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**THE NINETIES: MAJOR DEVELOPMENTS
IN WESTERN WATER LAW**

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Strategies in Western Water Law and Policy:
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IN WESTERN WATER LAW**
By David Getches

Summary

The 1990s began against a backdrop of states expressing great intentions for making significant adaptations of water laws and administration to the West's rapidly changing needs. Broad reforms were expected to promote water conservation, fuller representation of the public interest, protection of instream flows, integration of quality and quantity management, and freer transfers and marketing of water. It was widely accepted that the West was moving out of the era of federally subsidized water projects and the federal role was essentially to set environmental standards. The states aimed to head off the increased federal regulatory presence by making changes in their own systems that would satisfy an expanding public demand for protection of environmental and social values implicated by water use in the West, while serving a growing urban population. At the same time, the states and the federal government had engaged to negotiate settlements to Indian water rights claims that have long cast doubt on the utility and security of much of the West's water rights.

The decade has, indeed, seen many changes in water law and policy. But the dominant force has not been the movement for state law reform that propelled us into the '90s. Instead, it has been the combined force of federal laws and programs, and involvement of people and groups beyond the traditional water institutions that had dominated water policy for most of the century. To the extent that progressive reforms in state water law have been seen, they were concentrated almost entirely in the West coast states of California, Oregon, and Washington. The Indian water rights settlements that had gotten off to a strong start in the 1980s essentially stalled during the 1990s.

The most significant trends of the 1990s have been:

- Influence of federal environmental laws on water allocation;
- Basin-wide adjudications;
- Broader participation at all levels of decision making.

The most surprising development of the 1990s has been the acceptance of the idea that existing dams and other water “improvements” are problems to be dealt with by changing them or their operations, or removing them altogether, to protect environmental values and other uses that depend on the waterways they control.

Taken together, the developments of the 1990s show the marked decline in importance of traditional water institutions. It is appropriate that the recent report of the Western Water Policy Review Advisory Commission highlighted "governance" as its primary theme and called for "integration of federal programs with state, tribal, and local efforts." See *Water in the West: Challenge for the Next Century*, June, 1998, p. xxxi. It remains to be seen whether that challenge will be met.

I. The Early Nineties: A Commitment to Reform

A. The Western Governors Association and Western States Water Council Efforts

1. Momentum from the 1980s

a) 1986 Water Efficiency Task Force called for western governors to take the lead in working with the U.S. Department of the Interior, water users, and others to implement changes which would meet the needs of the westerners, benefit the economy, and maintain quality of life. Bruce Driver, *Western Water: Tuning the System, The Report to the Western Governor's Association from the Water Efficiency Task Force* (July 7, 1986).

b) Suggested reforms:

(1) Implementation of transfers of water, salvage, conservation of water, conjunctive use of substitutable supplies of water, alternative supplies of water for seniors through exchanges and other measures.

(2) Water marketing and governmental protection of public, community, and environmental values.

(3) New efficiency-enhancing laws and policies.

- (4) A new role for federal agencies which includes developing information to facilitate water markets and protecting environmental values in water.
2. Reform-oriented reports and scholarship from the 1980s
 - a) Water Efficiency: Opportunities for Action, Report to the Western Governors from the Western Governors' Association Water Efficiency Working Group (July 6, 1987)
 - (1) Report on the Water Efficiency Working Group on Federal Policy Issues
 - (2) Report on Profits from the Sale or Lease of Water Provided by the Bureau of Reclamation
 - (3) Report on the Role of the Bureau in Facilitating Water Use Efficiency
 - (4) Report of the Water Efficiency Working Group on State Policy Issues
 - (5) Report of the Water Efficiency Working Group on Contextual ("Big Thoughts") Issues
 - b) Zach Willey & Tom Graff, *Federal Water Policy in the United States – An Agenda for Economic and Environmental Reform*, 13 Colum. J. Envtl. L. 325 (1988).
3. Park City Principles. The WGA and WSWC sponsored three workshops on western water management in Park City, Utah in 1991, bringing together a diverse group of water experts who outlined a set of principles to guide western water management. These principles are known as the "Park City Principles." D. Craig Bell et al., *Retooling Western Water Management: The Park City Principles*, 31 Land & Water L. Rev. 303 (1996). They include:
 - a) Meaningful legal and administrative recognition of diverse interests in water resource values.
 - b) Approaching problems in a holistic or systemic way that recognizes cross-cutting issues, cross-border impacts and concerns, and the multiple needs within the broader "problemshed."

- c) Policy framework that is responsive to economic, social, and environmental considerations.
- d) Authority and accountability decentralized within policy parameters.
- e) Negotiation, market-like approaches, and performance standards preferred over command and control patterns.
- f) Broad-based state and basin participation in federal program policy development and administration, and comparable federal participation in state forums and processes.

