water rights for irrigation.²⁶ Only after passage of the federal Endangered Species Act (ESA)²⁷ did the flow of the river begin to change. The Fish and Wildlife

²¹ Telephone Interview with Bob Levitan, Hydrologist, Montana Reserved Water Rights Compact Commission, (June 25, 2002) (describing U.S. Bureau of Reclamation HydROSS Model of the Milk River). The use of the term “natural flow” refers to the amount of water in the bed of the Milk River that would be present without the interbasin transfer and storage provided by the Reclamation Project and other storage facilities, and without any diversion. This is the water to which the Tribes have the senior right.

²² COMMISSION STAFF, TECHNICAL REPORT: FORT BELKNAP, *supra* note 10, at 27. Note that at the time of the refusal, the Leavitt Act, 25 U.S.C. § 386a (2000), deferring repayment of construction costs for irrigation facilities on trust land, had not been passed. Costs of irrigation on the Fort Belknap Reservation in 1918 were already prohibitive. *Id.* at 30–31. Repayment obligations on non-trust land continued after passage of the Leavitt Act.

²³ CALIFORNIA DEP'T OF WATER RESOURCES, TRUCKEE RIVER ATLAS 26 (1991) [hereinafter TRUCKEE RIVER ATLAS].

²⁴ NEVADA DIV. OF WATER PLANNING, TRUCKEE RIVER CHRONOLOGY: CHRONOLOGICAL HISTORY OF LAKE TAHOE AND THE TRUCKEE RIVER AND RELATED WATER ISSUES, PART I [hereinafter TRUCKEE RIVER CHRONOLOGY PART I], *available at* <http://water.nv.gov/Water%20planning/truckee/truckee1.htm> (last visited Nov. 16, 2003).

²⁵ *Id.*; TRUCKEE RIVER ATLAS, *supra* note 23, at 27; UNITED STATES DEP'T OF THE INTERIOR ET AL., DRAFT ENVIRONMENTAL IMPACT STATEMENT/ENVIRONMENTAL IMPACT REPORT, TRUCKEE RIVER OPERATING AGREEMENT 3–128 (1998) [hereinafter TROA DRAFT EIS/EIR].

²⁶ *See generally Nevada v. United States*, 463 U.S. 110 (1983).

²⁷ Endangered Species Act of 1973, 16 U.S.C. §§ 1531–1544 (2000).

Service listed the Lahontan cutthroat trout as threatened in 1975,²⁸ and the cui-ui as endangered in 1967.²⁹

Meanwhile, the urban areas of Reno and Sparks in Nevada grew, placing an increasing demand on water from the Truckee River Basin for municipal and industrial (M&I) needs. Despite efforts to obtain water rights for M&I use with an early priority date through purchase and transfer of irrigation water rights, the M&I water supply is insufficient during drought.

3. The West

The Milk and Truckee River Basins are indicative of the problems facing most water basins in the West. The Western Water Policy Review Commission identified the following among the water challenges facing the West:

1) *Urban growth*.³⁰ Nine of the ten fastest growing cities in the United States are located in the West.³¹

2) *Unhealthy aquatic systems*.³² The Biological Resources Division of the United States Geological Survey identifies freshwater fish as the single most endangered vertebrate group in the United States.³³ In the Great Basin, nearly two thirds of the native fish are either listed under the ESA or considered of concern by the United States Fish and Wildlife Service.³⁴ Water development is considered second only to the introduction of non-native fish as a cause of these problems.³⁵

3) *Poor water quality*.³⁶ The Environmental Protection Agency reports that over a third of the nation's rivers are use-impaired due to poor

²⁸ "Threatened" Status for Three Species of Trout, 40 Fed. Reg. 29,863, 29,864 (July 16, 1975) (codified at 50 C.F.R. pt. 17).

²⁹ 50 C.F.R. § 17.11 (2003). The cui-ui was originally listed under the Endangered Species Preservation Act of 1966, Pub. L. 89-669, the precursor to the Endangered Species Act of 1973.

³⁰ WESTERN WATER POLICY REVIEW ADVISORY COMMISSION, WATER IN THE WEST: CHALLENGE FOR THE NEXT CENTURY xiii (1998) [hereinafter WWPRAC REPORT], available at www.waterwest.org/reading/readingfiles/fedreportfiles/intro.pdf. The President appointed the Commission pursuant to the Western Water Policy Review Act of 1992, Pub. L. 102-575, Title XXX, to review the federal role in allocation and use of water in the West.

³¹ WWPRAC REPORT, *supra* note 30, at 2-14, available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt2.pdf>. Growth rates in the nine cities vary from 14.6% to 26.2%. *Id.*

³² *Id.* at xiii, available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/intro.pdf>.

³³ Holly Doremus, *Water, Population Growth, and Endangered Species in the West*, 72 U. COLO. L. REV. 361, 366 (2001).

³⁴ *Id.* at 367.

³⁵ *Id.*

³⁶ WWPRAC REPORT, *supra* note 30, at xiii. This issue will not be covered in detail in this Article, but the processes discussed are equally applicable to resolution of water quality problems.

water quality.³⁷ The water quality impairment is caused both by chemical pollution and physical alteration of streams.³⁸

4) *Unfilled tribal water claims.*³⁹ Although reserved water rights arise at the time of establishment of an Indian reservation,⁴⁰ development of tribal water has lagged far behind that of their neighbors.⁴¹ The presence of endangered aquatic species handicaps current attempts to develop tribal water in heavily appropriated basins.⁴²

5) *Increasing periods of drought and flood due to climate change.*⁴³ Changes predicted to accompany global warming include increases in extreme weather conditions, reductions in crop yields in certain regions, and increased water scarcity in arid regions.⁴⁴

In the face of these changes in water supply and demand, and the recognition of environmental harm, westerners are beginning to alter the fundamental basis for allocation and management of water.⁴⁵ This process of change is made difficult by the fact that the historic legal structure gave control of water resources to those seeking to put them to economic use, and then locked that use in place by giving priority in order of date of development rather than current value of the use.⁴⁶ The historic system is complicated by the overlay of modern federal environmental regulation, which tends to reflect current values, is often directly at odds with consumptive use of water, and provides no clear guidelines on which use of water—human or the environment—should prevail.⁴⁷ Inevitably the choice of directions taken to meet these challenges will be determined by the water supply itself.

In a vast area between the Mississippi River and the Sierra Nevada Mountains, rainfall is generally less than the twenty inches per year needed to farm without irrigation.⁴⁸ Under the influence of aridity,

³⁷ Sarah B. Van De Wetering & Robert W. Adler, *New Directions in Western Water Law: Conflict or Collaboration?*, 20 J. LAND RESOURCES & ENVTL. L. 15, 19 (2000) (citing U.S. ENVTL. PROT. AGENCY, REPORT TO CONGRESS: NATIONAL WATER QUALITY INVENTORY, 1996, at 20 (1998)).

³⁸ *Id.*

³⁹ WWPRAC REPORT, *supra* note 30, at xiii.

⁴⁰ *Winters v. United States*, 207 U.S. 564, 577 (1908).

⁴¹ Daniel McCool, *Winters Comes Home to Roost*, in FLUID ARGUMENTS: FIVE CENTURIES OF WESTERN WATER CONFLICT 121 (Char Miller ed., 2001).

⁴² Charles Wilkinson, *The Role of Bilateralism in Fulfilling the Federal-Tribal Relationship: The Tribal Rights—Endangered Species Secretarial Order*, 72 WASH. L. REV. 1063 (1997).

⁴³ WWPRAC REPORT, *supra* note 30, at xiii; INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, WORKING GROUP II, CLIMATE CHANGE 2001: IMPACTS, ADAPTATION, AND VULNERABILITY 5 (2001) [hereinafter IPCC Report], available at <http://www.ipcc.ch/pub/wg2SPMfinal.pdf>.

⁴⁴ IPCC REPORT, *supra* note 43, at 5.

⁴⁵ *See, e.g.*, Wilkinson, *supra* note 4, at 317 (“[T]here is no denying that we are in the process of reevaluating water law and policy and of adjusting old and established uses in light of modern demands.”).

⁴⁶ MACDONNELL, *supra* note 6, at 231–32.

⁴⁷ Getches, *supra* note 7, at 5 (noting that increasing water needs have collided with federal environmental regulation).

⁴⁸ WALLACE STEGNER, BEYOND THE HUNDREDTH MERIDIAN: JOHN WESLEY POWELL AND THE

westerners have a special relationship with the West's major rivers. These rivers control not only where people can live in the West, but also control where people want to live.⁴⁹ John Wesley Powell, on surveying these arid regions in the late 1800s, recognized that the major rivers of the West would control its development.⁵⁰ He recommended that the federal government eliminate the straight-line, rectangular survey so dear to the engineer, and draw property boundaries along topographic divides.⁵¹

Aridity is not the only defining feature of this region. The water supply fluctuates on both a seasonal and yearly basis.⁵² As a result, native plant and animal communities have adapted to rely on a climate that oscillates between flood and dessication.⁵³

What water users and managers in the West are beginning to face is the truth of Powell's observations. In reality, no amount of political gerrymandering or creative engineering can alter the fact that a water supply sets its own boundaries. The next step is to discover a process that allows diverse political jurisdictions and diverse needs dependent on a water supply already heavily developed to adjust to that reality. Negotiation is emerging as the most successful process.

SECOND OPENING OF THE WEST 214 (1953).

⁴⁹ This concept is recognized in both our great legal writing and our great literature: "A river is more than an amenity, it is a treasure. It offers a necessity of life that must be rationed among those who have power over it." *New Jersey v. New York*, 283 U.S. 336, 342 (1931) (Holmes, J.); "Water is H₂O, hydrogen two parts, oxygen one, but there is also a third thing, that makes it water and nobody knows what that is." D.H. Lawrence, *The Third Thing*, in *THE COMPLETE POEMS OF D.H. LAWRENCE* 515 (Vivian de Sola Pinto & Warren Roberts eds., 1964);

A very little deficiency, even a slight distortion of the season in which the rain falls, makes all the difference. My family homesteaded on the Montana-Saskatchewan border in 1915, and burned out by 1920, after laying the foundation for a little dust bowl by plowing up a lot of buffalo grass. If the rains had been kind, my father would have proved up on that land and become a naturalized Canadian. I estimate that I missed becoming Canadian by no more than an inch or two of rain; but that same deficiency confirmed me as a citizen of the West.

WALLACE STEGNER, *THE AMERICAN WEST AS LIVING SPACE* 6 (1987).

⁵⁰ STEGNER, *supra* note 48, at 229. For discussion of the fact that the rivers of the West controlled where Native Americans chose to live, see, e.g., BARBARA T. ANDREWS & MARIE SANSONE, *WHO RUNS THE RIVERS? DAMS AND DECISIONS IN THE NEW WEST* 168 (1983) (referring to the fifteenth century canal systems of the Hohokum Indians); Maria Rosa Garcia-Acevedo, *The Confluence of Water, Patterns of Settlement, and Constructions of the Border in the Imperial and Mexicali Valleys (1900-1999)*, in *REFLECTIONS ON WATER* 59 (2001) ("[T]he Colorado River was 'the most important natural factor influencing native cultures in the delta.'" (quoting EDWARD F. CASTETTER & WILLIS H. BELL, *YUMAN INDIAN AGRICULTURE* 4 (1951)).

⁵¹ STEGNER, *supra* note 48, at 227. See also MARC REISNER, *CADILLAC DESERT: THE AMERICAN WEST AND ITS DISAPPEARING WATER* 49 (1987) (noting that Powell recommended that state boundaries follow the boundaries of the major water basins).

⁵² WWPRAC REPORT, *supra* note 30, at 2-1, available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt2.pdf>.

⁵³ *Id.*

B. The Approach

The emergence of negotiation as the most successful process for resolving many basin-wide water issues warrants discussion because it reveals some of the necessary elements of a process that will be effective. Reasons for resort to a collaborative process include: 1) the inadequacy of litigation for resolution of resource allocation problems, 2) ability to use the factual complexity of water supply and demand to expand availability and protection of the water resource, and 3) the need for participation by a broader range of interests.

1. The Inadequacy of Litigation

In general, people are unlikely to come to the table to negotiate solutions simply due to a sense of duty to community. Instead, people negotiate because "they seek to do together what they cannot do alone."⁵⁴ Both the complexity of the water supply and the complexity of people's need for water cry out for a process flexible enough to accommodate that variability. In particular, as detailed in the following sections, water interests frequently come together because litigation is inadequate to address water management and distribution across jurisdictional boundaries, or because existing law governing water distribution within a jurisdiction is inadequate to address changing needs and values with respect to water use, even though the water supply and infrastructure itself is physically adequate to address those changes.

a. Multiple Jurisdictions

Water sources shared by multiple jurisdictions as described for the Milk and Truckee River Basins are the rule rather than the exception in the West. Variability in water supply is generally taken into account in administration of a court decree of water rights rather than the decree itself,⁵⁵ and each jurisdiction will have its own institutions for administration and processes for resolution of disputes. On a shared water source, allocation problems remain between jurisdictions. A one-time resolution of issues between jurisdictions will not do. Allocation of a water supply that fluctuates both seasonally and from year to year, and that may change over time due to climate change, requires that the jurisdictions involved with water management and allocation in a basin have an ongoing relationship.⁵⁶ Attempts to litigate administrative schemes in the face of multiple jurisdictions tend to resolve only the

⁵⁴ Carrie Menkel-Meadow, *Toward Another View of Legal Negotiation: The Structure of Problem Solving*, 31 UCLA L. REV. 754, 755 (1984).

⁵⁵ For example, under the doctrine of prior appropriation, junior water right holders simply go without water during drought.

⁵⁶ See Janet Neuman, *Run, River, Run: Mediation of a Water-Rights Dispute Keeps Fish and Farmers Happy—For a Time*, 67 U. COLO. L. REV. 259, 309 (1996).

issues at hand, ignoring the need to develop joint institutions that provide the forum for a continuing dialogue.

For example, consider the variety of legal outcomes in water basins shared between a tribe and a state. The Ninth Circuit has held that a tribe or the federal government has jurisdiction over administration, including change in use of its water rights, when the water source is located wholly within a reservation.⁵⁷ However, the Ninth Circuit has also recognized state jurisdiction over non-Indian water use on a reservation when the water source is shared with private land.⁵⁸ Under these scenarios, administration of water from the same source turns on the ethnicity of the water user. In response to a challenge to tribal dedication of a portion of the water right of the Wind River Reservation to instream flow, the Wyoming Supreme Court concluded that the change could only occur pursuant to state law.⁵⁹ The members of the Wyoming Supreme Court differed narrowly in their bases for the determination. One justice opined that only the State can hold an instream flow right under Wyoming law.⁶⁰ This would present an absolute bar to the Tribes' desired use of their water. This limited ruling on ownership of an instream flow right was not necessary for the court to severely restrict the ability of the Tribe to dedicate water to instream flow. Wyoming state law permits change in use of a water right only if the applicant proves no injury to other water users.⁶¹ Proving that an instream use imposes no greater impact than the agricultural use may prove impossible, because water quantified for the Wind River Reservation for agricultural purposes has not been developed. The Wyoming approach provides a simple rule: administration by a single jurisdiction. However, it reduces the tribal voice in use of its own water rights, and in this case also reduces the uses the Tribe may make of that water.

In this all-or-nothing approach, one or more governmental entity must lose control over distribution of its own water use rights, and the people using water under the losing jurisdiction have less voice in water management within their own community. Governments view loss of control over their own natural resources as an infringement on sovereignty. Negotiation allows development of a joint management scheme for a shared water resource in which all governments on the

⁵⁷ *Colville Confederated Tribes v. Walton*, 647 F.2d 42, 49, 52-53 (9th Cir. 1981).

⁵⁸ *United States v. Anderson*, 736 F.2d 1358, 1366 (9th Cir. 1984).

⁵⁹ *In re General Adjudication of all Rights to Use Water in the Big Horn River Sys. (Big Horn III)*, 835 P.2d 273, 279 (Wyo. 1992).

⁶⁰ *Id.* (citing Wyo. Stat. § 41-3-1002(e) (Supp. 1991)).

⁶¹ Wyo. Stat. Ann. § 41-3-104 (LexisNexis 2001).

source have voices.⁶² Through negotiation, governments retain control over the contours of any shared administrative forum.

Negotiation provides a forum for the establishment of joint management and dispute resolution mechanisms that recognize the need to adapt solutions as water supply changes and allows participation by all entities affected on an ongoing basis.⁶³ Unlike litigation, in which a solution is imposed by a third party, negotiation gives people both a voice in the process and responsibility for the outcome. Local involvement in decision making about the health and management of a water basin is key to successful implementation of solutions.⁶⁴

b. Existing Law Versus Changing Needs and Values

Increasingly, urban, habitat, and recreational needs are the dominant demand within western water basins.⁶⁵ Not only are these needs the last to surface, but they are also the least able to tolerate shortage.⁶⁶ The law does not care.⁶⁷

Most water in the western United States is allocated on the basis of temporal priority: For private water rights, the priority date is the date of appropriation,⁶⁸ and for federal and Indian reserved rights, the priority date is the date of establishment of the reservation.⁶⁹ The impact of

⁶² Some may view sharing authority on a shared water resource as yet another form of infringement on sovereignty. Certainly each government must relinquish some control within its own territory. But sovereignty is an illusive concept. Although courts refer to its source as "inherent power," it is meaningless unless exercised. It is rarely controversial when a government exercises sovereignty over internal affairs concerning members of its own nation. It is at the boundaries where the sovereign rights of one government abut those of another that the true measure of sovereignty is revealed. At that boundary, the government that truly exercises its own sovereignty may be the government that reaches an agreement giving it some influence over the actions of another government whose decisions affect its resources. See Philip P. Frickey, *Adjudication and Its Discontents: Coherence and Conciliation in Federal Indian Law*, 110 HARV. L. REV. 1754, 1757 (1997) (noting that tribal participation in negotiation among sovereigns allows for greater tribal participation in the formulation of federal law than does litigation).

⁶³ Neuman, *supra* note 6, at 11,434 (describing adaptive management as administration that is allowed to change based on monitoring and other data collection, and noting that "[g]overnance by litigation and court decree is not compatible with adaptive management, as it results in rigid directives").

⁶⁴ See generally, WWPRAC REPORT *supra* note 30, at 2-3 (advocating national standards but local implementation), available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt2.pdf>; Neuman, *supra* note 56, at 295 n.168 (noting that control gained through participation in negotiation gives people a greater commitment to achieving resolution of disputes).

⁶⁵ See Wilkinson, *supra* note 4, at 321-22.

⁶⁶ See generally, MSE-HKM ENGINEERING *supra* note 3.