B. Reform-oriented reports and scholarship

- 1. Sara F. Bates et al., *Searching Out the Headwaters* (1993).
- 2. Report of the Long's Peak Working Group on National Water Policy, *America's Waters: A New Era of Sustainability* (Dec. 1992).
- 3. Water Quality 2000, *A National Water Agenda for the 21st Century: Final Report* (Nov. 1992).

II. Major State Law Developments 1989-1999

A. Efficiency and Conservation

- 1. Greater efficiency required. Alaska Admin. Code tit. 11, ch. 93 (1991); Wash. Rev. Code Ann. § 90.03.005 (West 1989).
- 2. Existing rights
 - a) Water conservation plans required for use of existing water rights. 1991 Kan. Sess. Laws, 292 § 4 (*amending* Kan. Stat. Ann. 82a-732 (1989)).
 - b) Quantity of adjudicated rights limited by "reasonable efficiency." *State v. Grimes*, 852 P.2d 1044 (Wash. 1993).
- 3. Re-use encouraged by California legislation.
 - a) Water Recycling Act. 1991 Cal. Legis. Serv. 187 (West) (amends Cal. Water Code §§ 13050 and 13241 and adds ch. 7.5 (commencing with § 13575)).

- b) DWR can adopt graywater standards for residential systems. 1992 Cal. Legis. Serv. 226 (West) (*adding* Cal. Water Code § 14875).
- c) Using potable water is waste if reclaimed water available. 1993 Cal. Legis. Serv. 980 (West) (*amending* Cal. Water Code § 13554.2 and *adding* §§ 13552.2 and 13552.6).
- d) Reclaimed water use must be considered in planning. 1993 Cal. Legis. Serv. 980 (West) (*amending* Cal. Water Code §§ 13552.4 and 13552.8).
- e) Treated recycled water exempt from the definition of “sewage,” allowing it to be used to supplement water supplies. A.B. 541, 1997-98 Reg. Sess. (Cal. 1997) (*amending* Cal. Water Code § 13271, and *adding* Cal. Water Code §§ 13529, 13529.2, and 13529.4).
- f) Authorized a feasibility study of providing recycled water for groundwater replenishment. A.B. 609, 1997-98 Reg. Sess. (Cal.1998) (*amending* Cal. Water Code §§ 13,575-76, 13,579-81).
- g) Water suppliers must identify potential recycled water uses within their service areas. Cal. Legis. Serv. 733 (West 1994) (*amending* Cal. Water Code §§ 13575, 13576 and *adding* Cal. Water Code §§ 13579, 13580, 13581, and 13582).

4. Salvaged water

- a) Can be used by appropriators who conserve. Mont. Code Ann. §§ 85-2-103(14), 1-402(2)(e), and 1-419(1991).
- b) Removed limitation on salvage to water irretrievably lost. 1993 Or. Laws ch. 641 (West) (*amending* Or. Rev. Stat. §§ 537.470, 537.480, 537.485, 537.490, 537.495, and 540.510).

5. Low flow plumbing requirements. Ariz. Rev. Stat. Ann. §§ 45-311 to –319 (West 1992); Colo. Rev. Stat. § 9-1.3-102 (1991).

6. Tax and economic incentives for water conservation

- a) Equipment tax exempt. 1993 Cal. Legis. Serv. 1058 (West) (*adding* Cal. Rev. and Tax Code § 73.5).

b) Small grants for pilot projects. Colo. Rev. Stat. § 37-60-125 (1991).

7. Other measures to encourage water conservation

a) Urban water management plans must include water conservation measures; cost can be recovered in rates. Colo. Rev. Stat. §§ 37-45-101 to 37-45-153 (Supp. 1993).

b) Effluent can be included in determining municipal water providers compliance with water conservation mandates. Ariz. Rev. Stat. Ann. §§ 45-801 to -818 (West 1994).

B. Planning

1. Comprehensive. Wash. Rev. Code Ann. § 90.54.045 (West 1991); Wash. Rev. Code Ann. § 19.27.097 (West 1990).
2. Basin or regional. Idaho Code §§ 42-1730 to -31, and 42 -1734 (1990); Idaho Code § 42-1734B(8) (1990); N.M. Stat. Ann. § 72-1-9 (Michie 1985 Repl. Pamp.).
3. Drought. Mont. Code Ann. § 2-15-3308 (1991); Tex. Water Code Ann. § 16.051(a) (West 1998); *See also* Tex. Water Code Ann. §§ 11.1271, 11.1272, and 11.134 (West 1998).
4. Urban water suppliers may recover in their rates the costs of urban water management plan and water conservation measures. 1994 Cal. Legis. Serv. 609 (West 1994) (*amending* Cal. Water Code § 10654).
5. Permits must be consistent with state water plan. Tex. Water Code Ann. ch. 11 (West 1998).

C. Groundwater

1. Groundwater hydrologically connected to surface water to be conjunctively administered if use of that water is affecting or is likely to affect surface water supplies. Leg. Bill 108, 94th Leg., 2nd Sess. (Neb. 1996) (*amending* various water statutes, and specifically Neb. Rev. Stat. § 46-656).
2. Nevada established management program to prevent contamination and depletion of ground water in the Las Vegas Valley Ground Water Basin. 1997 Nev. Stat. 572.

3. Texas begins management and control of groundwater (Edwards Aquifer), departing from absolute ownership rule. Act of May 30, 1993, 73rd Leg., R.S. ch. 626.
 - a) Required by Endangered Species Act. *Sierra Club v. Lujan*, 1993 WL 151353 (W.D. Tex.).
4. California deals with rights of overlying landowners.
 - a) Rights perfected by self-help can be preserved by continuous use. *Hi-Desert County Water Dist. v. Blue Skies Country Club*, 28 Cal. Rptr. 2d 909 (Cal. Ct. App. 1994).
 - b) Rights extend only to land directly over aquifer, not entire watershed. *San Benito County Water District v. Del Piero*, Sixth District Court of Appeal, No. HO10428 (Cal. Ct. App. Aug. 12, 1994).
5. Colorado deals with classification of “tributary” and “non-tributary” water.
 - a) *American Water Development, Inc. v. City of Alamosa*, 874 P.2d 352 (Colo. 1994).
 - b) Presumption that nontributary or not nontributary groundwater underlying property is transferred as an incident to the right of ownership of the land. *Bayou Land Co. v. Talley*, 924 P.2d 136 (Colo. 1996); *Smith v. Walker*, 924 P.2d 155 (Colo. 1996).
6. Arizona authorizes use of water from other sources as a credit toward future use of groundwater. Ariz. Rev. Stat. Ann. § 45-809 (West 1993).
7. Montana develops groundwater quality plan. Montana Bd. Nat. Resources & Conservation, Montana Ground Water Plan (Draft) (Nov. 14, 1994); Mont. Code Ann. § 85-1-203 (1993).
8. Idaho encourages recharge projects by recognizing the appropriation and underground storage of water to be a beneficial use of water. Idaho Code § 42-4201A (Supp 1994).
9. Oklahoma prohibits the groundwater permit for hog farms near nonprofit camps. Okla. Stat. §§ 9-202, 9-204, 9-205, 9-208, 9-209, and 9-211 (1998).

D. Instream Flow (ISF)

1. New or expanded state protection of ISF.

- a) New statute upheld. *In re Application A-16642*, 463 N.W.2d 59 (Neb. 1990).
- b) Stored water can be appropriated to augment ISF. Neb. Rev. Stat. § 46-2,107 (1988).
- c) Division of Parks (as well as Wildlife) can change existing water rights to benefit of fish, recreation, and environmental preservation. Utah Code Ann. § 73-3-3 (Supp. 1992)
- d) Experimental leasing allowed on 5 streams. Mont. Code Ann. §§ 85-2-102, 85-2-402, and 85-2-404 (1989).
- e) Commission cannot reduce or alter minimum flow if inconsistent with purposes of scenic waterway. *Waterwatch of Oregon v. Oregon Water Resources Commission*, 97 Or. App. 1, 774 P.2d 1118 (Or. App 1989).
- f) Agency's authority to revoke ISF if necessary for a new water project ended (legislative accident). L.B 772, 92nd Leg., 1st Reg. Sess., (Neb. 1991) (repealing Neb. Rev. Stat. §46-2,117).
- g) Cities and other appropriators can effectively protect ISF if structures are build at each end of stretch of river to be protected. *City of Thornton v. City of Fort Collins*, 830 P.2d 915 (Colo. 1992).

2. Limitations on state protection of ISF.

- a) State may not acquire conditional rights for ISF. 1994 Colo. Sess. Laws 766 (*amending* Colo. Rev. Stat. § 37-92-102(3) (Supp. 1994)).
- b) Appropriations on specific river under 1971 statute set aside because of error in legislative drafting. *Rim View Trout Co. v. Higginson*, 121 Idaho 819, 828 P.2d 848 (1992).
- c) To relinquish instream flow rights, state board must hold administrative hearing. Colo. Rev. Stat. § 37-92-102(3) (1990 & Supp. 1994). Enacted in reaction to *Aspen Wilderness Workshop, Inc. v. Colorado Water Conservation Board*, 901 P.2d 1251 (Colo. 1995)(power to

appropriate a minimum stream flow imposes a fiduciary duty between the CWCB and the people of the state).

3. Other

- a) Environmentalists allowed to object to interference with state ISF rights. *City of Aurora v. Division Engineer*, 799 P.2d 33 (Colo. 1990).
- b) State board must amend licenses to require releases for fish protection. Cal. Fish & Game Code §§ 5937, 5946 (West 1990).