⁶⁷ Getches, *supra* note 7, at 19 ("[C]alls to satisfy changing demands and newly appreciated values met with the inflexibility of the system."); MACDONNELL, *supra* note 6, at 232 (noting that the current system has not kept pace with changes in water-use preferences).

⁶⁸ 1 WELLS A. HUTCHINS, WATER RIGHTS LAWS IN THE NINETEEN WESTERN STATES 226 (1971).

⁶⁹ *Winters v. United States*, 207 U.S. 564, 577 (1908).

allocation on the basis of temporal priority becomes apparent during drought, a frequent occurrence in the West where water supply fluctuates to such an extent that no year can be considered "average." Water shortage is not shared by water users relying on the same source. Instead, water rights are satisfied in order of priority.⁷⁰ This approach was designed to protect the value of economic investment in water development at a time when the West was merely a source of resources for exploitation.⁷¹ To understand the inadequacy of this method of allocation for anything but purely economic interests, consider a bucket of water and a room full of thirsty people. If allocation of the water is governed by a simple rule under which the first person to arrive gets the first glass of water, the process of distributing the water is simple. Water is doled out to people in order of their arrival until it is gone. Of course, if the bucket is small, many people would remain thirsty and some might get water when they did not want it. Yet application of the priority system in litigation leads to this result.

Furthermore, litigation generally does not allow for prospective action. Parties must wait for an actual dispute to arise, timing that may be too late for the particular use or for the health of the aquatic system. Negotiation allows parties to anticipate future disputes and to design the institutions necessary to resolve them in a timely manner. Litigation runs the risk of providing a solution under a specific factual scenario of water supply that concerns only a part of the whole or may in fact never occur again.⁷²

Yet despite this inflexibility in the law, there is considerable slop in the physical infrastructure built to supply water.⁷³ Many water supply systems built in the twentieth century are sufficiently overbuilt to allow for accommodation of new needs and values through changes in management and efficiency.⁷⁴ These changes require cooperation across jurisdictional boundaries and creative solutions based on law and science that would be difficult to accomplish in litigation.⁷⁵ Solutions that vary

⁷⁰ See, e.g., MONT. CODE ANN. §§ 85-2-401, -406(1) (2001).

⁷¹ See, e.g., Wilkinson, *supra* note 4, at 317 (noting that "the prior appropriation doctrine . . . was created to meet the felt needs of the mining camps"); see also Dellapenna, *supra* note 6, at 346 (noting that shared, riparian ownership only works when a resource is abundant, and identifying prior appropriation as an attempt at creating private property rights to encourage investment in the face of scarcity).

⁷² See, e.g., *United States v. Adams*, No. CV-88-147-GF-PGH (D. Mont. 1988) (suit for injunction against diversion of water alleged to interfere with water rights of the Fort Belknap Reservation during year of severe drought).

⁷³ MACDONNELL, *supra* note 6, at 251; see also Neuman, *supra* note 56, at 318 (noting that mediation of water disputes may allow solutions based on substantive flexibility within the system).

⁷⁴ MACDONNELL, *supra* note 6, at 250; see also Menkel-Meadow, *supra* note 54, at 811 (noting that resource utilization expansion can occur when parties make trade-offs of rights less valuable to them but more valuable to others).

⁷⁵ See, e.g., Gina McGovern, *Settlement or Adjudication: Resolving Indian Reserved Rights*, 36 ARIZ. L. REV. 195, 197 (1994) (noting that an advantage of settlement over negotiation is that it can result in more flexible solutions); Carrie Menkel-Meadow, *Pursuing Settlement in an Adversary Culture: A Tale of Innovation Co-opted or "The Law of ADR,"* 19

timing of water use, share shortage, alter and integrate the management of storage across jurisdictions, protect instream interests that may lack a legal right, and authorize and appropriate funding to improve water infrastructure and efficiency of water use may be possible by agreement where they would be foreclosed by litigation.⁷⁶ Not only does negotiation provide the forum for agreement to resolve problems outside the shadow of existing law, but it also allows greater flexibility and application of the complex facts involved.

2. *Handling Complex Facts*

Certainly, courts can handle complex facts. However, where disputes are highly driven by facts such as a complex interplay between natural variables and human-created water development infrastructure, both diverse and variable water needs, and the need to design water allocation mechanisms in the face of a variable water supply, negotiation may provide better outcomes. First, in negotiation, scientific disciplines such as hydrology and municipal water supply engineering may take an equal seat at the table.⁷⁷ Where the adversarial system may see an irreconcilable conflict between a junior and senior water user during a drought, an agricultural engineer may see a difference in crop need that could accommodate both water uses. Although scientists are involved as experts in litigation of cases involving complex facts, the role is quite different than the role in negotiation. Data developed for use in litigation often remain confidential unless disclosed at trial. As a result, opportunities for creative solutions remain hidden in those data.⁷⁸ In contrast, participation by scientists and engineers in negotiation is often on an equal footing with legal and political representatives. This participation creates a greater likelihood that physical solutions will be discovered.

Second, active participation in problem solving by those with the expertise to evaluate the physical effects of creative solutions is necessary not only to expand the benefits from, or protection of, the water resource, but also to recognize and use the factual complexity of the problem to design flexible solutions. This is not to suggest that science is a panacea. Legal over-allocation of water will not always be solved by changes in timing of use, new storage management, or efficiency improvements. But

FLA. ST. U. L. REV. 1, 7 (1991) (noting that litigation outcomes are frequently inadequate to resolve human problems); Neuman, *supra* note 56, at 295 (noting that parties often come to the table due to the failure of litigation to provide creative, flexible solutions).

⁷⁶ See Menkel-Meadow, *supra* note 54, at 807 (noting that solutions may be available through negotiation that a court could not order).

⁷⁷ See *id.* at 813 (noting that solutions may be improved by analyzing the problem from the point of view of another discipline).

⁷⁸ See *id.* at 782 (discussing both litigation and litigation driven settlement: "[T]he notion that one should hide information is based on a conception of the court outcome [F]ailure to disclose real preferences has been shown to foreclose some of the most efficient and mutually satisfactory solutions.").

unless the complexity and limitations of the system are fully understood, effective means to allocate water in the face of that complexity cannot be designed.⁷⁹

Third, even when a complex water system cannot be fully understood with current data, negotiation allows jurisdictions to agree to an ongoing forum in which adaptive management and a dispute resolution mechanism can be employed to adjust to new variables. Of equal importance, the nonadversarial nature of the negotiation process may set the stage for improved relations between parties—a key component to successful implementation of any solution that requires a continuing relationship. This brings us to the people.

3. Broad Participation

Negotiation provides a forum for participation by a broader range of interest groups than are generally included in litigation. Historically, regardless of the forum, water development and allocation decisions were made by a narrow group of interests representing the legal rights to use water.⁸⁰ Today, a much broader group, including those who use water in its natural watercourse without consumption, seeks a voice in water management and allocation decisions.⁸¹ Negotiation allows at least the possibility of participation by a broader range of interests.⁸²

Although those holding the legal rights to water may view this participation as an annoyance,⁸³ any resolution that leaves out major interests, whether holding legal rights or not, is incomplete.⁸⁴ In the Truckee River Basin, foreclosure of the Pyramid Lake Paiute Tribe's pursuit of legal rights to water for fisheries⁸⁵ led the tribe to pursue other avenues for water. By asserting the fiduciary duty of the United States to manage surplus water from a federal project in the interest of the Tribe,⁸⁶ and by proceeding under the ESA,⁸⁷ the Tribe made considerable inroads

⁷⁹ See, e.g., Neuman, *supra* note 6, at 11,432 (arguing for the use of adaptive management in the face of water supply variability).

⁸⁰ WWPRAC REPORT, *supra* note 30, at 5-41 to 5-42, available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt5.pdf>.

⁸¹ *Id.* at 5-42 ("Now the values of water are viewed far more broadly, and those with an interest in the ways streams and aquifers are used extend well beyond groups holding water rights or hydropower contracts.").

⁸² *Id.*, at 6-45, available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt6.pdf>.

⁸³ See, e.g., Andy Dworkin, *Farmers Fight for Water Intensifies*, THE OREGONIAN, July 6, 2001, at A1 (reporting on the volatile clash between irrigation interests and enforcement of the Endangered Species Act to protect fisheries in the Klamath River Basin, Oregon).

⁸⁴ See Van De Wetering and Adler, *supra* note 37, at 34 ("Because one side (or more) leaves the dispute [resolved through litigation or lobbying] unsatisfied, whatever 'resolution' is achieved remains open to continual attack. . .").

⁸⁵ See *Nevada v. United States*, 463 U.S. 110, 143, 145 (1983) (holding that a water right decree could not be revisited despite tribal needs for water for fisheries).

⁸⁶ *Pyramid Lake Paiute Tribe v. Morton*, 354 F. Supp. 252, 256-57 (D.D.C. 1972).

⁸⁷ *Carson-Truckee Water Conservancy Dist. v. Clark*, 741 F.2d 257, 262 (9th Cir. 1984) (upholding the decision of the Secretary of the Interior to allocate stored water to

on traditional expectations for water allocation. For tribes in particular, negotiation provides a format for raising diverse water interests.⁸⁸

No substitute for water exists. Given a thirsty city, an endangered fish, or simply a high level of interest and a willingness to work the political process, those interested in water allocation, management, and preservation will not disappear simply due to absence of their name on a court decree of water rights. The sooner such interests are included in a process to resolve disputes, the more quickly water basins can move forward with comprehensive solutions.

Despite these arguments in its favor, negotiation has its critics. Whether the concerns raised warrant rejection of the process or can be accommodated in its design can only be answered by exploring the basis for its criticism.

4. Arguments Against Negotiation

Concerns over the use of a settlement process to resolve disputes fall into three categories relevant to negotiation to resolve water issues: 1) loss of the public value provided by precedent, 2) underrepresentation of the underprivileged, and 3) inability of the participants to make hard choices.

a. No Precedent

Critics of settlement argue that the public value of establishing precedent through litigation is substantial.⁸⁹ In addition, concern is expressed that alternative dispute resolution will replace legal precedent with alternative solutions that lack a legal basis.⁹⁰ These critics fear that application of alternative dispute resolution to environmental disputes "present[s] the danger that environmental standards will be set by private groups without the democratic checks of governmental institutions."⁹¹

The concern over loss of precedent stems from the fact that although settlement serves the public purpose of resolving a particular dispute, no future parties in a similar situation can rely on or be guided by the outcome.⁹² While this statement is true, it is relevant only in the narrow legal definition of the term "precedent." First, as noted above, the ability to satisfy all water interests within a particular water basin often turns on the complex interplay of water supply and demand in that particular

endangered species).

⁸⁸ See, e.g., Frickey, *supra* note 62, at 1783 (noting that negotiation provides tribes a forum to insert indigenous values in solutions).

⁸⁹ Leandra Lederman, *Precedent Lost: Why Encourage Settlement, and Why Permit Non-Party Involvement in Settlements?*, 75 NOTRE DAME L. REV. 221, 221-22 (1999).

⁹⁰ Harry T. Edwards, *Alternative Dispute Resolution: Panacea or Anathema*, 99 HARV. L. REV. 668, 677 (1986).

⁹¹ *Id.*

⁹² Lederman, *supra* note 89, at 222 n.6.

basin. Ability to do more than use solutions from one basin as ideas for possible application to another basin may not be necessary.

Second, governments and water users who establish a process for the fair and efficient resolution of disputes over a shared water resource are indeed establishing precedent for resolution of future disputes. As noted above, negotiation of water disputes in basins with multiple jurisdictions has had greater success in establishing mechanisms for joint water administration and joint dispute resolution than has litigation.

Third, the value to future generations of improved relations gained through negotiation of disputes involving scarce resources is incalculable. In the wake of the tragic events of September 11, 2001, the keynote speaker at the annual Indian Water Rights Settlement Conference stated:

I believe we are at a crossroads in our efforts to manage water in the West . . . [There are] immensely difficult conflicts between endangered species, the traditional use of water and the often as yet to be quantified water needs of the Tribes. And of course, the continued dynamic between the need for new and innovative ways of managing water for a burgeoning population and decades of established water law and practice. . . .

All the more reason, then, to use this extraordinary time to push for more civil discourse on these contentious natural resource issues, to advocate reconciliation with our native American neighbors, to do another one of the four things that Richard Harwood suggested citizens can do [in the wake of September 11th]: "Search out differing opinions. When under stress, we often seek solace from those who affirm our existing views. But now we must have the courage to actively seek out views that differ from our own. For it is only when we engage with different view points that we are forced to articulate our own views, examine deeply what we believe and reach a fuller understanding of what we value."⁹³

In short, precedent for adversarial relations between, for example, tribal and state governments, is precedent best lost.

Concern that private interests will set standards for resource allocation if judicial resolution of disputes is avoided is best addressed by design of the process itself. Strong involvement by governmental entities in both the Milk and Truckee River Basin settlements provides a template for discussion of such mechanisms in subsequent sections.

b. Underrepresentation of the Underprivileged

Courts appropriately view one of their purposes to be protection of the rights of those who lack a strong political or economic voice. Thus, the application of alternative dispute resolution to public disputes such as

⁹³ Susan Cottingham, Program Manager, Montana Reserved Water Rights Compact Commission, Keynote Address at the Indian Water Rights Settlement Conference (Oct. 10, 2001).

those concerning water allocation raises concerns that those voices will find no willing ear.⁹⁴

Consider first the traditionally underrepresented voice in resource disputes: that of the Native American tribes. While the tribes have won great victories in legal battles over water,⁹⁵ there is an emerging view that within the framework of those victories tribes have greater control and greater ability to exercise their own sovereignty through negotiation rather than representation by the United States Department of Justice in litigation.⁹⁶ Negotiation not only gives tribes control, it also allows them to raise indigenous values that may not be recognized as legal rights in court.⁹⁷

The challenge of representing the interests of a diffuse public in major water disputes is more problematic. Though the interest of the general public in management of water may not take the form of a water right, the interest of a community in the use and health of its local watershed, or the national interest in sustainability of scarce water resources, is hardly irrelevant. Yet, the "public interest" lacks the legal framework of federal Indian law and the legitimacy and cohesiveness of a sovereign political entity to give it a separate and clear voice in negotiations. Processes currently underway for resolution of water disputes in the West represent a broad range of experiments on the issue of accountability to the general public. Satisfactory handling of this issue is key to design of a fair, efficient, and durable process and will be discussed below.

c. Hard Choices

As the process of solving the water allocation and management problems in the West proceeds, hard choices remain.⁹⁸ People do not rush to give up hard-earned economic rights such as those to use water.⁹⁹ However, people have voluntarily made hard choices concerning water allocation in the past. The doctrine of prior appropriation was not imposed by courts but adopted out of deference to custom in the mining camps.¹⁰⁰ Though possibly enforced through the barrel of a gun, such

⁹⁴ Edwards, *supra* note 90, at 671-72.

⁹⁵ See, e.g., *Winters v. United States*, 207 U.S. 564 (1908); *Arizona v. California*, 373 U.S. 546 (1963).

⁹⁶ Frickey, *supra* note 62, at 1757.

⁹⁷ *Id.* at 1781.

⁹⁸ WWPRAC REPORT, *supra* note 30, at 6-1 ("The West's waters are over appropriated in many places. . . . Substantial amounts of water are needed to address obligations to Indian nations and tribes, to restore endangered species, and to meet the needs of a rapidly growing population. . . . Therefore, there will be fewer truly win-win solutions in the future."), available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt6.pdf>.

⁹⁹ See, e.g., Neuman, *supra* note 56, at 330 (noting that mediation of water disputes may not work if someone must cut back on water use); WWPRAC REPORT, *supra* note 30, at 2-39 (noting that existing water rights holders resist equitable sharing of risk), available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt2.pdf>.

¹⁰⁰ See, e.g., *Coffin v. Left Hand Ditch Co.*, 6 Colo. 443 (1882).

custom represents a choice that it is best to have a clear rule to maintain peace over water allocation even if some go without water. At the same time, the difficulty in making these choices and the concern expressed above that those with the most economic or political clout will make them, cautions for retention of a strong judicial and legislative role in any process for resolution of water disputes.

Just as science cannot solve all water supply problems, negotiation cannot provide a forum for resolution of all disputes. But, given the potential gain from coming together and engaging in public discourse concerning the use and protection of western water basins, the following sections advocate negotiation as the dominant process while retaining roles for both the judiciary and Congress to ensure that negotiation moves in the appropriate direction and to provide a safety net should it fail. In some cases, such as the Truckee River Basin, a preliminary round of litigation may be necessary to sufficiently alter the balance of power and bring those previously in control of the water resource to the table.

III. THE PROCESS OF NEGOTIATION: A FRAMEWORK FOR EVALUATION

A. Defining the Elements

The term “negotiation” can be applied to a broad spectrum of approaches to dispute resolution. Loosely defined, the term merely means that resolution of a dispute is reached through discussion among those interested without passing the decision-making authority to a neutral third party. Agreement to a particular solution is voluntary on the part of each party. Nothing in the term mandates a fair approach or good outcome. Given the broad range of alternatives encompassed by the term, it is important to establish a framework for both evaluation and design of negotiation processes adequate to resolve major water disputes. The following sections suggest a framework for the evaluation of the adequacy of a water negotiation process.

An adequate dispute resolution process consists of three elements: an 1) efficient and 2) fair process that 3) results in a durable outcome. The first two elements focus on process and the third on substantive components of the final resolution. Thus, deciding if a particular settlement process satisfies these elements requires analysis of both the procedure and the outcome. Each element is discussed in turn.

B. Efficient Process

Efficient processes achieve dispute resolution without excessive delay or cost.¹⁰¹ The vast amount of information and the large number of

¹⁰¹ See Neuman, *supra* note 56, at 295 (noting that one goal in water disputes is to achieve resolution without excessive delay or costs); Van De Wetering and Adler, *supra* note 37, at 34 (noting that a goal in choosing a method to resolve water disputes is to choose a process that is quicker and cheaper).

interests involved in any basin-wide water dispute render cheap, quick solutions unlikely. Efficiency of process therefore must be evaluated in comparison to other potential methods for achieving resolution. In the case of major water disputes, the principle comparison is between litigation and negotiation.

A properly designed negotiation process can result in a reduction in cost and time over litigation. The two most important features that aid efficiency in negotiation are: 1) reduction in cost of data collection through a combination of data sharing and joint data collection and evaluation, and 2) reduction in time through use of a less adversarial process.¹⁰² A decision to use negotiation does not guarantee inclusion of either feature. Rather, a conscious effort must be made to consider them in design of a process.

1. Less Duplication of Data—Less Money

Understanding a complex hydrologic system with variable water supply, diverse water uses, and an overlay of human-induced changes to a natural system is not easy. It requires collection and review of large amounts of data.¹⁰³ In a basin-wide water dispute where changes to existing infrastructure, management, or water use are contemplated, it may also be necessary to develop complex models to evaluate the effects of the changes.¹⁰⁴ Litigation forces parties to develop such information on their own.¹⁰⁵ Further, the adversarial process discourages data sharing and cooperative evaluation.¹⁰⁶ Not only does this approach result in duplication of effort, but it also has two collateral effects that further delay and raise the cost of resolution.

First, inability to share information can cause parties to miss important options for resolution.¹⁰⁷ Given the site-specific nature of water supply and use and the realization that considerable improvement in

¹⁰² Costs are also saved when agreements establish processes for resolution of future disputes concerning water; however, this aspect will be discussed in the context of the durability of the solution.

¹⁰³ See generally MONTANA RESERVED WATER RIGHTS COMPACT COMMISSION STAFF, TECHNICAL REPORT ON THE COMPACT WITH THE CHIPPEWA CREE TRIBE OF THE ROCKY BOY'S RESERVATION (2001) (documenting the data and technical methodology used to achieve the water right settlement in the Milk River Basin, Montana for the Rocky Boy's Reservation).

¹⁰⁴ See, e.g., Olen Paul Matthews, et al., *Marketing Western Water: Can a Process Based Geographic Information System Improve Reallocation Decisions?*, 41 NAT. RESOURCES L. J. 329, 332 (2001) (discussing the difficulty of predicting the effects of changes in water use and the level of precision and geographically related detail necessary to make predictions); Telephone Interview with Bob Levitan, Hydrologist, Montana Reserved Water Rights Compact Commission (June 25, 2002) (discussing the U.S. Bureau of Reclamation's HydroSS model of the Milk River and its use to evaluate the relative impacts of proposed alternatives).

¹⁰⁵ Menkel-Meadow, *supra* note 54, at 782.

¹⁰⁶ *Id.*

¹⁰⁷ *Id.* ([T]he notion that one should hide information is based on a conception of the court outcome [F]ailure to disclose real preferences has been shown to foreclose some of the most efficient and mutually satisfactory solutions").

usable water supply can be made by fine-scale adjustments to existing water storage and distribution systems, it is clear that the best solutions will be found within the minutiae of technical and experiential information related to the specific water basin.¹⁰⁸ Failure to collaborate on the collection and analysis of such information increases the likelihood that parties to the dispute will miss opportunities, particularly small-scale, low-cost opportunities.

Second, inability to collaborate on the collection and analysis of data guarantees that the initial argument in any process will be over whose data, analysis, or model is correct. This is true whether the process chosen is litigation or some method of alternative dispute resolution. In contrast, the joint data collection and analysis allows parties to negotiate from a common understanding of the technical nature of the problem, resulting in a savings of considerable time and, therefore, money. Thus, an efficient process rests on a foundation of joint data collection and analysis.

2. *Less Adversity—Less Time*

In addition to saving time through potential use of joint data collection and analysis, negotiation saves time by eliminating some of the adversarial posturing inherent in litigation. The competitive nature of litigation can cause parties to avoid early disclosure of, or even lose sight of, their true underlying interests in the outcome. The result—similar to the failure to develop data jointly—is that parties miss opportunities for satisfactory solutions.¹⁰⁹

Similar to the cost saving measures, reduction in adversity is not inherent in a negotiation process. Negotiation simply provides greater flexibility to build means of reducing adversity into design of the process. Early disclosure of interests and avoidance of posturing and finger-pointing requires leadership among the parties, ground rules on negotiation, and, in some cases, assistance by a neutral third party. Subsequent sections will discuss building these features into the process, and address recommendations.

Increasing process efficiency by reducing cost, time, and adversity, and thus providing a forum for a broader and less privileged group of participants, assists in rendering the process fair. However, additional features are necessary to assure that all interests have a voice in the process and a stake in the outcome.

¹⁰⁸ Such information consists of “specific’ knowledge—the knowledge of time, place, and experience.” Lynn Scarlett, *Evolutionary Ecology: A New Environmental Vision*, REASON, May 1996, at 21 (referring to the idea posed by Nobel Laureate F.A. Hayek).

¹⁰⁹ Menkel-Meadow, *supra* note 54, at 776.

C. Fair Process

A fair process in water dispute resolution is one that provides a forum for the airing and consideration of all interests including those of the public-at-large.¹¹⁰ Concerns raised with alternative dispute resolution, and in particular with settlement of environmental or natural resource disputes, generally relate to the inclusiveness of the process. Understanding the complexity associated with involving all interests requires recognition that there is both a community and a national interest in the use and health of water and water basins.¹¹¹

Prior to discussing the aspects of a process that would recognize these diverse interests, it is useful to divide them into three concentric categories: 1) water interests, 2) the community interested in the basin, and 3) the public-at-large. Each category is increasingly removed from the water resource. "Water interests" refers to those who use, manage, or benefit from water in the basin. This includes those who run a whitewater kayaking business on the water or rely on fisheries that depend on the water. The "community interested in the basin" includes the water interests, but also incorporates those interested in the economy of the basin without direct ties to water, those who recreate in the basin, those in downstream basins who might be affected by changes in water use in the basin, and any other person who is interested in the economic, social, or environmental aspects of the particular water basin. Finally, the "public-at-large" includes the community interested in the basin and the water interests, but also includes the general state, tribal, and national public.

Although a single individual may be a member of all three groups, the interests in each category are sufficiently different to warrant separate consideration. In addition, the interests in each group are increasingly difficult to represent in a dispute resolution process, and require separate consideration to avoid a solution that satisfies only local interests. The following sections conclude that addressing the concerns of each group requires that: 1) all water interests in the particular basin are present at the table, 2) the concerns of the community interested in the basin, whether local or remote, are heard, and 3) the process is designed to be accountable to the public-at-large.

¹¹⁰ See, e.g., Neuman, *supra* note 56, at 293-94 (asserting that a fair process including all necessary parties is part of both the public and private goods that form the measure of success in a mediated water dispute); Van De Wetering & Adler, *supra* note 37, at 34 (stating that one goal of a process for resolution of water disputes is inclusion of all affected interests).

¹¹¹ WWPRAC REPORT, *supra* note 30, at 5-42 (contrasting the historic limitation of water disputes to those with legal rights to water with the modern view, stating: "Now the values of water are viewed far more broadly, and those with an interest in the ways streams and aquifers are used extend well beyond groups holding water rights or hydropower contracts"), available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt5.pdf>.

1. *Water Interests*

Commentators seem to agree that a fair water dispute resolution process must include all interested and affected parties.¹¹² However, little is written about the fact that inclusiveness of all interests is important not only to the party potentially excluded but also to those remaining at the table. No comprehensive solution is possible, nor is any solution likely to endure, if an affected party has been excluded from the process. The implementation of solutions at the local level requires buy-in by those affected. Buy-in is unlikely to occur if people are excluded from the process. Because of the importance of water, an excluded party whose interests are not met will continue to pursue other avenues until their voice is heard.

A disadvantage of negotiation is that participation is voluntary. No mechanism such as subpoena power exists to force a party to the table. However, voluntary abstention from negotiation affects the durability of the outcome rather than the fairness of the process and will be discussed below.

An additional concern is that without court intervention, the underprivileged will not be afforded effective participation.¹¹³ Participation by the underprivileged requires not only a willingness by more privileged parties to include all water interests at the table, but a mechanism to fund effective participation. As noted above, Native American tribes are historically underprivileged parties in water disputes. Effective participation by tribes requires funding for legal representation to provide a voice, technical representation to evaluate solutions, and joint efforts to generate and analyze data.¹¹⁴ The effectiveness of efforts by Congress and the Bureau of Indian Affairs to provide funding for tribes will be discussed under sections addressing recommendations. Regarding fairness, it is merely important to note that without a means to fund participation, an invitation for a tribe to come to the table is meaningless.

2. *Basin Community*

The avenue for participation by the community interested in the basin is public comment.¹¹⁵ This tends to occur in two different stages of a negotiation process. First, the public voice may be included through public comment on solutions as negotiators discuss them. Second, the

¹¹² See, e.g., Neuman, *supra* note 56, at 293-94; Van De Wetering & Adler, *supra* note 37, at 34.

¹¹³ Edwards, *supra* note 90, at 673.

¹¹⁴ WWPRAC REPORT, *supra* note 30, at 6-10 (discussing the need to fund tribal participation in water right negotiations), available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt6.pdf>.

¹¹⁵ See, e.g., *id.* at 6-43 (The agencies must ensure "that the process has appropriate openness and accountability to the broader public" beyond the interest groups included in the negotiation.).

public voice may be heard during the judicial or legislative process required to approve a final agreement.

Each stage for public comment may be necessary to ensure a fair process. Postponing public comment until final approval can lead to the discovery of major problems after considerable resources have been spent on resolution. In addition, it can result in missed opportunities for those who know the water supply to identify creative solutions. At the same time, judicial or legislative approval of an agreement tends to be more formal than general public comment and raises the likelihood that all comments will be heard and recorded. Moreover, comment in a judicial or legislative hearing is taken and acted on by someone with a more neutral view toward the negotiation. Comment at this stage may ensure that even the most divisive voice is heard.

3. Public Accountability

How to include the more diffuse interests of the public-at-large may be the most difficult problem raised by the trend toward local resolution of basin-wide water disputes. Clearly the entire population of living generations, not to mention future generations, cannot take a seat at the table or provide public comment. However, the importance of water beyond the local community currently living within a particular water basin warrants an effort at broader representation.¹¹⁶

One scholar argues for a moral check on accountability asserting that those at the table should consider effects on third parties or the larger society voluntarily.¹¹⁷ Water disputes are too complex for this approach. Parties at the table have enough difficulty ascertaining their own interests and the affects on them without trying to guess those of a third party. It is most likely that parties will look to governmental entities at the table to represent the public interest; however, adequate representation requires more specific guidelines than a moral check.

At the same time, a balance must be struck between the need to represent the larger public interest and the need to maintain flexibility in the development of a basin-specific solution. Two methods are apparent for giving voice to the larger public interest. Each will be discussed in light of the need to strike that balance.

First, the process may accommodate the public interest by ensuring that the parties at the table negotiate an outcome that complies with standards set at the national level. Thus, adherence to water quality standards promulgated under the Clean Water Act and requirements of the ESA ensure that a national agenda aimed at maintaining a healthy

¹¹⁶ See Edwards, *supra* note 90, at 677 ("Environmental mediation and negotiation present the danger that environmental standards will be set by private groups without the democratic checks of governmental institutions."); Menkel-Meadow, *supra* note 54, at 815 (expressing concern over the accountability of the process to third parties or the larger society); Menkel-Meadow, *supra* note 75, at 25 (expressing concern that alternative dispute resolution robs the public of information by privatizing disputes).

¹¹⁷ Menkel-Meadow, *supra* note 54, at 815 n.239.

water supply and ecosystem plays a role in the outcome. Interpretation of the application of national standards to the specific basin can be accomplished through participation of appropriate representatives of the federal government. This approach is useful for issues that lend themselves to national standards. However, resort to negotiation is generally driven by the perception that a basin specific solution is necessary. National standards for water allocation issues other than water quality or endangered species are unlikely to address the details of a local solution and if modified to do so would thwart the very site-specific solutions that are proving successful.¹¹⁸

Second, interests of the public-at-large that do not lend themselves to national standards may be represented by governmental entities. Negotiations studied in Parts I and II of this series on the Milk and Truckee River Basins included representation of statewide interests by the state governments and tribal interests by tribal representatives. These governmental entities frequently used a process for public comment to determine the public interest. However, state, local, and tribal representatives cannot appropriately represent the national interest. Except for its adherence to federal standards, the current federal role in negotiations involving tribal water rights such as those on the Milk River tends to be narrow, focusing on its role as trustee in representing tribes, or its proprietary interest in a federal project. Designing a process to allow the federal representatives to identify national interests within a basin, while maintaining the integrity of the basin-specific interests the federal government must represent (such as those of the tribes and of federal reclamation projects), will be discussed in subsequent sections recommending means of altering current processes. The approach recommended for federal participation is equally applicable to state, local, and tribal governments struggling to identify the interests of their public.

Each of these approaches is useful in the design of a fair process. Most important is the initial recognition by the parties at the table that the voice of each of the circles of interest, including the public-at-large, is legitimate, that public input is not merely a procedural step, and that solutions will be both better and more durable if the public interest is taken into account. This leads to the third element of an adequate process: durability of the outcome.

D. Durable Outcome

Key to the viability of a process for resolution of water disputes is the likelihood of achieving a durable outcome. Processes designed to save money and time that include everyone accomplish little if the focus on process comes at the expense of a quality substantive outcome.

¹¹⁸ See, e.g., Getches, *supra* note 7, at 58 (noting that one problem with a federal role in compromise is that it risks substituting national for local interests).

“Durability” should not be confused with “finality.”¹¹⁹ A key difference between litigation and negotiation is that negotiated solutions can recognize that the variability and complexity of water supply and demand sometimes render a “final” resolution of all water issues impossible and, more importantly, undesirable. Settlement must set the stage for a continuing dialogue to address changes efficiently and fairly when they occur. Instead of finality, durable outcomes should achieve: 1) a comprehensive solution, 2) equitable distribution of use of the water resource both within the current generation and between current and future generations, and 3) relative ease of implementation, including institutions for a continuing dialogue among those sharing the water resource.

1. A Comprehensive Solution

A durable outcome is comprehensive because it includes all interested parties and all major issues. First, just as inclusion of all interested parties is essential to the fairness of a negotiation process, it is also essential to the durability of the outcome. It is in the interest of each party to include all other interested parties to avoid subsequent erosion of a solution or barriers to implementation of a solution because parties excluded from negotiation attack through other avenues. In the Truckee River Basin negotiations covered in Part II of this series, a key party—the Truckee-Carson Irrigation District (TCID)—refused to participate in the settlement. Parties who remained at the table believe the first attack on the final agreement will come from TCID.¹²⁰

Second, comprehensive coverage of the issues, at least those that are interrelated, is essential to a durable outcome. The Western Water Policy Review Advisory Commission considers a comprehensive solution to cover water quality as well as quantity, surface and groundwater, human needs, and the environment.¹²¹ The complexity of a settlement this broad may render it impossible to achieve in a single agreement. A “comprehensive” solution need not solve all water related problems in a single step. However, at any one stage it is important to include all interrelated issues to avoid a solution that cannot be implemented. For example, if federal water quality standards can be met under certain

¹¹⁹ The primary position of the United States Department of Justice in Indian water right negotiations is that the outcome must achieve finality. John Lange, United States Department of Justice Attorney, Statement made During Negotiations Between the United States, the Chippewa Cree Tribe of the Rocky Boy's Reservation, and the State of Montana (1995).

¹²⁰ Telephone Interview with Mike Turnipseed, Director, Nevada Department of Conservation and Natural Resources (Apr. 30, 2002). The United States as owner of the federal project, and the State of Nevada as the authority over the project water rights, have sought to maintain the integrity of the project water rights in negotiations. *Id.*; Telephone Interview with William Bettenburg, United States Department of the Interior (June 24, 2002). As a result, a challenge by TCID, though time consuming, may not be successful. *Id.*

¹²¹ WWPRAC REPORT, *supra* note 30, at 5-15, available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt5.pdf>.

scenarios of water allocation and not under others, water quality must be considered in choosing options for water allocation. By establishing basin-wide forums such as these discussed below, for continuing resolution of disputes and to implement solutions during initial efforts to solve basin-wide problems, negotiators can set the stage for additional steps to reach a comprehensive solution over time.

2. Equitable Distribution of Use of the Water Resource

Equitable distribution of use of the water resource requires solutions that satisfy both intragenerational and intergenerational equity. First, equity within this generation requires that decisions on water distribution fairly distribute the rights to enjoy the use of the water, and allocate water according to current values. Second, equity between generations requires a healthy aquatic and riparian ecosystem, a viable water infrastructure, and institutions flexible enough to adapt to changing circumstances to be passed to future generations.¹²² These requirements for intergenerational equity are reflected in the concept of “sustainable use.” Solutions that may aid in achieving the requirements of intragenerational equity—a fair distribution of the rights to enjoy use of water and allocation according to current values—will be discussed first, followed by a discussion of sustainable use and its relation to intragenerational and intergenerational equity.

a. Intragenerational Equity

The suggestion that a durable solution requires a fair distribution of the right to enjoy the use of water and allocation of that water according to current values is not intended as a radical social restructuring of water allocation schemes. To be “fair,” solutions must acknowledge existing water rights under both federal and state law. At the same time, solutions must account for changing needs. In terms of western water, this balance can be struck if an agreement includes the following elements: 1) means to reallocate water based on changing need and value that fully compensate any lost right to water (taking into account that there is generally not a right to waste water), 2) provisions to address needs during drought, 3) measures to ensure water is not wasted for one use while another goes thirsty, and 4) provisions to ensure that these measures make water available to serve both economic and other uses.

Two avenues for reallocation of water to meet current needs and values are being developed throughout the West. First, marketing of water to provide either a drought water supply,¹²³ or to move water from

¹²² See Getches, *supra* note 6, at 523 (“The goals of water policy tend to be confined to respecting existing rights and rewarding development. Western states are lately realizing that economic stability, human health, ecological balance, and survival of urban and rural communities all have a nexus in water.”).

¹²³ See, e.g., Dellapenna, *supra* note 6, at 360–62 (discussing water banks).

agricultural to urban needs,¹²⁴ provides an avenue for reallocation in which the original water users receive sufficient benefit to either improve the efficiency of their water use or alter their economic base. As discussed below in the context of the two case studies, a true market would ensure that water flows to its highest economic use, but may do nothing to repair environmental harm or distribute water to the underprivileged. Thus, mechanisms for retention of strong governmental control and measures to allow allocation to noneconomic uses are recommended. Second, reallocation has been imposed through enforcement of federal laws such as the ESA.¹²⁵ This second method is highly controversial and questions of whether the reallocation amounts to a Fifth Amendment taking,¹²⁶ and the degree of certainty necessary regarding the water needs of the endangered species,¹²⁷ have yet to be resolved. Nevertheless, the very lack of clear legal guidelines provides the uncertainty necessary to bring parties to the table.

Consideration of a fair distribution of water includes serving the needs of the underprivileged. Indian water development has not kept pace with that of their neighbors.¹²⁸ To provide a fair distribution of water use in any basin where tribes hold a share in the water resource, the solution must remedy this inequity. Currently, the primary barrier to development of tribal water resources is not the inability to reach settlement, but the inability to fund development once settlement is reached. Recommendations for improving funding are included below.

b. Intergenerational Equity: Sustainable Use

Passing healthy ecosystems, viable water infrastructure, and adaptable institutions to future generations—all essential elements in obtaining an equitable distribution of use of the water resource—are reflected in the concept of sustainable use. Sustainable use of water resources is much talked about in theory and poorly understood in practice. Sustainable use of water has been defined as 1) “development that meets the needs of the present without compromising the ability of

¹²⁴ TROA DRAFT EIS/EIR, *supra* note 25, at 3-20 (describing the purchase of 40,910 acre-feet of water by Sierra Pacific Power Company for transfer from agricultural to urban uses in the Reno/Sparks area of Nevada).