E. Public Interest

1. Requirements for new water rights

- a) Permit requirements eased for environmentally beneficial projects. 1993 Or. Laws 654 (*amending* Or. Rev. Stat. § 537).
- b) The Water Resources Commission adopted administrative rules to limit new appropriations of water from the Columbia River and its tributaries above the Bonneville Dam to assist in the recovery of threatened and endangered salmon runs. Or. Admin. R. ch. 690, div. 33.
- c) Wildlife propagation is a beneficial use that can support a water right. *Dekay v. United States Fish & Wildlife*, 524 N.W. 2d 855 (1994).

2. Requirements for changes in use

- a) Local public interest standard applies to application to amend a water right permit, *Hardy v. Higginson*, 849 P.2d 946 (Idaho 1993), though not explicitly required by statute. Idaho Code § 42-211 (Supp. 1993).
- b) Change must be in conformity with water quality protection goals. 1993 Mont. Laws 244 & 445 (*amending* Mont. Code Ann. § 85-2-319).
- c) Revegetation required for changes out of agriculture. Colo. Rev. Stat. §§ 37-92-305(4.5) & -103(10.4) (Cum. Supp. 1992).

- 3. Public trust doctrine: *Mono Lake* case ended, with amendment of L.A.'s water rights to require water releases and limits on exports as necessary to provide instream flows and a channel restoration program to protect fish and other public trust resources. *California State Water Resources Control Board*, Decision 1631 (Sept. 28, 1994).

F. Transfers and Marketing

1. Major appropriations

- a) Appropriations >50cfs subject to legislative approval. Or. Rev. Stat. § 540.510 (1989)
- b) Special procedures apply to transfers >2000AF/year or > 35 miles. Kan. Stat. Ann. §§ 82a-1501 to –1506 (1989).

2. Interbasin

- a) Impacts and alternatives must be assessed. Or. Rev. Stat. §§ 537.801, 537.803, 537.805, 537.809, 537.810, and 537.830 (1989); Nev. Rev. Stat. §§ 533.368, 533.4375 (1991); Tex. Water Code Ann. § 11.085 (West 1997).
- b) Tax on transfers. Nev. Rev. Stat. §§ 533.438(1), 533.438(2), and 533.4385 (1991); Proposed Alaska Admin. Code tit. 11, §§ 05.1010 (a)(8)(P), (Q) (Sept. 29,1994).
- c) County land use authority used to prevent transbasin diversion. *City of Colorado Springs v. Board of County Commissioners*, 895 P.2d 1105 (Colo. App. 1994).

3. Interstate

- a) Standards for exports (generally similar to requirements for in-state appropriations). Ariz. Rev. Stat. Ann. §§ 45-291 to –294 (West 1989); Idaho Code § 42-401 (1990).
- b) Legislative approval required. Okla. Stat. Ann. tit. 82, § 1085.2(2) (West 1990).
- c) Exports enabled on conditions designed to protect state interests. Alaska Stat. § 46.15.035 (Michie 1992) (also fee for export); Utah Code Ann. §§ 73-3a-101 to –109 (Supp. 1991).

- 4. Agricultural transfers restricted. S.D. Codified Laws Ann. § 46-5-34.1 (Supp. 1992).

III. Major Decisions Peculiar to State Systems

A. Oklahoma: Denial of riparians' rights to reasonable use under 1963 law held to be a taking of property. *Franco-American Charolainee, Ltd. v. Oklahoma Water Resources Board and City of Ada*, 855 P.2d 568 (Okla. 1993).

B. Colorado

1. Specific rulings on requirements for plans for augmentation. *City of Florence v. Board of Water Works*, 793 P.2d 148, 152 (Colo. 1990).
2. Relaxing requirements for grant and perpetuation of conditional rights (due diligence); (compliance with statute requiring a showing that applicant "can and will" develop and divert water). Colo. Rev. Stat. § 37-92-301(4)(b)(1990). But see *FWS Land & Cattle Co. v. Colorado*, 795 P.2d 837 (Colo. 1990).

IV. The Growth of Federal Regulatory Influences

A. Endangered Species Act Puts Basin-Wide and State-Wide pressure on All Major Watersheds

1. ESA listing of salmon species requires major changes in the management of federal dams and reservoirs on the Snake and Columbia Rivers and water management throughout the Northwest.
2. Texas federal court appointed monitor for Edwards Aquifer and plan to limit withdrawals to protect endangered species. *Sierra Club v. Babbitt*, 81 F.3d 155 (1994). Provoked major changes in Texas groundwater law.
3. Colorado, Nebraska, Wyoming, and United States Department of the Interior entered into a cooperative agreement for recovery of endangered species in the Platte River, resulting in limits on states' water rights.
4. Bay-Delta issues driven by ESA, causing rethinking of reform of water use state-wide.
5. Colorado River management altered to protect endangered fish, limiting scope and type of water uses in seven states.