¹²⁵ See, e.g., *Tulare Lake Basin Water Storage District v. United States*, 49 Fed. Cl. 313, 318–19 (2001); Melinda Harm Benson, *The Tulare Case: Water Rights, The Endangered Species Act, and the Fifth Amendment*, 32 ENVTL. L. 551, 559 (2002); Dworkin, *supra* note 83 (describing irrigators fight against reallocation of water for endangered species in the Klamath Basin of Oregon).

¹²⁶ Benson, *supra* note 125, at 561–62.

¹²⁷ See, e.g., INTERIM REPORT FROM THE COMMITTEE ON ENDANGERED AND THREATENED FISHES IN THE KLAMATH RIVER BASIN, SCIENTIFIC EVALUATION OF BIOLOGICAL OPINIONS ON ENDANGERED AND THREATENED FISHES IN THE KLAMATH RIVER BASIN, 1–4 (2002) (questioning the scientific support for the Biological Opinions of the United States Fish and Wildlife Service and the National Marine Fisheries Service calling for increased lake levels and instream flows in the Klamath Basin of Oregon).

¹²⁸ McCool, *supra* note 41, at 120–21.

future generations to meet their own needs”¹²⁹ or 2) “use of water that supports the ability of human society to endure and flourish into the indefinite future without undermining the integrity of the hydrological cycle or the ecological systems that depend on it.”¹³⁰ Both definitions paint with such a broad brush that they fail to define the measure of sustainable use within a given water basin. The western basins addressed in this series are already heavily developed. Thus, the question is not how to avoid altering a natural system, but how to alter a developed system to render it, and the ecosystem supporting it, sustainable. With this question in mind, the following sections attempt to parse these broad definitions into a form that can be used to judge the sustainability of negotiated solutions in a specific developed water basin.

If the concept of sustainability is to reflect both environmental and human needs, it must incorporate a framework that assigns value to more than a purely natural system. Goodland and Daly provide a useful framework to evaluate sustainability of a natural resource when the human element is an integral part of the ecosystem. To account for the need for development to sustain human life, they divide the legacy left to future generations into the following: “natural,” “manufactured,” and “human” or “social” capital.¹³¹ “Natural capital” is defined as “our natural environment.”¹³² “Manufactured capital” is the human created infrastructure.¹³³ Finally, “human or social capital” is the people and the institutions, information, knowledge, and culture they create.¹³⁴ The categories are not interchangeable. Instead, a sustainable level of each type of capital must be maintained.¹³⁵ Thus, use of nonrenewable resources requires equal investment in maintaining or developing their substitutes.¹³⁶ Use of a renewable resource, like water, requires that the use not degenerate the value of the resource.¹³⁷

For example, the huge water projects built in the western United States in the early twentieth century by previous generations have given this generation cheap hydropower and less dependence on fossil fuels. Nevertheless, the development occurred at considerable cost to our natural legacy.¹³⁸ By completely altering the flow of rivers, natural capital

¹²⁹ WWPRAC REPORT, *supra* note 30, at 3-1 (quoting REPORT OF THE PRESIDENT’S COUNCIL ON SUSTAINABLE DEVELOPMENT (1996)), *available at* <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt3.pdf>.

¹³⁰ MACDONNELL, *supra* note 6, at 232.

¹³¹ Robert Goodland & Herman Daly, *Environmental Sustainability: Universal and Non-Negotiable*, 6 *ECOLOGICAL APPLICATIONS* 1002, 1002-17 (1996), *reprinted in* INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 154, 155-61 (David Hunter et al. eds., 2d ed. 2002).

¹³² *Id.* at 156.

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Id.* at 157.

¹³⁶ *Id.* at 158.

¹³⁷ *Id.*

¹³⁸ *See, e.g.*, REISNER, *supra* note 51, at 53 (noting that development of the rivers of the West was accomplished at considerable environmental cost); Doremus, *supra* note 33, at 367 (discussing the detrimental effects of water development on fisheries); WWPRAC REPORT,

was sacrificed for manufactured capital. Some conversion of natural to manufactured capital is necessary to achieve the quality of life we enjoy in the United States. A sustainable solution need not eliminate water infrastructure. In fact, it must not do so if it is to meet the needs of current generations. However, where the conversion of natural to manufactured capital becomes unsustainable is in the failure to account for external environmental costs in water development. To remedy this failure, modern durable solutions must both repair existing damage to natural capital and minimize future damage. Sound water infrastructure that minimizes damage to natural capital and efficiently uses the resource benefits both current and future generations.

Sustainable solutions that improve the availability of water for human use while reducing the effects of current development on the natural system include modifications and efficiency improvements to existing water infrastructure, off-stream storage, and groundwater storage.¹³⁹ In addition, efforts to alter storage management to allow river flow to mimic a more natural system—*i.e.*, high spring flows—provide benefits in terms of fish habitat, channel maintenance, and water quality.¹⁴⁰

Bringing the heavily developed western rivers back to sustainable systems also requires the elimination of factors that promote use that cannot be sustained either economically or environmentally. Among the current practices considered to promote unsustainable use of water resources are the huge federal subsidies associated with irrigated agriculture.¹⁴¹ Subsidies eliminate incentive to use water efficiently and distort the true market value of the particular use.¹⁴² This in turn raises the cost of reallocation of water to meet other needs.

In addition to maintenance of natural capital and development of manufactured capital, sustainable use requires the development of adequate human or social capital.¹⁴³ In the water context, this requires the development of knowledge about the water resource and the effects of development on that resource. In addition, future generations will benefit from the establishment of institutions with sufficient flexibility to adapt

supra note 30, at 2-12 to 2-14 (summarizing the detrimental effects of water development on rivers) *available at* <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt2.pdf>.

¹³⁹ WWPRAC REPORT, *supra* note 30, at 3-9 to 3-10, *available at* <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt2.pdf>.

¹⁴⁰ *See, e.g.*, TRUCKEE RIVER ATLAS, *supra* note 23, 120 (reprinting Preliminary Settlement Agreement, wherein parties agreed to hold water from the Truckee River in storage for release to provide high spring flows for fish spawn). *See generally* Fred P. Bosselman & A. Dan Tarlock, *The Influence of Ecological Science on American Law: An Introduction*, 69 CHI.-KENT L. REV. 847, 870-71 (1998) (advocating “manage[ment of] nature to mimic natural systems.”).

¹⁴¹ WWPRAC REPORT, *supra* note 30, at 3-8, *available at* <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt3.pdf>; *id.* at 6-35, *available at* <http://www.waterwest.org/readingfiles/fedreportfiles/chapt6.pdf>; *see also* Tarlock, *supra* note 7, at 111 (indicating that sustainability requires accurate pricing of water).

¹⁴² *See* Tarlock, *supra* note 7, at 111.

¹⁴³ Goodland & Daly, *supra* note 131, at 158-59.

water management to changes in supply and demand and to resolve future disputes over water as they arise. As recommended by Powell,¹⁴⁴ these institutions must mimic basin boundaries by including participation by each jurisdiction allocating or managing water within the basin.

These features—a comprehensive solution in both participation and issues and an equitable distribution of the benefits of use of the water resource, both among members of living generations and between living generations and future generations—form the basic framework for evaluation of a durable solution. However, any solution, no matter how comprehensive and equitable on paper, will not endure if implementation cannot be accomplished with relative ease. This is the final factor in a durable solution.

3. Ease of Implementation

The ease with which any solution can be implemented turns on 1) the need for additional steps for finalization, 2) the simplicity and flexibility of administrative measures, 3) the likelihood of funding for implementation, and 4) the adequacy of mechanisms to resolve future disputes.

*a. Steps to Finalization*¹⁴⁵

Resolution of water disputes addressing basin-wide problems frequently requires multiple steps to achieve final approval. Particularly where governmental entities are at the table, these steps may involve substantive review and public hearings or legal proceedings. For example, if tribal water is at issue, congressional approval may be necessary. At the state level, both the Truckee and Milk River Basin agreements described in Parts I and II of this series require state court approval to assure that the agreements become part of any court decree or administration of water rights. Tribal approval often includes a referendum by the voting membership of the tribe.

Each of these steps involves considerable effort to educate a widening circle of people necessary to approve an agreement. Each of these steps can bring an agreement to a halt. However, given the need to maintain accountability to the public-at-large, it is crucial that these steps remain a part of any process. Thus, a process must be designed to increase the likelihood that these steps will proceed smoothly.

Early involvement of legislative and congressional staff, of local congressional representatives and legislators, and of the public in general can facilitate final approval. A leadership role by local legislators and congressional representatives will greatly enhance both the speed and likelihood of final approval.

¹⁴⁴ See STEGNER, *supra* note 48.

¹⁴⁵ The term “finalization” is used to reflect the fact that, even though a “final agreement” may be reached by representative of the parties to a negotiation, additional steps may be necessary to actually bind the parties to the agreement.

Finally, of greatest importance is arguably the mere recognition that these steps exist, are necessary, and will take time. Dedication by parties to a negotiation of adequate funding and staff, including staff familiar with legislative or court approval processes, is essential. A process viewed as complete once an agreement is negotiated may never lead to any more than a paper solution.

b. Simple, Flexible Administration

Administrative simplicity and flexibility are key to easy implementation. One certainty does exist in western water—supply and demand will change. A process that results in a solution so detailed that it cannot adapt to these changed circumstances will not endure.¹⁴⁶ Adaptive management is a term used to describe management that includes monitoring to detect the effects of a particular action, and a process for change in management if monitoring indicates a need for change.¹⁴⁷ Adaptive management can provide the flexibility necessary to meet changing supply and demand, and the information required to know when change has occurred.

Flexibility, though important, will also prove awkward if methods of allocating water or monitoring compliance are too complex. Simplicity is key, particularly in the allocation of water between jurisdictions. A process that bases major allocation decisions between jurisdictions on complex models is likely to fail or become obsolete in a brief period of time. A method that requires frequent agreement between high-level representatives of, or legislative bodies of, jurisdictions prior to daily or weekly water allocation is also likely to fail. Simple measures of compliance and up-front rules on how to comply will endure.

Two process elements aid saddling minor adjustment to change with high level approval processes. A framework agreement generally requires approval at the level of legislatures, Congress, and the courts. By delegating the details of implementation to a separate process, such approval is not required each time an adjustment in administration is necessary. Second, joint gathering and analysis of technical data required for negotiation will not only facilitate the negotiation itself, but will provide the basis for formulation of implementation plans. The data gathered, the models developed, and the relationships built will facilitate implementation.

c. Funding

A solution must be funded to be implemented. The days of major federal spending on large-scale water infrastructure are over.¹⁴⁸ Solutions

¹⁴⁶ See, e.g., Neuman, *supra* note 6, at 11,432 (advocating the use of adaptive management to address variability in water systems).

¹⁴⁷ See, e.g., *id.*

¹⁴⁸ See, e.g., MACDONNELL, *supra* note 6, at 237.

must work within the limits of existing infrastructure and minimize costs to obtain funding. Local entities involved in negotiation must look to solutions that are consistent with their own budgetary constraints. Nevertheless, as noted above, enormous inequity exists in the current water infrastructure when tribal water development is compared to that of their neighbors. The current process of funding tribal water development through the normal Bureau of Indian Affairs budgetary process merely pits that development against other tribal programs. Efforts to improve funding in this area will be discussed in the sections addressing recommendations.

In addition, the enormous environmental cost of development of the rivers of the West and the cost of much needed repair to existing development are debts that must be paid by this generation if we are to leave a sustainable resource to future generations. Sections discussing recommendations point to the need for a national commitment to achieve this goal.

d. Future Dispute Resolution

Finally, implementation of a durable solution must include mechanisms for future dispute resolution. Unlike litigation, a negotiated solution may act prospectively to consider the likelihood that with changes in supply and demand, new conflicts will arise. An important aspect of the legacy left to future generations is a means to resolve those disputes without starting over. Thus, once again, the parties at the table must recognize that negotiation of an agreement on allocation and management of water merely begins the process of improving water supply in western water basins.

E. An Efficient and Fair Process Leading to a Durable Solution

What appears in the preceding paragraphs is a framework for a process that is necessary to formulate an enduring solution. To summarize:

- 1) An efficient process achieves resolution of the dispute without excessive delay or cost.
- 2) A fair process provides a forum for the airing of all interests.
 - a) Water use interests are invited to the table.
 - b) Basin community interests are allowed comment while solutions are being formulated.
 - c) The interest of the public-at-large is represented by both national standards and the appropriate level of governmental representation.
- 3) A durable solution:
 - a) is comprehensive with respect to both parties and issues;

- b) achieves an equitable distribution of water resources benefits both within the current generation and between generations; and
- c) can be implemented with relative ease.

These abstract elements of an efficient and fair process that result in a durable solution are best understood in application to real problems. The following section takes this framework and applies it to the processes used in the Milk River Basin of Montana and the Truckee River Basin of California and Nevada.

IV. APPLICATION OF AN EFFICIENT AND FAIR PROCESS AND A DURABLE SOLUTION

Solutions arrived at in negotiations among representatives of the United States, the State of Montana, and the Gros Ventre and Assiniboine Tribes of the Fort Belknap Reservation, pertaining to basin-wide management and allocation of water in the Milk River Basin of Montana, are discussed in Part I of this series.¹⁴⁹ Solutions arrived at in negotiations among representatives of the United States, the States of Nevada and California, the Pyramid Lake Paiute Indian Tribe, and Sierra Pacific Power Company, pertaining to basin-wide management and allocation of stored water in the Truckee River Basin of California and Nevada, are discussed in Part II of this series.¹⁵⁰ The following section analyzes those same solutions and the processes used to achieve them in the context of the framework outlined above for seeking an efficient, fair, and durable outcome.

A. The Milk River Basin

The Milk River in north-central Montana is a testament to our changing federal policy toward the development and use of public lands and water in the West. In 1805, when Meriwether Lewis described the milky stream laden with glacial silt entering the Missouri River, the stream's banks were home to buffalo, grizzly bear, and wolf. The Blackfeet and Sioux Indians hunted the territory of the Milk River. Today, the grizzly bear and wolf are gone and the only buffalo are in an introduced herd on the Fort Belknap Reservation. The Milk River Basin is now home to four Indian reservations and numerous Indian allotments, and it is the site of one of the earliest reclamation projects developed by the federal government. The basin is also the locus of the dispute that led to the *Winters* Doctrine—the recognition by the United States Supreme Court in 1908 of Indian and federal reserved water rights.¹⁵¹ More recently in the basin history a national park and several national wildlife refuges have been established, and bull trout (*Salvelinus confluentus*)—a listed

¹⁴⁹ Part I, *supra* note 9.

¹⁵⁰ Part II, *supra* note 9.

¹⁵¹ *Winters v. United States*, 207 U.S. 564 (1908).

species under the ESA—have been found in its upper tributaries. The recognition of reserved water rights in 1908 did not settle the quantification of those rights.

The Montana Water Use Act¹⁵² established a general adjudication for all water rights developed under state law prior to July 1, 1973,¹⁵³ and for all federal and Indian reserved water rights.¹⁵⁴ Reserved water rights occur in every major water basin in Montana.¹⁵⁵ Montana is a headwater state for the Columbia, Missouri, and Saskatchewan Rivers. The state contains 28% federal or Tribal land, 69% of which is reserved.¹⁵⁶ Of the 85 subbasins in the state identified for purposes of water rights adjudication, 70 contain claims for reserved water rights.¹⁵⁷ As part of the 1979 amendments to the Montana Water Use Act, the Montana legislature established the Montana Reserved Water Rights Compact Commission (Compact Commission),¹⁵⁸ to negotiate “compacts for the equitable division and apportionment of waters between the state and its people and the several Indian tribes claiming reserved water rights within the state.”¹⁵⁹ The Compact Commission consists of:

- (a) two members of the house of representatives appointed by the speaker, each from a different political party;
- (b) two members of the senate appointed by the president, each from a different political party;
- (c) four members designated by the governor; and
- (d) one member designated by the attorney general.¹⁶⁰

The Compact Commission acts on behalf of the state and its citizens as a whole. It represents the interests of water users as part of the general state interest, but not as individuals.¹⁶¹ To ensure that the interests of the public and individual water users are addressed, two additional steps are

¹⁵² MONT. CODE ANN. §§ 85-2-1-1 to -907 (2001).

¹⁵³ *Id.* §§ 85-2-211 to -243.

¹⁵⁴ *Id.* §§ 85-2-313, -701 to -705.

¹⁵⁵ Based on claims filed with the Montana Water Court for purposes of the statewide general stream adjudication.

¹⁵⁶ U.S. BUREAU OF THE CENSUS, STATISTICAL ABSTRACT OF THE U.S. 219, tbl. 358 (1993).

¹⁵⁷ Montana law identifies four water divisions in the State: the Yellowstone River Basin, the lower Missouri River Basin, the upper Missouri River Basin, and the Clark Fork River Basin. MONT. CODE ANN. § 3-7-102 (2001). Within those four divisions, the Montana Water Court recognizes eighty-five subbasins for purposes of adjudications. Ten of the subbasins comprise the Milk River Basin. *Id.*

¹⁵⁸ *Id.* § 2-15-213.

¹⁵⁹ *Id.* §§ 85-2-701(2), -702.

¹⁶⁰ *Id.* § 2-15-212(a)–(d). This composition of legislative and executive appointees has never been challenged in Montana on the basis of separation of powers. Recently the California Coastal Commission, with a similar composition, has been successfully challenged on that basis; however that decision may have turned on the lack of fixed terms for the commissioners. *Marine Forests Soc’y v. Cal. Coastal Comm’n*, 128 Cal. Rptr. 2d 869 (Cal. Ct. App. 2002), *rev’d*, 132 Cal. Rptr. 2d 527 (2003) (requesting that parties brief unrelated issues). The Montana commissioners have fixed terms.

¹⁶¹ *See* MONT. CODE ANN § 2-15-212 (2001) (indicating that “the commission is acting on behalf of the governor”).

required by Montana law. First, negotiated compacts must be ratified by the state legislature.¹⁶² Second, after ratification a compact must be filed with the Montana Water Court, which then considers the rights of individual water users claiming water in the state adjudication, and enters the negotiated water right in a final decree, integrating it with other water rights in the basin.¹⁶³

In 1979, when the State of Montana launched a new program for the resolution of reserved water rights through negotiation,¹⁶⁴ it identified the Milk River Basin as its highest priority¹⁶⁵ because the demand for water already exceeded supply and five Indian reservations claimed water rights in the basin that were not yet quantified or developed. In 1997, after years of data collection, negotiations began in earnest among the State, the Gros Ventre and Assiniboine Tribes of the Fort Belknap Reservation, and the United States. Similar to tribal water negotiations throughout the West, negotiators soon realized that no settlement would be possible without addressing issues of basin-wide concern.

1. Efficiency

The agreement on the Milk River arose out of efforts to quantify the reserved water rights of the Gros Ventre and Assiniboine Tribes of the Fort Belknap Reservation. The Reservation and the basin upstream of it was the location of the water dispute that in 1908 led to the recognition of reserved water rights by the United States Supreme Court.¹⁶⁶ The Reservation is located at approximately the mid-point on a river that includes the numerous jurisdictions described above. Delivery of water to Fort Belknap requires coordination among these entities. Diversions upstream can prevent that delivery. Yet in 1997, ninety years after *Winters*, when negotiations began in earnest to resolve the Tribes' water rights, no comprehensive tool existed for coordinated management of water in the Milk River Basin. The agreement negotiated between 1997 and 2001 will probably take at least an additional five years to achieve final approval.¹⁶⁷ Thus, the dispute has taken roughly one hundred years to settle. This is not efficient. However, when broken down into years spent seeking solutions in court and years spent in negotiation, it is clear that the negotiation effort moved at a rapid pace.

The State of Montana established a process for negotiated resolution of tribal water rights in 1979.¹⁶⁸ Between 1979 and 1995, the parties to the Fort Belknap Compact invested in joint development of a hydrologic

¹⁶² *Id.* § 85-2-702(2).

¹⁶³ *Id.* § 85-2-702(3).

¹⁶⁴ *Id.* §§ 85-2-701 to -708.

¹⁶⁵ *Id.* § 85-2-321(2).

¹⁶⁶ *Winters v. United States*, 207 U.S. 564, 578 (1908).

¹⁶⁷ Water Rights Compact Entered Into by the State of Montana, the Fort Belknap Indian Community of the Fort Belknap Reservation, and the United States of America [hereinafter Fort Belknap Compact], *reprinted in* MONT. CODE ANN. § 85-20-1001 (2001).

¹⁶⁸ MONT. CODE ANN. §§ 85-2-701 to -703 (2001).

model of the Milk River,¹⁶⁹ a Geographic Information System (GIS) database of irrigation in the Milk River Basin, and joint review of public information on arability of soils on the Fort Belknap Reservation and irrigation within the Reclamation project.¹⁷⁰ That joint data-gathering effort led to the rapid settlement of water rights of the Fort Belknap Reservation in the period between 1997 and 2001, including use of the GIS database on irrigation as a basin-wide management and enforcement tool. Furthermore, the three year negotiation process not only led to quantification of the water rights of the Tribes, but to a tool for comprehensive management and enforcement to ensure delivery of that right. Through negotiation the parties were able to avoid a piecemeal approach to solving problems across jurisdictional boundaries.

2. Fairness

The fairness element turns on the inclusion of a widening circle of interests from water interests, to basin community interests, to the public-at-large. Each interest is viewed separately for the Milk River negotiations.

a. Water Interests

The parties at the table in the Milk River negotiations were the United States, representing the interests of the Tribes, the U.S. Bureau of Reclamation, and the U.S. Fish and Wildlife Service; the State of Montana, representing the interests of the State and of the people claiming water rights pursuant to state law;¹⁷¹ and the Fort Belknap Reservation. The irrigation districts were absent from the table. Under Montana law, their interests and those of other off-Reservation water users in the basin were represented by the State of Montana. Montana takes the position that negotiations with tribes must be on a government-to-government basis.¹⁷² To ensure that the water right claimants in the basin have a voice at the table, the Commission representing Montana provides for extensive public involvement, including individual meetings with irrigators and irrigation districts.¹⁷³ However, the Commission also takes the position that if a conflict arises between general state interests and the interests of individual water users, the state interests will prevail.¹⁷⁴ Examples of

¹⁶⁹ The HydROSS model of the Milk River was initially developed by the United States Bureau of Reclamation, but reviewed, modified, and implemented jointly by the parties. Telephone Interview with Bob Levitan, Hydrologist, Montana Reserved Water Rights Compact Commission (June 25, 2002).

¹⁷⁰ Telephone Interview with Bill Greiman, *supra* note 15.

¹⁷¹ See Reclamation Act, § 8, 32 Stat. 388 (1902) (codified as amended at 43 U.S.C. § 383 (2000)) (requiring that water rights for Reclamation projects be obtained pursuant to state law).

¹⁷² Former Montana Governor Marc Racicot, Proclamation (March 10, 1993); Montana Governor Judy Martz, Proclamation (June 27, 2001).

¹⁷³ Telephone Interview with Susan Cottingham, Program Manager, Montana Reserved Water Rights Compact Commission (June 24, 2002).

¹⁷⁴ *Id.*

other state interests include: interests of the Department of Fish, Wildlife, and Parks in fisheries and instream flow; interest in resolving the water conflict; and interest in keeping the settlement's impact on the state treasury to a minimum.¹⁷⁵ To give voice to individual water users in light of the fact that their concerns may be subordinated to other state concerns in negotiations, water right claimants have the opportunity to object to entry of the agreement in a decree by the Montana Water Court.¹⁷⁶ The court has the choice of either approving or voiding the agreement.¹⁷⁷ Although this step ensures that no agreement will become final if it infringes on the rights of water right claimants, it does nothing to obtain their proactive participation in developing solutions. In Montana, that is left to the voluntary participation of water users in the public participation process established by the Commission.

In addition to state efforts to involve the public, during the negotiations the representatives of the U.S. Bureau of Reclamation met extensively with irrigation districts.¹⁷⁸ However, the role of the federal team in negotiations is as trustee for the tribes. Thus, although the Bureau of Reclamation provided substantial technical information concerning the federal project, it was not participating in negotiations as a representative of the interests of the project water users.

Filtering of the participation of local water interests through state representatives may prevent full consideration of local solutions. Of equal importance, absence of representatives of irrigation districts from the table may hinder implementation. Local buy-in by those who will live with the results of a negotiation on a daily basis is essential to the full realization of its benefits. In addition, by allowing private interests to participate at the table, state and federal governments can represent the general public interest with less internal conflict over local interests.¹⁷⁹

Although the State's respect for the governmental status of the Tribes is important, respect for tribal status has not prevented the inclusion of important private interests in negotiations in the Truckee River Basin. Though certainly an important consideration, the interests of the State and Tribe in a fair and durable agreement weigh in favor of the presence of private parties at the table.

¹⁷⁵ *Id.*

¹⁷⁶ MONT. CODE ANN. §§ 85-2-231, -233, -702(3) (2001).

¹⁷⁷ *Id.* § 85-2-233(8).

¹⁷⁸ Telephone Interview with Richard Aldrich, Field Solicitor, United States Department of the Interior (June 13, 2001).

¹⁷⁹ The balance between governmental representation and participation by private parties must also take into account the level of organization of local water interests. Where private parties are organized into irrigation or water districts, their participation can be accommodated without overwhelming the process. Where water interests are not organized, process efficiency may be more appropriately served through representation by governmental entities. Nevertheless, those interests and the process will be better served if that governmental representation is local—*e.g.*, the county level.

b. Basin Community Interests

Interests of the wider basin community surface at two levels in the Milk River Basin negotiations. First, the extensive public involvement of the Compact Commission includes numerous public meetings within the basin to obtain comment from local interests in general in addition to water interests.¹⁸⁰ This process was also undertaken by the Tribes on the Fort Belknap Reservation to obtain comment from the Reservation community.¹⁸¹ Both efforts had varying degrees of success in obtaining attendance at meetings.¹⁸² Representatives in negotiations had greater success when they asked to be included on the agenda of scheduled local meetings such as those of local Conservation Districts.¹⁸³ Public comment did result in numerous substantive changes to the agreement affecting water allocation and solutions to management and enforcement problems to meet the concerns of the local community.¹⁸⁴ The federal representatives to negotiations undertook no effort at public involvement other than the meetings with the irrigation districts discussed above. However, federal representatives attended and were available for questions at most Compact Commission public meetings.¹⁸⁵

Second, each governmental entity requires a final approval process that includes either representative or direct vote. The State of Montana requires legislative approval of any reserved water right settlement.¹⁸⁶ Legislative hearings on the Fort Belknap compact included testimony from irrigation districts.¹⁸⁷ Congressional and tribal approval of the Fort Belknap Compact are pending. Tribal approval will include a referendum vote by the eligible membership of the Fort Belknap Indian Community.¹⁸⁸

Both the public involvement and the finalization process in the Milk River Basin assure ample opportunity for comment by basin community interests. By including an early phase of public involvement, the process in the Milk River negotiations ensures that comments will be received during the formulation of solutions when it can have an effect on the outcome.

¹⁸⁰ Telephone Interview with Susan Cottingham, *supra* note 173.

¹⁸¹ Telephone Interview with Chris Leahy, Fredricks, Pelcyger, & Hester (June 24, 2002) (representing the Gros Ventre and Assiniboine Tribes of the Fort Belknap Reservation).

¹⁸² Telephone Interview with Susan Cottingham, *supra* note 173; Telephone Interview with Chris Leahy, *supra* note 181.

¹⁸³ Telephone Interview with Susan Cottingham, *supra* note 173.

¹⁸⁴ *Id.*; Telephone Interview with Chris Leahy, *supra* note 181.

¹⁸⁵ Telephone Interview with Richard Aldrich, *supra* note 178.

¹⁸⁶ MONT. CODE ANN. § 85-2-702(2) (2001).

¹⁸⁷ Telephone Interview with Susan Cottingham, *supra* note 173 (noting that the testimony of the irrigation districts supported approval of the agreement).

¹⁸⁸ Telephone Interview with Chris Leahy, *supra* note 181.

c. Public Accountability

In the Montana effort, as in many negotiation processes, public accountability is the weak link. However, unlike most other processes, the use of a politically appointed commission¹⁸⁹ provides strong accountability at the state level that can be used as a model for other processes and participation by other levels of government. The presence of state legislators from across the state on the Compact Commission and the political ties of the remaining members not only ease approval of compacts before the Montana Legislature, but also provide a degree of accountability to the general public. This accountability is weakened by the fact that the Commission takes the narrow view that its primary role is to protect existing water use. To remedy this weakness, the legislature could direct the Commission to consider a broader perspective including the health of Montana's watersheds and economic development for its citizens, whether on or off reservations. Leadership would then be necessary to balance these broader interests against the vocal interests of local water users.

The general public represented by the Compact Commission stops at the state line. The role of the Compact Commission as a state entity does not include giving voice to concerns of the national public. The primary means of accountability to the national public are the requirements that any project negotiated comply with national environmental laws including the National Environmental Policy Act (NEPA)¹⁹⁰ and the ESA, and receive congressional approval.¹⁹¹

The NEPA process provides a procedure that allows public comment,¹⁹² but, because it occurs after a project has been authorized by Congress, it is unlikely to alter the choice of a negotiated solution. To give greater weight to environmental standards in influencing the choice of alternatives, the Fort Belknap Compact avoids choosing specific alternatives for improvements to the reclamation project contemplated as part of the agreement.¹⁹³ Instead, the Compact delegates the choice to the Bureau of Reclamation after environmental review.¹⁹⁴

In addition, congressional approval should in theory provide accountability to the national public. However, the structure of

¹⁸⁹ MONT. CODE ANN. § 2-15-212(2) (2001).

¹⁹⁰ National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4370e (2000).

¹⁹¹ Endangered aquatic species are not currently an issue in the Milk River Basin. This may be due to lack of information. However, the fact that the Milk River historically could run dry in the summer before construction of the reclamation project, may also be a factor. U.S. BUREAU OF RECLAMATION, MILK RIVER PROJECT, at <http://www.usbr.gov/dataweb/html/milkriver.html> (last visited Nov. 16, 2003) (describing project history and circumstances leading to construction). The natural habitat of the river was substantially altered long before passage of the Endangered Species Act. *Id.*

¹⁹² 40 C.F.R. § 1503 (2003).

¹⁹³ Fort Belknap Compact, *supra* note 167, art. VI.B.1. The compact, rather than requiring a specific project, requires a specific level of improvement in water supply by any project ultimately chosen. *Id.*

¹⁹⁴ *Id.*

congressional committees involved in water issues generally provides a narrow focus in which economic interests in existing water development, particularly federal projects, prevail.¹⁹⁵ Furthermore, consideration of a larger public interest at the late stage of congressional approval, after interests in negotiated solutions have firmly developed, is arguably too late to influence the details of the agreement. Whether these weaknesses in representation of the public-at-large in designing solutions for the Milk River Basin hindered the durability of the outcome is discussed below.

3. Durability of the Outcome

Evaluation of the durability of the Fort Belknap Compact requires consideration of the comprehensiveness of the solution, whether the solution results in an equitable distribution of water-use benefits both within and between generations, and the ease with which the agreement will be implemented.

a. Comprehensiveness

Comprehensiveness of a solution refers to both the parties represented at the table and the issues addressed. One major player in the United States's portion of the Milk River Basin was not at the table in the negotiations to settle the water rights of the Fort Belknap Reservation: the Blackfeet Tribe. The Blackfeet Reservation is located in the headwaters of the Milk River and is the location of a major interbasin water diversion that serves the federal reclamation project.

However, the Milk River process contemplates a phased approach to settlement of all issues in the basin. The Blackfeet, the United States, and the State of Montana continue to negotiate. In addition, the Fort Belknap Compact delegates study and design of improvements in water infrastructure to the United States Bureau of Reclamation.¹⁹⁶ Any decision to include portions of the upper basin in the improvements cannot be made without an invitation to the Blackfeet Tribe sit at the table.¹⁹⁷

This phased approach recognizes the overwhelming complexity of including every interest in a basin in a single agreement. Attempts in the early 1990s to develop a comprehensive Milk River Basin tribal water settlement failed due to the complexity of relations between parties and the issues.¹⁹⁸ Once again, it remains to be seen if the phased approach will achieve a comprehensive settlement in the end.

Issues addressed in the Fort Belknap Compact are limited to those involving water allocation and use.¹⁹⁹ The agreement addresses both

¹⁹⁵ See generally DANIEL MCCOOL, *COMMAND OF THE WATERS: IRON TRIANGLES, FEDERAL WATER DEVELOPMENT, AND INDIAN WATER* 72-80 (1987).

¹⁹⁶ Fort Belknap Compact, *supra* note 167, art. VI.B.

¹⁹⁷ *Id.* art. VI.A.

¹⁹⁸ Telephone Interview with Susan Cottingham, *supra* note 173.

¹⁹⁹ Fort Belknap Compact, *supra* note 167, art. III.

surface and groundwater, but does not address water quality.²⁰⁰ This lack of connection between water right quantification and water quality reflects the basic separation between the laws governing the two areas in the western United States. However, it is encouraging that the loan program established by the agreement allows consideration of improvements to water quality by the Milk River Coordinating Committee in issuing loans for projects to improve irrigation efficiency.²⁰¹ In addition, a basin-wide coordinating committee, established by the agreement to coordinate management of water between jurisdictions²⁰² creates an institution that the basin could use to address water quality issues in the future.

b. Equitable Distribution of the Benefits

Within the current generation, the Milk River agreement, if ultimately approved and funded, will go a long way to remedy the inequitable distribution of federal water development dollars between the Fort Belknap tribes and their neighbors. Federal funds spent in the twentieth century were allocated predominately to off-reservation water development.²⁰³ Parties to the agreement are currently negotiating the federal bill for approval of the agreement.²⁰⁴ Included in that approval will be authorization of funding for development of tribal water.²⁰⁵

At the same time, the agreement maintains the existing dependence of the rural economy on irrigated agriculture by authorizing study and design to improve the current reclamation project.²⁰⁶ Any significant improvement or renovation to the project will require a substantial federal subsidy in a basin where making a living on irrigated alfalfa and pasture is marginal at best.²⁰⁷ Under the standards proposed by the Western Water Policy Review Advisory Commission, such continued reliance on federal subsidy does not result in sustainable use of the water resource.²⁰⁸

The dilemma facing the citizens of the Milk River Basin is that once a community has gone down the path of economic reliance on a federal irrigation project, it is difficult to turn back. Yet continuing down that path requires continued infusion of federal funds. Studies are currently underway by the United States Bureau of Reclamation to determine exactly what changes to existing water infrastructure in the Milk River Project are appropriate. Unfortunately, without major changes that include broader consideration of a sustainable economic base, future

²⁰⁰ *Id.*

²⁰¹ *Id.* art. IV.C.10.a.3.

²⁰² *Id.* art. IV.C.

²⁰³ COMMISSION STAFF, TECHNICAL REPORT: FORT BELKNAP, *supra* note 10, at 30-31.

²⁰⁴ Telephone Interview with Richard Aldrich, *supra* note 178.

²⁰⁵ *Id.*

²⁰⁶ Fort Belknap Compact, *supra* note 167, art. VI.B.

²⁰⁷ Telephone Interview with Susan Cottingham, *supra* note 173.

²⁰⁸ WWPRAC REPORT *supra* note 30, at 3-8, 3-14 to 3-15, available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt3.pdf>.

generations will likely face similar problems to those currently before the people of the Milk River Basin.

However, it is encouraging that the Fort Belknap Compact established a loan program for improvements in water use efficiency and a drought water bank that can shift water, on a voluntary basis, to critical needs including habitat.²⁰⁹ In addition, indications are that the final solutions for improvement in water infrastructure will most likely work within the confines of the existing system, rather than attempt to develop major new water sources.²¹⁰

Although it is in part due to the investment of previous generations in water infrastructure that Americans have cheap power and do not stand in lines to purchase food, this policy basis for irrigation subsidy is weak when applied to the question of whether there are better uses for public money than subsidizing alfalfa in an arid region with a northern climate. Nevertheless, it is national policy, followed in the early 1900s, that placed the Milk River Basin in its current dilemma. Sustainability requires that new projects move toward the elimination of subsidy. However, the Milk River process indicates that locally driven negotiations are unlikely to eliminate subsidies in basins whose economic bases are dependent upon such subsidies. In a basin with a history that is not one of large profits by agribusiness, but rather one dominated by individual family farms (the goal of twentieth century reclamation policy), this may also reflect a sense that it is inequitable to place the entire burden of past mistakes on the people who have come to rely on irrigated agriculture.

Finally, it should be noted that the decision was made almost a century ago to transform the Milk River from a river into an irrigation delivery system, to varying degrees, for the reservation and nonreservation lands. Without the interbasin transfer of water, the Milk River did not run during dry summer years. No issues concerning fisheries have yet arisen in negotiations on the portion of the river affected by the Fort Belknap Compact.²¹¹ The long use of the Milk River as an irrigation conveyance system and its minor contribution, at its terminus, to the much larger Missouri River, render identification of endangered species reliant on Milk River water flow unlikely. It is possible that studies to identify appropriate improvements to the Milk River Project may discover environmental issues. More likely, it will come down to a choice of infrastructure improvements reflecting current values within the basin. Until a national voice on the future of the federal project is heard, as recommended below, those values, heavily influenced by local interests, are likely to maintain the Milk as an irrigation delivery system.