B. Wetlands Protection (Clean Water Act §404) Involves U.S. in Most Major Water Development.

1. Denial of permit was proper because project would adversely affect six acres of adjoining wetlands and lake. *O'Connor v. Army Corps of Engineers*, 801 F.Supp. 85 (N.D. Ind. 1992).
 2. Veto of § 404 permit upheld where project would cause unacceptable adverse effects on the environment; courts need not consider the “need” of the public entities. *James City County, Va. v. EPA*, 12 F.3d 1330 (4th Cir. 1993), *cert. denied*, 513 U.S. 823 (1994).
 3. Presence of migratory birds on the property created a sufficient connection to interstate commerce to allow Corps regulation over a water development project under the Clean Water Act. *Leslie Salt Co. v. United States*, 896 F.2d 354 (9th Cir. 1990).
- C. Federal Energy Regulatory Commission Licensing Affects Old and New Hydrological Projects.
1. Relicensing: FERC staff recommended significant instream flow requirements to protect downstream habitat on Platte River as operating conditions for the Kingsley Dam relicensing.
 2. New Licenses: FERC instream flow requirements control over conflicting state requirements. *California v. FERC*, 495 U.S. 490 (1990).

V. Interstate Litigation

- A. Pecos River. New Mexico’s debt to Texas of 340,100 acre-feet of water under the Pecos River Compact could be paid back in money in lieu of water. *Texas v. New Mexico*, 485 U.S. 388 (1987).
- B. Canadian River. *Oklahoma and Texas v. New Mexico*, 498 U.S. 956 (1990), held that New Mexico violated the Canadian River Compact by maintaining more reservoir storage in the Canadian River basin than permitted under the terms of the compact. *Oklahoma and Texas v. New Mexico*, 501 U.S. 221 (1991), held that all waters stored in the Canadian River basin in New Mexico below Conchas Dam were subject to New Mexico’s 200,000 acre-foot limit on conservation storage set out in the Canadian River Compact. In *Oklahoma and Texas v. New Mexico*, 510 U.S. 126 (1993), the Supreme Court approved a settlement.
- C. Platte River. *Nebraska v. Wyoming*, 507 U.S. 584 (1993), held the 1922 decree had not completely apportioned all water in the Laramie River to Wyoming and Colorado, but in order for Nebraska to block Wyoming from developing a reservoir on Deer

Creek (a tributary to North Platte) Nebraska would have to prove substantial injury from the project.

- D. Arkansas River. *Kansas v. Colorado*, 514 U.S. 673 (1995), held Colorado had materially depleted the state line flows of the Arkansas River in violation of the Arkansas River Compact and that Colorado was liable for violating the compact; remanded for consideration of the remedy and damage issues.
- E. In May of 1998, Kansas sued Nebraska alleging violation of the Republican River Compact.

VI. Federal and Indian Reserved Rights

A. Federal and Indian Reserved Rights Settlements

1. Fort Hall Indian Water Rights Settlement Act of 1990.
2. Fort McDowell Indian Community Water Rights Settlement Act of 1990 and 1993.
3. Fallon Paiute-Shoshone & Pyramid Lake Paiute (1990).
4. San Carlos Apache Tribe Water Rights Settlement Act of 1991 and 1992.
5. Salt River Pima Maricopa Indian Community Settlement (1991).
6. Northern Cheyenne (1992)
7. Jicarilla Apache (1992)
8. Uintah-Ouray (1992)
9. San Carlos Apache (1992)
10. Yavapai-Prescott Indian Tribe Water Rights Settlement Act of 1994.
11. Confederated Tribes of the Warm Springs Reservation Water Rights Settlement Agreement, Nov. 17, 1997.

- B. Ongoing Litigation: In all the states where there are general adjudications, reserved rights are at issue.

VII. Problem-Solving “Outside the Box”

A. Basin Wide Adjudication

1. Snake River Basin adjudication began in 1987; 174,459 claims filed.
2. Gila River adjudication (AZ) – approximately 24,000 claimants.
 - a) Revisions enacted by legislature to adjudication statute mostly struck down after challenges by United States and Indian tribes.
3. Little Colorado (AZ) – the parties involved moved closer to settlement in 1998. Progress was achieved in one of the most important issues – finding water supplies for the various tribes involved.
4. Klamath Basin (OR) – Water Department began process in 1990; 25,000 claimants. Determining federal and pre-1909 water rights in the Klamath Basin.
 - a) United States and the Klamath Tribe unsuccessfully challenged application of the McCarran Amendment to proceedings. *United States v. Oregon*, 44 F.3d 758 (9th Cir. 1994), *cert. denied*, 516 U.S. 943 (1995).
 - b) United States and Klamath Tribe submitted 370 claims totaling almost 1,000 individual water rights.
5. Legislatures attempting to modify adjudication statutes set aside by courts.
 - a) Idaho. Act of April 12, 1994, chs. 454-55, 1994 Idaho Sess. Laws 1443-91 (1994 Act), codified at Idaho Code 42-1401 to 1428 (Supp. 1994). Partially overturned by *Idaho v. United States*, 912 P.2d 614 (1995).
 - b) Arizona. HB 2276. Constitutional and McCarran Amendment challenges resulted in setting aside most attempted legislative alterations of general stream adjudication law. *San Carlos Apache Tribe v. Superior Court*, 972 P2d 179 (Ariz. 1999).