²⁰⁹ Fort Belknap Compact, *supra* note 167, art. IV.C.8.

²¹⁰ Telephone Interview with Richard Aldrich, *supra* note 178.

²¹¹ Telephone Interview with Susan Cottingham, *supra* note 173.

c. Ease of Implementation

The ease with which an agreement can be implemented turns on the complexity of the steps necessary to finalize the agreement, the simplicity and flexibility of its administration (particularly between jurisdictions), the availability of funding, and mechanisms for future dispute resolution.

First, the Fort Belknap Compact received approval by the Montana Legislature in 2001.²¹² This process was quick and easy due to the presence of legislators on the Commission.²¹³ Remaining steps to finalization include congressional approval, entry of a decree by the Montana Water Court, and a Tribal referendum. Although each of these steps is difficult to achieve, the need for accountability to the broader public warrants the effort. To avoid surprises in the final approval stages, the parties to the Fort Belknap agreement included public involvement and frequent briefing of legislative and congressional staff as part of the process.²¹⁴ Nevertheless, lack of active participation by congressional staff or Congressmen may hinder that process.

Second, the Fort Belknap Compact establishes a basin-wide coordinating committee to coordinate water storage and management among tribal, state, federal, and irrigation district jurisdictions.²¹⁵ Even more innovative is the agreement to jointly appoint water commissioners to enforce the daily distribution of water from the mainstem of the Milk River.²¹⁶ In a complex system with interbasin transfer of water, stored water, and multiple jurisdictions distributing water, this simple agreement to seek a single enforcement entity should go a long way toward easing concerns over implementation among the parties.

More complex is the accounting system the United States Bureau of Reclamation must develop and the database water distributors must maintain to determine when to release water and where it must go. Water flowing in the bed of the Milk River includes water imported from the St. Mary River, stored water, and the natural flow of the Milk River. Separating out these sources and who has claim to them on a daily basis is a daunting task. However, by delegating the tasks of establishing an accounting system and database to actions separate from the actual agreement, and allowing any system established to be modified on the basis of new information,²¹⁷ the agreement allows flexible management that should prove helpful to meet changing circumstances and variable water supply.

Third, both the size and sources of funding for implementation of the Fort Belknap Compact are currently under negotiation as part of efforts to develop a federal bill for ratification of the agreement.²¹⁸ The likelihood of

²¹² MONT. CODE ANN. § 85-20-1001 (2001).

²¹³ Telephone Interview with Susan Cottingham, *supra* note 173.

²¹⁴ *Id.*

²¹⁵ Fort Belknap Compact, *supra* note 167, art. IV.C.

²¹⁶ *Id.*, art. VII.B.3.

²¹⁷ *Id.* art. IV.E.

²¹⁸ Telephone Interview with Richard Aldrich, *supra* note 178.

receiving funding will turn partially on whether the amount sought is within state and federal budgetary limits, and partially on whether Congress removes existing barriers to funding of Indian water right settlements. The problems with the current funding process and the efforts to change it are discussed in subsequent sections.

Finally, the Fort Belknap Compact establishes a process for resolution of future disputes. The agreement sets up a Compact Board composed of a state and tribal representative and a third member chosen by the other two.²¹⁹ The Compact Board is authorized to hear disputes over interpretation of the agreement and any disputes between an individual authorized to use water under state law and an individual authorized to use water under tribal law.²²⁰ By setting up a joint state-tribal board, the Compact gives voice to both governments with jurisdiction over water use in the basin, ensuring equal participation in the resolution of future disputes.

The process followed in the Milk River differed strikingly from that employed on the Truckee River. Thus, analysis of the Truckee River will provide a perspective on results using a different approach. In addition, unlike the Milk River, urban needs, fisheries, and interstate apportionment dominated discussions on the Truckee River, allowing analysis of a different set of problems.

B. The Truckee River Basin

The Truckee River takes its water supply from the snowpack of the Sierra Nevada Mountains in California, where five major federal and several private reservoirs regulate its flow. The terminus of the Truckee River, Pyramid Lake, is located within the Pyramid Lake Paiute Indian Reservation. Years of litigation attempting to reallocate water to Pyramid Lake upheld the dominance of appropriative water rights for the federal reclamation project that diverts water to the Carson River Basin known as the Newlands Project. Diversions of the river to satisfy the irrigation project resulted in lower lake levels, which blocked fish passage to spawning grounds.²²¹ The Pyramid Lake cutthroat trout disappeared entirely from the lake in the late 1930s or early 1940s, though a similar strain of Lahontan cutthroat trout was introduced subsequently.²²² The Lahontan cutthroat trout was listed as threatened under the ESA in 1975.²²³ The cui-ui, another important fishery dependent on the lake and upstream spawning habitat, was listed as endangered in 1967.²²⁴ Meanwhile, the urban areas of Reno and Sparks in Nevada grew, placing

²¹⁹ Fort Belknap Compact, *supra* note 167, art. IV.D.

²²⁰ *Id.*

²²¹ TRUCKEE RIVER CHRONOLOGY PART I, *supra* note 24; TRUCKEE RIVER ATLAS, *supra* note 23, at 27.

²²² TRUCKEE RIVER CHRONOLOGY PART I, *supra* note 24; TRUCKEE RIVER ATLAS, *supra* note 23, at 27; TROA DRAFT EIS/EIR, *supra* note 25, at 3-128.

²²³ 40 Fed. Reg. 29,864 (July 16, 1975) (codified at 50 C.F.R. pt. 17 (2003)).

²²⁴ 50 C.F.R. § 17.11(h) (2003).

an increasing demand on water for municipal needs, particularly during drought. Finally, despite years of negotiation, California and Nevada had never reached an apportionment of Truckee River and Lake Tahoe water that could achieve congressional approval.

In 1990, after years of litigation and less than comprehensive negotiated agreements, Congress passed the Truckee-Carson-Pyramid Lake Water Rights Settlement Act (1990 Settlement Act).²²⁵ Among other things, the Act required a process to revise the operating criteria for the Truckee River for the restoration of endangered species and to provide a drought water supply for urban areas, as well as authorizing changes to the operation of federal dams for these purposes.²²⁶

The modern trend toward altering river management to meet changing needs²²⁷ is embodied in the 1990 Settlement Act, and the effort to implement that Act through the pending Truckee River Operating Agreement (TROA).²²⁸ If finalized and adopted, implementation of the TROA is likely to aid in the restoration of the Pyramid Lake fishery, ensure a drought water supply for Reno and Sparks, and achieve an apportionment between California and Nevada.

A long and contentious history brought the parties to the brink on which the 1990 Settlement Act was negotiated. Certain elements in this history stand out as key in setting the stage for comprehensive resolution of many of the basin's water disputes. They can best be understood in the context of the parties they brought to the table:²²⁹

1) *California*. Efforts in the 1970s to achieve congressional approval of an Interstate Compact between California and Nevada regarding the Truckee, Carson, and Walker Rivers failed, largely due to objections by the Tribe and the United States.²³⁰ As a result of that failure, water users in the Truckee River Basin in California faced a serious threat of loss of the ability to use water to the senior fishery flow water rights claimed in a suit filed by the Tribe.²³¹ In addition, due to lack of an apportionment, the California State Water Resources Control Board has been unwilling to

²²⁵ Truckee-Carson-Pyramid Lake Water Rights Settlement Act, Pub. L. No. 101-618, 104 Stat. 3294-3324 (1990).

²²⁶ *Id.*

²²⁷ See *supra* note 5 and accompanying text.

²²⁸ The TROA is currently under negotiation. Indications are that the final agreement will include similar, but more detailed solutions to those reviewed in the TROA DRAFT EIS/EIR. Telephone Interview with John Kramer, Senior Staff Counsel, California Department of Water Resources (Apr. 29, 2002); Telephone Interview with Christine Thiel, Deputy State Engineer, Nevada Department of Conservation and Natural Resources (Apr. 30, 2002).

²²⁹ This analysis of the moves and countermoves by the parties and the operation of outside influences on the balance of power is only partially based on interviews with the parties concerning their intent. For the most part, it is the author's analysis in hindsight of how these factors, whether calculated or serendipitous, combined to set the stage for the 1990 Settlement Act.

²³⁰ John Kramer, *Lake Tahoe, the Truckee River, and Pyramid Lake: The Past, Present, and Future of Interstate Water Issues*, 19 PAC. L.J. 1339, 1364-67 (1988).

²³¹ *Id.* at 1353.

issue permits for new water use since the 1970s.²³² California considered certainty on apportionment and how tribal water rights would be treated in that apportionment to be key to providing a foundation on which operation of the Truckee River Basin could occur.²³³

2) *Nevada*. Nevada, like California, was frustrated with failure of the interstate compact.²³⁴ As a result of that failure, Nevada's water users in the Truckee River Basin faced the constant insecurity posed by upstream diversions. Furthermore, almost all storage on which Nevada relies is located in California. Nevada considered interstate apportionment to be its primary goal in entering negotiations on the 1990 Settlement Act, but also sought to resolve major concerns regarding a drought water supply for the Reno/Sparks area and settlement of litigation concerning the Newlands Project.²³⁵

3) *Pyramid Lake Paiute Indian Tribe*. The United States Supreme Court foreclosed the Tribe in its efforts to argue for tribal water rights for fisheries.²³⁶ But the Tribe's success on other fronts turned the tables, allowing it to bring a strong voice to the table. First, the Tribe was in the fortunate position of having its interest in fishery flows aligned with the newfound national interest embodied in the ESA.²³⁷ Second, the Tribe successfully asserted the fiduciary duty of the United States and, although foreclosed on the issue of reserved water rights for fisheries in Nevada, brought the federal fiduciary duty to bear on the operation, management, and efficiency of water use in the Newlands Project.²³⁸ Finally, by asserting new reserved rights for fisheries against California, the Tribe got the attention of the upstream state and guaranteed that the powerful California congressional delegation would support any settlement.

4) *Sierra Pacific Power Company (Sierra Pacific)*. Sierra Pacific's urban water users in the Reno/Sparks area of Nevada had fallen last in line, since they had outgrown their allocation in the 1944 Orr Ditch Decree and were being served through purchase of irrigation water rights beginning in the 1940s.²³⁹ Sierra Pacific needed a firm supply of water during drought. What Sierra Pacific brought to the table was, in part, the

²³² Telephone Interview with John Kramer, *supra* note 228.

²³³ *Id.*

²³⁴ Telephone Interview with Mike Turnipseed, *supra* note 120.

²³⁵ *Id.*

²³⁶ *Nevada v. United States*, 463 U.S. 110, 145 (1983).

²³⁷ Tribal and ESA interests will not always be aligned. In fact, substantial concern has been raised by Tribes attempting to develop water in basins where over appropriation has already pushed species to the brink of extinction. Concern that the water budget necessary to avoid that extinction is being balanced on the back of Tribes led to a June 5, 1997, Secretarial Order during the Clinton Administration. See Charles Wilkinson, *The Role of Bilateralism in Fulfilling the Federal-Tribal Relationship: The Tribal Rights-Endangered Species Secretarial Order*, 72 WASH. L. REV. 1063 (1997).

²³⁸ *Pyramid Lake Paiute Tribe of Indians v. Morton*, 354 F. Supp. 252, 261-62 (D.D.C. 1972).

²³⁹ Bonnie G. Colby, et al., *Mitigating Environmental Externalities Through Voluntary and Involuntary Water Reallocation: Nevada's Truckee-Carson River Basin*, 31 NAT. RESOURCES J. 757, 766 n.38, 777 (1991).

high economic value of urban water. In addition, Sierra Pacific was the beneficiary of instream flow requirements set in 1908 to assure water for small hydropower stations and referred to as the Floriston rates.²⁴⁰ Their willingness to waive those rates, which did not mimic the natural river fluctuations necessary for habitat, became key to successful negotiations with the Tribe.²⁴¹

5) *Truckee Carson Irrigation District (TCID)*. TCID represents the water users in the federal Newlands Project. TCID initially participated in the 1990 Settlement Act negotiations, but withdrew periodically when it believed that its interests were not being addressed, and is not participating in current TROA negotiations.²⁴² The State of Nevada and the United States have attempted to represent the interests of TCID in current negotiations, but believe the first challenge to the final TROA will come from TCID.²⁴³

6) *The United States*. Representatives of the United States Departments of the Interior and Justice have participated throughout negotiation of the 1990 Settlement Act and TROA, taking a lead role in convening TROA negotiations.²⁴⁴ The federal interest in the Truckee River Basin has been strong throughout its modern history and includes the needs of the Pyramid Lake Paiute Indian Tribe as trustee, the integrity of the federal reclamation project, the federal reservoirs, and the endangered species, specifically the cui-ui and the Lahontan cutthroat trout.²⁴⁵

One additional element for successful negotiation of the 1990 Settlement Act was leadership from Senator Harry Reid of Nevada (D-Nev.) who used the power of his office to facilitate, supervise, and push negotiations to a final result.²⁴⁶ Under Senator Reid's leadership, parties to the final agreement were assigned the task of entering separate negotiations focused on specific issues.²⁴⁷ The goal was to allow resolution of issues in manageable bites, then to assemble each agreement into a comprehensive whole.²⁴⁸ The result was as follows: the Preliminary

²⁴⁰ TRUCKEE RIVER CHRONOLOGY PART I, *supra* note 24; TROA DRAFT EIS/EIR, *supra* note 25, at 1-6.

²⁴¹ Telephone Interview with John Kramer, *supra* note 228.

²⁴² Telephone Interview with Christine Thiel, *supra* note 228.

²⁴³ Telephone Interview with Mike Turnipseed, *supra* note 120; Telephone Interview with William Bettenburg, *supra* note 120 (indicating that the parties have successfully minimized impact on the water rights for the project, making it likely any challenge to the TROA will not be successful).

²⁴⁴ Telephone Interview with William Bettenburg, *supra* note 120.

²⁴⁵ *Id.*

²⁴⁶ E. Leif Reid, *Ripples from the Truckee: The Case for Congressional Apportionment of Disputed Interstate Water Rights*, 14 STAN. ENVTL. L.J. 145, 145, 177 (1995). Representatives of California, Nevada, the Tribes, and the United States concur that the leadership of Senator Reid was key to achieving the 1990 Settlement Act. Telephone Interview with John Kramer, *supra* note 228; Telephone Interview with Mike Turnipseed, *supra* note 120; Telephone Interview with Robert Pelcyger, Fredericks, Pelcyger, & Hester (June 13, 2002) (representing the Pyramid Lake Paiute Tribe); Telephone interview with William Bettenburg, *supra* note 120.

²⁴⁷ TROA DRAFT EIS/EIR, *supra* note 25, at 2-3.

²⁴⁸ *Id.*

Settlement Agreement (PSA) negotiated between Sierra Pacific and the Tribe covering issues of fishery flows and urban water supply during drought was completed in 1989;²⁴⁹ the 1990 Settlement Act resolving the interstate issues and incorporating the PSA,²⁵⁰ and the TROA, authorized by the 1990 Settlement Act to cover the operation of the upper basin reservoirs, which is currently under negotiation.²⁵¹

1. Efficiency

Roughly a century of litigation and failed attempts at settlement set the stage for the current process to negotiate a solution to water management, interstate apportionment of water, and restoration of fisheries in the Truckee River Basin. A plan to accomplish these objectives has taken approximately 15 years to construct. In water disputes as complex as those faced in the Truckee River Basin, fifteen years is an efficient use of time.

However, the preceding 85 years of litigation cannot be discounted.²⁵² Without the resolution of certain issues through litigation, the shift in power resulting from successful litigation to improve water flow to Pyramid Lake, and frustration over the inability of litigation to provide a satisfactory solution, the current settlement may not have been possible. Once the stage was set, negotiation provided an efficient means to achieve much broader solutions than would otherwise have been available.

Current negotiations in the Truckee River Basin are focused on the renegotiation of the 1998 TROA. Parties to the negotiation indicate that the 1998 TROA became unacceptable when Sierra Pacific realized that its modeling assumptions used to predict water availability for its customers were not consistent with the lake levels and tributary instream flow maintained in the upper basin under the 1998 TROA.²⁵³ This inconsistency illustrates the inefficiency caused by independent use of a hydrologic model by individual parties. The model in this case was developed by the Bureau of Reclamation, but modified by Sierra Pacific during negotiations of the PSA between the Tribe and Sierra Pacific in which the focus was on urban and fishery water needs in the lower basin.²⁵⁴ Additional parties to the TROA negotiations—the United States and California—expanded the scope of negotiations to include upper basin interests in lake levels for recreation and instream flow below dams on tributaries for Lahontan

²⁴⁹ Preliminary Settlement Agreement, *reprinted in* TRUCKEE RIVER ATLAS, *supra* note 23, app. 2 at 119.

²⁵⁰ Pub. L. No. 101-618, 104 Stat. 3289 (1990), *reprinted in* TRUCKEE RIVER ATLAS, *supra* note 23, app. 1, at 101.

²⁵¹ Final document release pending. The 1998 draft is described and analyzed in TROA DRAFT EIS/EIR, *supra* note 25.

²⁵² Detailed discussion of the litigation that shifted power in the basin by requiring the use of surplus water in the federal project for endangered species can be found in Part II of this series. Part II, *supra* note 9.

²⁵³ Telephone Interview with William Bettenburg, *supra* note 120.

²⁵⁴ *Id.*

cutthroat trout and other fisheries, yet these interests were not reflected in the model being run independently by Sierra Pacific.²⁵⁵

Establishment of a joint team consisting of technical representatives from each party would avoid the inefficiency of differing assumptions in modeling solutions. The chair of the federal team on the Truckee River negotiations recommends hiring a neutral consultant and full documentation of the model and model runs.²⁵⁶ Although this approach would alleviate the problem caused by working from different assumptions, it may not improve efficiency. Each party to the agreement would still assign separate technical representatives to review the neutral model with the potential for differing results. Efficient use of time in negotiations requires focus on substantive issues. By allowing technical representatives from each party to work together to develop a model, disagreement over model assumptions, use, and interpretation of results would be minimized.

2. Fairness

Similar to the analysis of the Milk River process, the fairness element turns on the inclusion of a widening circle of involvement from water interests, to basin community interests, to the public-at-large. Negotiations in the Truckee River Basin approach this through a very different process than that used in the Milk River. Those differences are noted in the following sections.

a. Water Interests

Unlike negotiations in the Milk River Basin, both public and private entities are at the table in the Truckee River negotiations. Participation appears to turn on the level of stake in water use and storage management rather than governmental status. Thus, the initial players included California, Nevada, the Pyramid Lake Paiute Indian Tribe, Sierra Pacific Power Company, and the TCID. As noted above, allowing key water interests a seat at the table provides a greater possibility that basin-specific solutions will be recognized, water interests will buy-in to solutions, and the ultimate agreement will be implemented.