B. Macro-Basin Efforts

1. CALFED - Representatives of agricultural, business, environmental, and urban concerns pursuing more reliable water supplies and improved water quality for the environment, cities and farms. Proposals being studied:

- a) long term levee protection plan,
 - b) water quality program,
 - c) ecosystem restoration program,
 - d) water use efficiency program,
 - e) water transfer program,
 - f) watershed program,
 - g) storage,
 - h) Delta conveyance.
2. Glen Canyon Adaptive Management Work Group – comprised of diverse interests including basin states, tribes, power purchasers, recreational users, federal agencies, and environmental organizations; charged with monitoring operations and proposing modifications of operating criteria and mitigation activities related to the Glen Canyon Dam.
 3. Platte River – After 20 years of conflict over the effect of water projects on endangered species in the Central Platte River, Colorado, Nebraska, and Wyoming signed a cooperative agreement with Interior for a joint program of restoration and management of the Platte River, addressing endangered species concerns.
 4. Truckee River/Pyramid Lake. Truckee-Carson-Pyramid Lake Water Rights Settlement Act of 1990, Pub. L. No. 101-618, 104 Stat. 3289 (1990), provides for interstate allocation of waters of the Carson River, Lake Tahoe and Truckee River between California and Nevada; negotiation by the Secretary of Interior, California and Nevada of an Operating Agreement for the management of the Truckee River; authorization to purchase water rights to benefit the Stillwater National Wildlife Refuge; implementation of recovery plans for the cui-ui and the Lohontan cutthroat trout; authorization of \$40 million for the Pyramid Lake Paiute Tribe’s general economic development and \$25 million to develop the Tribe’s fisheries; and increased efficiencies for the Newlands Reclamation Project.
 5. Lower Colorado River Basin Multi-Species Conservation Program – Representatives from Arizona, California, and Nevada, together with various water and power agencies, formed a regional partnership to develop a program

to protect the critical habitat for endangered fishes and to conserve other species not yet endangered in the lower Colorado River basin.

C. Local Watershed Efforts

1. Collaborative watershed efforts have developed in response to the failure of traditional governmental approaches to address resource management issues.
2. Common attributes are:
 - a) focus on one or more problems related to the allocation, use or quality of water;
 - b) geographic scope encompassing all or part of a watershed;
 - c) inclusive approach to participation;
 - d) collaborative approach to decision making;
 - e) systems view of problems and potential solutions rather than dividing lines by resource, agency, or political jurisdiction. See Natural Resources Law Center, University of Colorado, *The Watershed Source Book: Watershed-Based Solutions to Natural Resource Problems* (1996).

VIII. Dam Removal and Re-operation

A. Re-operation and Modification of Facilities to Protect and Serve Additional Purposes

1. Five approaches to restore and enhance environmental values in western rivers:
 - a) Structural changes – can physically modify Reclamation facilities so that they can be made more environmentally friendly.
 - b) Changes in project operations – changes in the timing of storage and delivery in order to protect fish; changes in maximum rate of releases to protect the environment; changes in the season of release of water to protect endangered birds.
 - c) Improvements in project efficiency – an important benefit the reduction of diversions from a stream.

- d) Defining project and water user rights – the legal basis under which Reclamation projects work is a mix of federal statutory, administrative, regulatory, and contractual arrangements; state law water rights and statutes; and district rules and arrangements with water users. The result is a remarkable lack of clarity regarding the quantity of water that may be used by the project and individual users.
- e) Water transfers – under existing federal law there are a number of hurdles to be cleared before voluntary transfers of water from existing consumptive uses to nonconsumptive environmental uses can occur. Lawrence J. MacDonnell, *Managing Reclamation Facilities for Ecosystem Benefits*, 67 U. Colo. L. Rev. 197 (1996).

B. FERC Relicensing: Dam Removal a New Option

- 1. FERC ordered the removal of a dam subject to relicensing for which the owner had applied for a new license. (Edwards Dam on the Kennebec River in Maine).

C. Large Dams

- 1. Glen Canyon: Hayduke lives?
After David Brower and the Sierra Club proposed that Lake Powell be drained, Western congressmen scheduled hearings on the idea, leading credibility to, and arousing public interest in the proposal.
- 2. Snake River Dams: A viable, radical solution
 - a) Four of the twenty dams on the Snake River could be breached, resulting in good economic and environmental sense. Decision in 1999.

IX. Conclusion: Federal laws and programs have been primarily responsible for the changes in western water policy in the 1990s.

- A. Federal regulations have emerged as more important in determining where and how water is developed and used in the West than state water allocation laws.
- B. Environmental laws brought pressures to which established state water institutions were unequipped to respond, leading to the creation of alternative, often ad hoc, decision-making institutions.

- C. Most of the major new directions in state water policies have been motivated by federal laws. E.g.:
1. Basin-wide adjudications were initiated in an attempt to quantify reserved rights in state courts.
 2. Most state water quality protection laws were enacted under federal mandates.
 3. Even long-awaited and needed changes in state laws were provoked by federal actions (e.g., Texas groundwater law).
- D. Weak (or non-existent) state programs have been supplanted by federal programs. E.g.:
1. Almost all wetland protection is federal.
 2. State instream flow programs are often superseded by federal requirements (e.g., ESA, FERC, etc.).
- E. Federal programs can substitute national determinations of the public interest for state judgements, even on matters of essentially local or state importance and expertise.
1. Ironic, given the traditional state insistence and federal recognition of the primary state role in western water policy.
 2. Illogical, given the importance of finding practical solutions that tailor water uses to local needs and conditions.
 3. Necessary, given the existence of strong and widely held demands for more diverse economic uses of water competing with demands for fulfillment of ecological, social, and aesthetic values from western water.
- F. The expanded federal role appears to be the result of a default in state leadership rather than an overbearing federal presence.
- G. To the extent that states assert greater leadership in the areas where federal government is now responding to public demands for change in water policy they may supplant the federal role.

The 90s: Major Developments in Western Water Law

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I have an interesting job today and that is to look at the developments over the last ten years in water law. It is a challenging task and preparing for it offered some surprises to me. As I reviewed the past decade, I thought it would be good to reflect on what we were thinking when it began. At the threshold of the 1990s it would have been reasonable to predict that the western states would use the decade to produce some major reforms in water law. The stage was set, with calls for reform, a lot of specifics coming out of studies and reports and recommendations, and commitments made by political leaders. But today, as we contemplate closing out the 90s, as we look back at the decade the expectations that we began with have not been fully realized. It has been an era of progressive and major changes in water law and policy. But the promise of major state reforms seems to have fallen short. This has been a time when, somewhat to my surprise, there has actually been a diminished importance of state governments in western water law and policy.

Evolution of Water Policy

Now, let's flashback farther than ten years to examine the evolution of water policy over the lifetime of the Natural Resources Law Center.

Shortly before the Center was born, Jimmy Carter was elected President. For westerners, especially those interested in water issues, and that meant most westerners, Carter's ascent was characterized by the infamous "hit list." Some 33 water projects that were already approved by Congress to be constructed in the West were targeted for elimination from the federal budget. According to the new Administration, they were doomed by intolerable environmental impacts or unacceptable benefit/cost ratios. The resulting outcry from western politicians and

development interests was instant and shrill. Governor Richard Lamm wrote in his book, *The Angry West*:

However well-intentioned it may have been, the Carter hit list was a study in federal arrogance. Its assumptions were questionable, its conclusions were faulty; it was riddled with anti-western prejudice and wrapped in anti-western ignorance. It reflected no understanding of western conditions, of western people, of the nature of their lives, or of the relentless crushing aridity that shapes their land and everything in it.

So in those gentle and muted terms Governor Lamm weighed in with his views of the Carter hit list. Then-Governor Bruce Babbitt was critical as well as he told us last night, quoting from a brief he had written in that era. The brief pleaded that the need, indeed the life-or-death need, for water projects to be built, else Arizona would wither up and blow away. Babbitt told us that he has recanted some of those views, and we know that Dick Lamm did the same.

Now Carter was new to Washington, having run as an outsider, and he could never be accused of having a keen sense of national politics. The hit list was seen as a major political blunder, a blunder of epic proportions. But now we look back and we find like many other retrospective views of the Carter presidency, it is viewed more kindly by history than it was by contemporary observers. Although Carter had to back-pedal on a few of the projects, the thrust of the policy was maintained. The Reagan and Bush Administrations embraced policies that had the same bottom line. Projects that did not meet certain criteria and standards and did not have significant state or local funding were basically dead. The hit list is now seen by many as a forward-looking proposal that marked the end of the big dam era as clearly as any other event in history.

With the departure of the federal government from western dam building, however, there was no less federal presence. The same national environmental consciousness that emboldened the Carter administration to produce the hit list had inspired a wave of law-making in the early 70s that created most of the environmental laws that are on the books today. Clean Water Act, Clean Air Act, FLPMA, NFMA, Endangered Species Act, and many others. These laws gave the feds a new kind of presence. Instead of being there with large helpings of pork to mask the distaste the West felt for federal rules, the U.S. was left holding all sticks and no carrots. The western states might have dug in their heels and turned up the volume on the traditional chorus

of “Send your money but shove your rules” but, while the states did continue to assert the primacy of states in western water policy, the debate changed in some important and subtle ways.

A clutch of energetic western governors like Babbitt, Lamm, Mattheson, and others saw the trend: If dams were going to be built it would have to be with state or private funds. There would no longer be a free lunch, if there ever had been. Even if the states could raise the money to build their own dams--and this was a time of declining state revenues--they would face significant regulatory obstacles. So the handwriting was on the wall.