Unfortunately for the Truckee River parties, a key player—TCID—chose to withdraw from the process. Discussed below, this withdrawal diminishes the comprehensiveness of the agreement. The withdrawal may not diminish the fairness of the process because it was voluntary. However, it is important to note that the stated reason for withdrawal was failure by the other parties to fully honor TCID's view of the scope of its valid water rights in design of solutions. If TCID's perceived unfair treatment is real, then similar to the process in the Milk River the ability to

²⁵⁵ *Id.*

²⁵⁶ *Id.*

challenge the agreement in court provides a final safety net, albeit one detrimental to the durability of the agreement.

b. Basin Community Interests

Formal local public comment is left to the final approval stages of negotiation in the Truckee River Basin. On completion of the Truckee River Operating Agreement, public comment will be received in an environmental review process required by both the United States and the State of California.²⁵⁷ In addition, the congressional process that led to the 1990 Settlement Act provided an opportunity for public comment. Final approval of the TROA will require a political process by each governmental entity. This process will include a tribal referendum vote.²⁵⁸

Unlike the Milk River process, the Truckee River process will obtain the views of the local community after solutions have been designed and have received preliminary approval by representatives of the parties. This approach tends to miss additional opportunities for local design of solutions and to render public comment a mere procedural step. The presence at the table of private water managers representing key urban and agricultural interests in the basin does provide substantial opportunity for local input. Nevertheless, instream interests other than the fisheries represented by the Tribe and the United States are left to representation by state participants. This approach may prove inadequate.

Many negotiations are closed to maintain confidentiality on data and positions prepared for litigation. In addition, parties to a settlement may be understandably nervous about public and media scrutiny of options under early stages of discussion. Furthermore, such scrutiny may have a chilling effect on open discussion of ideas. However, a careful control of the release of information would address these concerns while serving the need to inform the public.

First, by maintaining confidentiality on technical information and parties' positions and by releasing only information on solutions under consideration, parties can protect the information generated for litigation. Second, by identifying solutions not yet studied as premature for release, parties can avoid speculation on preliminary ideas, ensuring that possible solutions are released to the public when the parties have sufficient information to explain their effects. Third, avoiding attribution of a settlement option to any particular party can eliminate the chilling effect on open discussion of ideas.

²⁵⁷ An earlier draft of the TROA currently under negotiation combined the environmental impact statement (EIS) and the environmental impact report (EIR). National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4370e (2000) (requiring an EIS under federal law); Cal. Pub. Res. Code §§ 21,000-21,178 (West 1996) (requiring an EIR under California law).

²⁵⁸ Telephone Interview with Robert Pelcyger, *supra* note 246.

c. Public Accountability

Similar to the Milk River process, accountability to the wider circle of the public-at-large is generally limited to the approval stages of the various Truckee River agreements, including entry of the agreement in the Orr Ditch proceedings in the Truckee River Basin. However, Senator Henry Reid filled the role of political leadership played by the Montana Reserved Water Rights Compact Commission in the Milk River negotiations.²⁵⁹ Unlike the state Compact Commission, Senator Reid held a national political office, placing him in a better position to represent national interests. Interviews with the parties indicate that he did so by placing a high premium on achieving settlement, and also by assuring that the voice of each party was heard.²⁶⁰

In addition, a national standard in the form of the ESA played a substantial role in shifting power among parties and in giving fishery interests a voice at the table. In doing so, the negotiations reflected the shift in national interest toward environmental values.

Finally, the federal role in negotiations on the Truckee River Basin was substantially different from that on the Milk River. Whereas the federal team on the Milk River primarily represented the interest of the tribes, the federal representatives in the Truckee River negotiations took a broader view of their role, representing all federal interests reflected in federal law.²⁶¹ Thus, the federal team represented the tribe, the federal project, and the interests in protection of endangered species.²⁶² This broader view of the federal interest allowed representation of the diverse national interests reflected in federal law and provided a greater level of public accountability than that reflected in the current federal process for participation in negotiation of tribal water rights. The difficulty of representing these potentially conflicting interests cannot be overstated. However, the participation of federal negotiators, whose position in the Department of the Interior enabled rapid decision making in the Truckee River Basin negotiations, helped ensure that conflicts among federal interests could be resolved on a timely basis.

3. Durability of Outcome

Evaluation of the durability of the Truckee River agreements requires consideration of the comprehensiveness of the solution, whether the solution results in an equitable distribution of water use benefits both

²⁵⁹ *Id.*; Telephone Interview with John Kramer, *supra* note 228; Telephone Interview with Mike Turnipseed, *supra* note 120.

²⁶⁰ Telephone interview with Robert Pelcyger, *supra* note 246 (indicating that Senator Reid was the first to truly listen to the concerns and needs of the Tribe); Telephone Interview with John Kramer, *supra* note 228; Telephone Interview with Mike Turnipseed, *supra* note 120.

²⁶¹ Telephone Interview with William Bettenburg, *supra* note 120.

²⁶² *Id.*

within and between generations, and the ease with which the agreement will be implemented.

a. Comprehensiveness

TCID's absence from settlement in the Truckee River Basin prevents the parties from achieving a comprehensive solution as to both parties and issues. It is both a strength and a weakness of negotiation, as opposed to litigation, that participation is voluntary. No means exists to force a party to the table. One cure may be Montana's approach, where the legislature designated the state as the representative of all private interests, accompanied by a state policy in favor of negotiation. A private party's disgruntlement cannot force the state to walk. This approach assures a comprehensive solution. However, as noted above, it may not assure a solution that is readily implemented if additional efforts are not taken to obtain buy-in by the local interests.

The Truckee River Basin process takes a phased approach to issue settlement. Under the leadership of Senator Reid, issues were divided into manageable segments including allocation of surplus storage between fisheries and municipal interests reflected in the negotiation of the PSA, interstate apportionment of water, and resolution of issues involving the Newlands Project.²⁶³ Resolutions of the storage and apportionment issues were then approved in the 1990 Settlement Act. Finally, that Act authorized, and even required, negotiation of the much more detailed TROA to validate the other agreements.

This phased approach does not detract from the comprehensiveness of the solution; instead, it recognizes that the complexity of water management and allocation is best addressed in manageable steps. More importantly, it recognizes that while the framework for a basin-wide agreement may appropriately be subjected to congressional approval, the details of an operating agreement require a greater degree of flexibility and thus a less onerous process to adapt to changing circumstances.

Unfortunately, the absence of TCID from negotiations prevented settlement of issues related to the Newlands Project. The absence of agreement related to the project will likely require additional efforts to achieve a comprehensive solution. Because of the major role of the project in water use from the Truckee River Basin, there is no guarantee that those additional efforts will not force the parties to revisit issues currently considered settled. However, efforts by the United States and Nevada to protect the water rights for the federal project may allow them to maintain the integrity of the agreement.

²⁶³ The Newlands Project issues are now proceeding on a separate track, primarily through litigation due to the absence of TCID from settlement negotiations. Telephone Interview with Robert Pelcyger, *supra* note 246; Telephone Interview with Mike Turnipseed, *supra* note 120.

b. Equitable Distribution of the Benefits

The end result of efforts to resolve the water issues in the Truckee River Basin is a solution that more equitably distributes the water-use benefits among the members of this generation and leaves a more sustainable resource to future generations by mitigating past environmental harm, by providing an urban drought water supply, and by establishing a joint mechanism for dispute resolution. This attention to repair of environmental harm distinguished the Truckee River settlement from the Milk River compact, and, at least at this stage, provides greater intergenerational equity. However, it cannot be said that this redistribution of benefits occurred solely as the result of negotiations.

Negotiation provided a sufficiently flexible and political forum to achieve some of the management results in the Truckee River Basin. This was reflected in the Preliminary Settlement Agreement, the 1990 Settlement Act, and the draft TROA. Litigation, national legislation in the form of the ESA, and a shift in the economic, and therefore political, focus in the basin from agriculture to urban needs provided the shift in power necessary to set the stage for settlement.

This is an important lesson in the need for a judicial and political backdrop within which negotiation can occur.²⁶⁴ Even in the Milk River where the negotiation process dominated, without the 1908 recognition of the reserved water rights of the Tribes by the United States Supreme Court, it is unlikely the parties would have even begun the process and even less likely they would have focused on developing tribal water rights. Thus, if the Truckee and Milk River processes are representative, the second prong of a durable outcome—an equitable distribution of benefits—appears to require both the development of national requirements and at least the threat of litigation before negotiation can provide a solution. It is not surprising that the actual reallocation of water, whether to tribes, environmental needs, or urban areas, is the step that requires the biggest stick.

c. Ease of Implementation

The ease with which an agreement can be implemented turns on several things including: the complexity of the steps necessary to finalize the agreement, the simplicity and flexibility of administration particularly between jurisdictions, the likelihood of funding, and mechanisms for future dispute resolution.

First, the phased approach to achieving resolution of water issues in the Truckee River Basin has made finalization of agreements manageable. As discussed in evaluating the Milk River negotiations, the requirements for congressional, legislative, and tribal referendum approval, though onerous, also serve the need of public accountability. Participation by

²⁶⁴ Details on how litigation shifted power to set the stage for negotiation can be found in Part II of this series. Part II, *supra* note 9.

Senator Harry Reid early in the process rendered the congressional step in the approval process more likely.

Second, because the final TROA is not yet public, it is difficult to evaluate whether the solutions incorporate sufficient flexibility and simplicity to ease implementation. If the TROA is too detailed, it may lack the flexibility necessary to allow management to adjust to future changes in water supply and demand. Nevertheless, the decision to follow the existing agreement between Nevada and California on apportionment, one with a track record of compliance, simplifies implementation. In addition, the decision to use the office of the federal Water Master, already assigned the task of implementing the Orr Ditch Decree for administration of decreed water rights, means that the task of daily administration will also be performed by an entity with a proven track record in the basin. Depending on the outcome of the TROA negotiations, these decisions bode well for the basin.

Third, funding is also uncertain until the TROA negotiations are completed and made public. However, at least the assignment of administration to the federal Water Master places them in the hands of an office that already has the authority to assess fees against water users.²⁶⁵ Thus, the funding mechanism for that portion of the settlement is built into the choice of the entity for the task.

Finally, by use of the office of the federal Water Master for daily administration and by setting up a process for appointment of a hearing officer for dispute resolution, the Truckee River agreements allow for adjustment in the face of a continually changing water resource. In doing so, the parties have set the stage for a durable agreement in the Truckee River Basin.

V. RECOMMENDATIONS FOR A PROCESS FOR BASIN-WIDE WATER DISPUTE RESOLUTION

The resolution of water disputes in the West relies increasingly on negotiation as people endeavor to meet changing and growing needs for water, to remedy past harm to the environment caused by water development, and to remedy the inequitable distribution of federal dollars to provide benefits from that development. Negotiation is proving successful in allowing parties to avoid the narrow single-issue approach of litigation and to find more creative solutions to chronic problems with water management and allocation. Negotiation allows parties to recognize the shared nature of a water resource and to step beyond the jurisdictional boundaries dividing basins to find shared solutions.

Four concerns arise with the current ad hoc approach to solving major basin-wide water disputes through locally driven negotiation processes including the: 1) lack of a hammer to force parties to the table and to force consideration of difficult issues, 2) lack of accountability to the public-at-large, 3) lack of certainty that the results will lead to an

²⁶⁵ Telephone Interview with Robert Pelcyger, *supra* note 246.

equitable distribution of water-use benefits, and 4) inability or lack of will to fund solutions, particularly where water development to serve those currently receiving fewer benefits from the water resource is needed. The following sections discuss these concerns and recommend elements for incorporation into a negotiation process to assure they are addressed.

A. *The Hammer*

The shift in power resulting from prior litigation and the threat of future litigation played a major role in bringing parties to the table and in forcing consideration of environmental and tribal issues in both the Truckee and Milk River Basin negotiations. In addition, enforceable national standards in the ESA forced consideration of habitat issues in the Truckee River Basin. Even with these incentives, TCID, a key party in the Truckee River negotiations, chose not to participate in negotiations.

The Milk and Truckee River negotiations illustrate the continued need to negotiate against the backdrop of possible litigation.²⁶⁶ A dispute resolution process that allows the freedom to negotiate while maintaining judicial oversight serves two functions. First, it allows intervention by a neutral decision maker when an impasse is met on a particular issue in negotiation or when a necessary party is reluctant to participate. Second, it facilitates finalization of any agreement that must be integrated into a water rights decree for the basin at issue.

Of the negotiation processes currently underway on major water basins in the West, those proceeding in Arizona give the strongest role to the judiciary.²⁶⁷ Under the rules of the Arizona Supreme Court, the parties to water negotiations arising in the context of a general stream adjudication may seek interlocutory review of legal issues that require resolution for the parties to reach agreement.²⁶⁸ However, it is important that parties not use the availability of a judicial forum as a crutch to avoid addressing difficult issues or to unnecessarily constrain negotiation. The Arizona Supreme Court imposed highly limiting constraints on tribal water right negotiations by ruling that the amount of water allocated in any settlement may not exceed the amount that would have been available in court.²⁶⁹ This has caused parties in Arizona to spend considerable time

²⁶⁶ Negotiation under the hammer of litigation has been referred to as “bargain[ing] in the shadow of the law.” Robert H. Mnookin & L. Kornhauser, *Bargaining in the Shadow of the Law: The Case of Divorce*, 88 YALE L. J. 950, 968 (1979). However, this term has also been used to describe a dispute resolution process that limits items discussed in negotiation to those that would have been addressed in litigation, thus limiting creativity. Menkel-Meadow, *supra* note 54, at 766. To avoid confusion, this Article avoids this latter use.

²⁶⁷ See *In re Gen. Adjudication of All Rights to Use Water in the Gila River Sys. and Source: Special Procedural Order Providing for Interlocutory Appeals and Certifications* (Ariz. Sept. 16, 1989), <http://www.supreme.state.az.us/wm/InterlocutoryAppeals.htm> (setting forth the rules for interlocutory review of issues arising in the general stream adjudication).

²⁶⁸ *Id.*

²⁶⁹ *In re Gen. Adjudication to Rights to Use Water in the Gila River Sys. and Source* (Ariz. May 16, 1991), <http://www.supreme.state.az.us/wm/DecisionsandOrders.htm> (providing for the approval of federal water rights settlements).

debating the legal measure of tribal water rights rather than seeking creative solutions to water supply problems.²⁷⁰ Often, it is the uncertainty in the law—*i.e.*, the fact that a party may not know what the outcome in court will be but knows they are at risk—that leads parties to seek creative solutions.²⁷¹

Unnecessary constraints on negotiation could be avoided by resorting to a judicial forum primarily for procedural rather than substantive issues to ensure, for example, that all parties are present, have notice of proceedings, and adhere to a timeline. A high bar to litigation on substantive issues should be imposed both through procedural mechanisms that require prior efforts to negotiate and through judicial constraint.

In addition to the threat of litigation to allocate water rights, enforcement of national standards reflecting changes in national values with regard to water use provide a tool for encouraging change.²⁷² Of particular importance in the Truckee River Basin were the requirements under the ESA that allowed dedication of surplus federal project water to fishery flows.²⁷³ Continued threat of enforcement of laws to protect endangered species and water quality is necessary to force consideration of issues of national concern that are not otherwise represented at the table in a local water basin dispute. The use of national standards for this purpose leads directly to the issue of accountability to the public-at-large.

B. Public Accountability

Maintaining accountability to the public-at-large is the weakest link in current processes to resolve water disputes in the West. As is evident in both the Milk and Truckee River processes, negotiation opens the door to considerable local innovation but does not provide an avenue to secure representation of the interests of those absent from the table. The public interest includes the health of the federal lands, the expenditure of federal tax dollars on water infrastructure, and the long-term sustainability of the use of the nation's water resources. The current federal process for participation in water negotiations represents the proprietary interest in public and reserved lands and the interest in prudent use of federal tax dollars. However, the sustainable use of water resources is not a mandatory element of a negotiated solution unless a listed endangered aquatic species is at risk.²⁷⁴ Incorporating the need for sustainability into

²⁷⁰ See, e.g., *In re Gen. Adjudication of All Rights to Use Water in the Gila River Sys. and Source*, 35 P.3d 79, 79–80 (Ariz. 2001) (addressing the standards for quantification of tribal water rights).

²⁷¹ Mnookin & Kornhauser, *supra* note 266, at 969–70 (noting that an uncertain litigated outcome may increase willingness to negotiate if a party is adverse to risk).

²⁷² WWPRAC REPORT *supra* note 30, at 5-50 (noting that federal environmental laws can serve as the impetus for negotiated solutions), available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt5.pdf>.

²⁷³ *Carson-Truckee Water Conservancy Dist. v. Clark*, 741 F.2d 257, 262 (9th Cir. 1984).

²⁷⁴ See Getches, *supra* note 6, at 538–41 (1993) (“The problem is not a shortage of water, it

water dispute resolution processes requires the following: 1) national standards that basin-wide negotiations must meet, 2) reform of the current federal process for participation in tribal water right negotiations and formation of a federal process for participation in water negotiations in general, and 3) strong political leadership from both Congress and local legislators.

1. National Standards

National standards that dictate the format or content of a basin-wide water management or allocation solution would have a chilling effect on the creative solutions currently blossoming under the freedom of negotiation. However, focused standards in areas of national concern that might otherwise be ignored are important to assuring a national voice.²⁷⁵ For example, the twin hammers of the ESA and the Clean Water Act provides an incentive to negotiate and a requirement to accommodate issues relating to the long-term viability of the resource and downstream effects of its use.

With the need to develop tribal water and to modify or renovate existing federal projects such as the Milk River Project, the time is ripe to discuss federal priorities for funding of renovation and allocation of water in federal water projects in the West. This issue will be discussed in the context of the equitable distribution of benefits and funding for water development. For purposes of public accountability, the outcome of any national prioritization on funding and use of federal projects will sufficiently represent the interests of the public-at-large.

2. Reform of the Federal Process

Because accountability of the process of water dispute resolution through negotiation is a concern to the public, federal participation in negotiation is a natural starting point to address that concern. However, the same principles apply to state and local government in designing their own processes to assure public accountability. The current federal process for participation in water negotiations in any basin involving claims to tribal water is set forth in the Criteria and Procedures for the Participation of the Federal Government in Negotiations for the Settlement of Indian Water Right Claims (Criteria and Procedures).²⁷⁶ The Criteria and Procedures were established pursuant to a negotiation policy articulated by President George H.W. Bush,²⁷⁷ remained unchanged

is a shortage of sound policy, a failure to consider comprehensively what will be done with water and the consequences of doing it.”).

²⁷⁵ See WWPRAC REPORT, *supra* note 30, at 5-45 (noting that federal environmental laws have opened decision making concerning water to the public) *available at* <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt5.pdf>.

²⁷⁶ 55 Fed. Reg. 9223 (Mar. 12, 1990) [hereinafter Criteria and Procedures].

²⁷⁷ Upon signing the “Puyallup Tribe of Indians Settlement Act of 1989,” President Bush stated:

throughout the Clinton Administration, and thus remain unchanged in the current Bush Administration.²⁷⁸

The Criteria and Procedures provide guidelines for the procedure for federal participation in negotiations to settle Indian water rights and criteria for determining federal negotiating positions.²⁷⁹ The process is designed to allow the United States to speak with one voice in tribal water right negotiations.²⁸⁰ To do so, federal teams are assigned to specific negotiations with members representing each major federal interest in the particular water basin. For example, the federal team participating in the Milk River negotiations included representatives of the Bureau of Indian Affairs, the Bureau of Reclamation, the Fish and Wildlife Service, the Department of the Interior's Field Solicitor's Office, and the Department of Justice.²⁸¹ Despite this broad participation, the role of the team is to act as trustee for the tribes.²⁸² To do so, the team attempts to address agency differences. However, the team has no authority to choose between conflicting interests during negotiations if they are unable to find a solution that accommodates all federal interests. Only after an agreement is completed and presented at a higher level within the Department of the Interior can those decisions be made.²⁸³ This is often too late to provide meaningful federal participation in design of solutions. When tribal water rights are not involved, no official federal policy on participation exists, and the particular administration is often criticized for failure to present a united front.²⁸⁴

Two approaches to reform of the federal process should be considered. In Model 1, the federal government participates in negotiations at a level that allows rapid resolution of conflicting federal

The Administration expects to continue to work toward settlement of legitimate Indian land and water rights claims to which the Federal Government is a party. . . . Indian land and water rights settlements involve a complicated blend of law, treaties, court decisions, history, social policies, technology, and practicality. These interrelated factors make it difficult to formulate hard-and-fast rules to determine exact settlement contributions by the various parties involved in a specific claim. . . . In recognition of these difficulties, this Administration is committed to establishing criteria and procedures to guide future Indian land and water claim settlement negotiations including provision for Administration participation in such negotiations.

George Bush, 1 Pub. Papers 771, 772 (June 21, 1989).

²⁷⁸ Department of the Interior official William Myers, III, indicated that the Bush Administration is willing to review the Criteria and Procedures in a statement at the Western States Water Council/Native American Rights Fund Symposium on Indian Water Rights Settlement, St. George, Utah, October, 2001.

²⁷⁹ Criteria and Procedures, *supra* note 276.

²⁸⁰ *Id.*

²⁸¹ List of Negotiation Participants, Fort Belknap Negotiations (on file with the Montana Reserved Water Rights Compact Commission, Helena, Montana).

²⁸² See Criteria and Procedures, *supra* note 276.

²⁸³ *Id.*

²⁸⁴ WWPRAC REPORT *supra* note 30, at 6-37 to 6-38, available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt6.pdf>.

interests. In Model 2, each federal interest receives separate federal representation, with public airing of conflict.

Model 1 is based on the Truckee River negotiations. The federal team in the Truckee River negotiations represents all federal interests reflected in federal law.²⁸⁵ Rather than waiting until the completion of negotiations to take a position between conflicting views, the team chair has ready access to a decision maker at the level of an Assistant Secretary.²⁸⁶ This streamlined process allows real-time federal participation in negotiations. In doing so, it increases the likelihood that internal conflicts will be resolved and that the national interest will be reflected in a final agreement. Model 1 thus moves the level of federal participation in basin negotiations up a notch in the hierarchy of authority at the Department of the Interior from the level in the process under the Criteria and Procedures.

The Western Water Policy Review Advisory Commission recommended the appointment of a Cabinet level water official to resolve internal federal disputes.²⁸⁷ A position at that level is more likely to command the attention of Congress in shepherding a settlement bill through to final approval. However, it is difficult to argue that issues that are primarily western and within the domain of the Department of the Interior warrant this level of attention. Concern has been expressed that, rather than resolve issues, it could merely raise the conflict to another level by pitting cabinet level Secretaries against each other.²⁸⁸ In the context of Indian water settlements, the Chair of the Working Group on Indian Water Settlements with final authority to resolve internal disputes within the Department of the Interior is housed in the Secretary of the Interior's Indian Water Rights Office.²⁸⁹ In the Truckee River negotiations (Model 1), decisions are made at the level of an Assistant Secretary.

In contrast, Model 2 would step down the ladder by eliminating the requirement that the federal participants speak with one voice. If one role of federal involvement in western water negotiations is to assure accountability to the public-at-large, efforts to speak with one voice may compromise that role.²⁹⁰ Although in a perfect world there should be no

²⁸⁵ Telephone Interview with William Bettenburg, *supra* note 120.

²⁸⁶ *Id.*

²⁸⁷ WWPRAC REPORT *supra* note 30, at 6-37 to 6-38, available at <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt6.pdf>.

²⁸⁸ Telephone Interview with William Bettenburg, *supra* note 120 (noting that all parties involved would like direct participation by the President, but that just does not happen).

²⁸⁹ Telephone Interview with Pam Williams, Department of the Interior, Washington D.C. (Feb. 26, 2002).

²⁹⁰ In deciding the position of the United States in litigation to resolve water rights in the Truckee River Basin in 1922, the Acting Commissioner of Indian Affairs and the Reno Agency debated their obligation to seek additional reserved water rights to preserve the Pyramid Lake fishery in the face of conflicting water use needs by the federal Newlands Reclamation Project. The Acting Commissioner concluded that the fishery was of mere local importance, whereas the development of irrigated farmland in the arid west was of national concern and must take precedence. The final federal claim for the Pyramid Lake Paiute Indian Reservation was limited to water for irrigation. *See United States v. Truckee-Carson*

conflict in the implementation of federal mandates by various federal agencies, and no conflict with the federal role as trustee because Congress would have taken that into account, this ignores reality. These conflicts reflect differences in the interests of the public-at-large. Under Model 2, the public airing of these differences as they apply to a particular basin, rather than an internal effort to resolve them according to some monolithic national agenda, would not only ensure a broader public dialogue, but would increase representation of the divergent national interests in water use in a specific basin. By airing the debate as it applies to a specific basin rather than attempting to fit diverse basins into the framework of a national policy, tailored solutions are not jeopardized. At the same time, a national role in the dialogue is not sacrificed in favor of a purely local solution. Achieving this federal process would require separate federal representation of separate federal interests in a negotiation. Thus, for example, representation of the interests of a federal water project must be separated from representation of a tribe.

The difficulty with Model 2 is determining who makes the final decision between conflicting national interests once they are aired. In a water adjudication before a judge, the United States may aggressively assert the conflicting water claims of a tribe and a federal project or national wildlife refuge, leaving the final decision to a judge. In negotiation, that final decision must be made voluntarily. Thus, Model 2 must follow the full public airing of conflicting federal interests with a final decision.

There are additional weaknesses in the approach in Model 2. The public airing of conflicting national interests risks polarizing the local and national public, causing negotiations to grind to a halt. However, conflict on issues so important as to be reflected in conflict in national policy will ultimately surface.²⁹¹ Better that they be addressed during the problem-solving phase of a negotiation than be raised in the context of an Environmental Impact Statement once negotiations are complete and interests in the solutions are entrenched. Model 2 also increases the possibility that the benefits to all interests will be maximized through participation of a more comprehensive group of interests in the process.

Although Model 2 seems to solve the most problems with the federal process, ultimately a choice among the current approach, the two models, or some fourth approach should be made by the Department of the Interior in the context of a dialogue involving water interests and the general public. Of greatest importance is that the dialogue takes place and that the message be conveyed that the current process under the Criteria and Procedures is not working.

Irrigation Dist., 649 F.2d 1286, 1293 (9th Cir. 1981), *aff'd in part, rev'd in part sub nom. Nevada v. United States*, 463 U.S. 110 (1983).

²⁹¹ For example, the long debate over funding for the Animas-La Plata Project, part of the water rights settlement with the Southern Ute in Colorado, was due to environmental concerns with the proposed project. *Cf. Colorado Ute Indian Water Rights Settlement Act of 1988*, Pub. L. No. 100-585, 102 Stat. 2973 (1988) (showing the final settlement reached).

3. Political Leadership

The role of congressional leadership in the Truckee River negotiations and state legislative participation in the Milk River negotiations proved invaluable to finalization of the agreements. Leadership not only facilitated approval of agreements in Congress and the Montana Legislature respectively, but also provided an avenue for accountability to the larger public interest. Montana law mandates the participation of state legislators.²⁹² The participation of Senator Harry Reid in the Truckee River negotiations was purely voluntary and, according to the parties, essential.²⁹³

Assignment of staff for both Senators and Representatives from the affected state and staff for key congressional committees to participate in water negotiations from the outset would facilitate both approval and the public accountability of the process. Direct participation at the table may not be appropriate where negotiations are for the purpose of settling litigation and the federal interest is represented by the Department of Justice. However, at a minimum, congressional staff should be informed of, and provide feedback on, solutions under consideration. Although congressional approval of a water settlement, once negotiated, does provide opportunity for review, it comes at a stage where substantive changes to solutions are unlikely to occur. The end result is either approval with relatively little change or failure to approve, neither reflecting real congressional input.

Similarly, participation of local legislators will facilitate consideration of the interests of citizens of the state and the state approval process. In addition, participation by tribal councils assures accountability to the tribal public. Although this early involvement of multiple interests results in upfront expenditures, the time and money spent on participation at a meaningful juncture would be well advised.

C. Equitable Distribution of Benefits

As discussed above, an equitable distribution of benefits from water use requires that water be allocated equitably among members of this generation, that the allocation reflect current values, and that the use, development, and health of a water basin be sustainable. Assuring an equitable distribution of benefits within this generation turns in part on efforts to develop tribal water. These efforts are discussed in the following section.

Whether a negotiated solution promotes sustainable use of the water resource is tied directly to decisions on the future of major water projects in western basins. Most of those projects are federal. The previous section recommended congressional effort to set priorities on this issue. This

²⁹² MONT. CODE ANN. § 2-25-213 (2001).

²⁹³ Telephone Interview with Robert Pelcyger, *supra* note 246; Telephone Interview with John Kramer, *supra* note 228; Telephone Interview with Mike Turnipseed, *supra* note 120.

section recommends elements that should be considered in setting those priorities.

Considerable environmental damage has resulted from the damming of rivers in the West.²⁹⁴ However, westerners are also fortunate that the previous generation invested in water infrastructure because now they have cheap hydropower, drinking water, and irrigation. The focus in setting priorities should be to remedy the harm, not eliminate the benefit. However, some federal projects serve production that cannot be considered necessary to the nation's food supply.

To prioritize the use of a federal project, Congress must first determine whether the benefits of cultivation of a particular water basin are adequate given the costs. Prior to expenditure of additional federal tax dollars, Congress should consider whether specific projects support a sustainable local economy or merely subsidize an artificial one. If the specific project subsidizes an artificial economy, additional congressional debate should take place on whether the product resulting from the subsidy is necessary to the health of the nation or whether it would be more appropriate to spend federal tax dollars assisting the local communities to convert to a more sustainable economy.

Second, if the benefits of a project justify expenditures, Congress should still consider in its authorization of funds whether improvements in efficiency, conservation, and alteration in regulated flows to mimic natural processes can reduce environmental costs. Although consideration of environmental impact will take place during environmental review of a proposed federal project, it is in the allocation of funds by Congress that changes to reduce environmental harm can be affected. An argument can be made that subsidy of western water use to facilitate these changes should cease, and those who have benefited should pay both the full cost of future water delivery and the cost to mitigate the environmental harm that fueled their benefit; however, this view oversimplifies the problem and its cause. The federal effort to dam the rivers and settle the river valleys of the West was undertaken in the national interest as it was identified in the early 1900s, and the current environmental harm is a direct result of that policy. By providing federal assistance to remedy that harm, Congress recognizes the reality that just as it required a national commitment to develop the rivers of the West, it will require a national commitment to address the consequences.²⁹⁵

²⁹⁴ See, e.g., REISNER, *supra* note 51, at 118 ([T]he desert suffers improvement at a steep price, and the early Reclamation program was as much a disaster as its dams were engineering marvels.); Doremus, *supra* note 33, at 367 (noting that two-thirds of the native fish in the Great Basin are either listed under the ESA or considered of concern by the United States Fish and Wildlife Service).

²⁹⁵ MACDONNELL, *supra* note 6, at 252-53 (advocating national funding for improvements because the problem is the result of national policy).

D. Paying for Solutions

Given a sufficiently deep pocket, it is likely that all of the West's water problems could be solved. Given reality, modern solutions to water problems must work within existing water infrastructure and attempt to design solutions that rely entirely on local water sources.²⁹⁶ However, if the United States is to meet the goal of providing an equitable distribution of water benefits, both within the current generation and between generations, then it must find the will to expend money in three areas: 1) development of tribal water resources, 2) repair to environmental harm caused by past development and use of water resources, and 3) renovation and efficiency improvements to existing water infrastructure. The previous section addresses funding for solutions to the latter two areas. This section addresses funding for development of tribal water resources.

Federal funding for development of tribal water resources requires two steps: congressional authorization of funding and appropriation of actual funds in the federal budgetary process. The Balanced Budget Act of 1985²⁹⁷ placed caps on appropriations.²⁹⁸ Thus, even though funding may be authorized for development of Indian water rights, appropriation of funds for that development requires a reduction in another program covered by the budget of the Bureau of Indian Affairs.²⁹⁹

At the urging of the Ad Hoc Group on Indian Water Rights,³⁰⁰ Senator Pete Domenici (R-N.M.) introduced a bill on July 17, 2001 to allow a budgetary cap adjustment of up to \$200 million per budget cycle to fund Indian water and land settlements.³⁰¹ The bill was referred to committee, and the Senate has taken no further action.³⁰²

The absence of a cap adjustment at the very least, or an even stronger commitment to establish a permanent fund for Indian water settlements, pits tribes and tribal programs against each other for limited federal funding. Until Congress takes this important step, the commitment of the United States to fulfill its role as trustee in developing Indian water and to

²⁹⁶ WWPRAC REPORT *supra* note 30, at 2-35 (noting that overall, fewer federal dollars will be spent on water in the future), *available at* <http://www.waterwest.org/reading/readingfiles/fedreportfiles/chapt2.pdf>.

²⁹⁷ Balanced Budget and Emergency Deficit Control Act of 1985, 2 U.S.C. §§ 901-907d, 922 (2000).

²⁹⁸ 2 U.S.C. § 901 (2000).

²⁹⁹ 147 CONG. REC. 57,829 (daily ed. July 17, 2001) (statement of Sen. Domenici (R-N.M.)).

³⁰⁰ The Ad Hoc Group in Indian Water Rights is an association composed of the Western Regional Council, the Western Governors' Association, the Native American Rights Fund, and the Western States Water Council. *See also* Western Governors' Association Resolution 98-029 (June 30, 1998) (calling for Congress and the Administration to establish a permanent funding mechanism for Indian water settlements).

³⁰¹ Fiscal Integrity of Indian Settlement Protection Act of 2001, S. 1186, 107th Cong. (2001).

³⁰² The status of this bill can be found by accessing *Thomas Legislative Information on the Internet*, at <http://thomas.loc.gov/bss/d107query.html>, and entering the Senate Bill number S.1186.

assure the equitable distribution of benefits to water resources is in question.

VI. CONCLUSION

Several professors and students from Lewis and Clark Law School and their associates recently participated in a relay run across America to raise money for research on muscular dystrophy.³⁰³ While traversing a lonely stretch of highway from west to east between the Sand Hills and St. Paul, Nebraska, at a pace between seven and eight miles per hour, they noticed that the change comes on slowly and is almost imperceptible at first. The air thickens, sweat lingers, there are fewer center pivots visible in the fields, and the farms are closer together. Crossing this same region of the one hundredth meridian in the opposite direction, early settlers would have noticed it too, except heading West the air would become lighter and their lips and hands would have cracked.

John Wesley Powell understood what aridity would mean to development of the West. Over one hundred years since he recommended that governance of the West be established around its water basins, frustration over inability to administer and distribute water efficiently and fairly across jurisdictional boundaries has brought Westerners to the table to negotiate solutions that look a great deal like management based on basin boundaries.

The rapid growth in the use of negotiation to solve chronic water management and use problems created by jurisdictional boundaries that do not follow watershed divides, water resources development that ignored environmental costs, and inefficient and inequitable distribution of the benefits of water use provides an opportunity for creative solutions. The danger is that these locally driven processes will proceed without providing comprehensive solutions to these problems and without consideration of the long-term sustainability of the water resource and the economies dependent on its use.

The time is ripe to examine these processes to determine the elements that can best lead to an efficient and fair process with a durable outcome. In doing so, negotiation can reduce costs, thus providing a more efficient process through joint collection and evaluation of data, and can allow development of more comprehensive and satisfactory solutions than are available through litigation.

The fairness of the negotiation process requires attention to inclusion of a widening circle of interests. People with direct interests in water must be represented at the table. People with an interest in the effect of water use on the basin community must also have an opportunity for comment at a time in the negotiation process when solutions are still in the design phase. The interests of the public-at-large must be represented by a

³⁰³ See RUN AMERICA 2002, at www.runamerica.org (last visited Nov. 16, 2003) (providing information about the run that was organized by Professor Craig Johnston). The author participated in the portion of the relay that crossed the 100th Meridian.

national presence in negotiations, both in the form of federal representatives and congressional leadership.

Durability of the outcome requires that the process and solution be comprehensive by including all interests and all relevant issues. However, the complexity of a truly comprehensive solution warrants a phased approach in which manageable segments of the problem are solved at each phase. In addition, durability requires that the outcome result in an equitable distribution of water resource benefits both within the current generation and between generations. This requires both a shifting of development dollars to populations previously overlooked and attention to renovating existing water infrastructure and repairing environmental damage with an eye toward sustainable use. Finally, a durable solution must be one that anticipates the steps necessary for finalization by providing simple and flexible rules for administration and management that anticipate the likelihood of future changes in supply and demand, by providing funding, and by providing a mechanism for resolution of future disputes.

An efficient and fair process that results in a durable outcome is not impossible to achieve. Its precursors are taking place in water basins all over the West as illustrated by efforts in the Milk River Basin of Montana and the Truckee River Basin of California and Nevada. In order to assure an appropriate solution, as a nation we must commit to ensuring the sustainable use and flow of the rivers of the West.