The progressive governors consequently recognized that, first, demand had to be controlled. Second, the public insisted that resources that defined the West’s essential character had to be protected. And finally, they perceived that states had an opportunity to supplant the need for federal regulation. So the governors began shifting their positions. There was a nascent recognition of the need for water conservation, protection of instream flows, the integration of quality and quantity management, and use of market and pricing mechanisms to make water allocation more efficient in serving the West’s needs. There was even some talk of widening water decision-making so that it was more inclusive of a variety of interests.

These were relatively revolutionary at the time, if not new ideas. It wasn’t clear exactly what the states should do to implement these concepts and the constituency for changing laws and policies wasn’t formulated. Some still viewed the talk of any change in western water law as seditious. Prior appropriation pure and simple had been enough for our grandparents and it would be enough for our grandchildren. Never mind that most states had already made plenty of departures from prior appropriation in the course of providing incentives for development and creating elaborate statutory programs for permitting. Now, I speak from personal experience when I talk about the resistance to change, having been a state official in this era and having dodged some missiles, both verbal and vegetable, as I stood before various audiences and organizations of water users, farmers and others, and broached then-controversial issues like water conservation, protection of flowing streams, and use of markets and pricing. There was a strident, dogmatically ideological tone to the arguments in opposition.

The 1980s

The change in attitude that we experienced during this period was, I think, traceable to the spark of innovation and leadership in reform in the work of the Western Governors Association in the 1980s. When the governors I talked about came into that association they changed the debate. As each one became chairman of the association they had their pet projects. One of the path-breaking pieces of work the governors produced was a report authored primarily by Bruce Driver, *Western Water: Tuning the System* in 1986. That was followed by Western Governors Association resolutions that called for more efficiency for tidying up our state laws, and making them more reflective of the need to conserve our scarce water resources. The governors also endorsed vigorously the settlement of Indian water rights.

Although there had been acceptance in principle by the mid to late 1980s of some of the revolutionary ideas in these official resolutions of the Western Governors' Association, the water establishment still had not accepted ideas like the need for greater instream flow protection or efficiency. This marked a separation of the official state position from the water development and management interests within the states. It was a subtle change, but it broke an alliance that had been rather solid in the past. The work of the governors was important in identifying specific actions that the states could take: water salvage laws, more inclusive hearings for water decision-making, pricing. Similarly writers, academics, and think tanks like the Natural Resources Law Center produced a body of literature with suggested reforms and changes. A few new state laws were actually passed that reflected these ideas.

The 1990s – Great Expectations

The 1990s then arrived with another generation of governors in office. And they further set the stage for reform. They increased the prospects that the 90s would produce the kinds of reforms that had been incubated in the 1980s. Notably, the Western States Water Council headed by Craig Bell who you heard speak last night, and the Western Governors Association co-sponsored a series of workshops known as the Park City Workshops. This series of four meetings produced a clear, consensus message: the states needed to take leadership in making water policy conform to the interests of a broader public. Environmental, social, and economic needs have to be integrated into the decisions. The parties at those meetings agreed that a more

holistic approach to problems was necessary, with a focus on the basin, the watershed, or the problemshed instead of relying on purely political divisions. The clear implication was that if the states acted it would not be necessary for the federal government to increase its control in water matters beyond distinct, identifiable federal interests. Again, the Western Governors Association passed strong resolutions of endorsement.

Now many of these themes were echoed in the book that culminated the Center's own western water policy project which many of you are familiar with, *Searching Out the Headwaters* which was published in 1993. Also the Longs Peak Working Group recommendations to the Clinton administration when they came in in '92 included many of the same ideas. Closely linked themes are also found in the contemporaneous report entitled, *Water Quality 2000* that was produced by other experts under multiple industry sponsors. These reports were coming from all different perspectives and sources but their recommendations were closely allied.

Water reform at the beginning of the 90s no longer seemed ominous. It was even acknowledged to be a good idea by some people who had rejected it in the past. Some of the growing western cities, in particular, could see the advantages of getting on the band wagon. They saw the new ideas as potentially helping their problems and they didn't dwell on ideology.

State Law Reforms

What happened in the 1990s--the reality of political and legal development at the state level--nevertheless fell short of the predictions that seemed reliable in the late 80s. I admit to being wrong in predicting major state law changes and reforms, and somewhat disappointed now. Let me take a minute or two to review the legal activity, judicial and legislative, during this era at the state level. And forgive me for being rather selective in doing this. In the question and answer period if I've omitted something that affects my generalizations you can correct me.

Conservation and Efficiency

In the area of water conservation where we expected a considerable amount of reform there has been some activity. But for all the talk of the need to conserve, the reports and rhetoric and concrete ideas that were offered, the decade has actually yielded little.

Montana and Oregon passed laws encouraging salvage. Montana's law allows appropriators who conserve to use the water they save, something that has been pressed for many years but not realized in many places. Arizona and Colorado passed laws promoting low flow plumbing fixtures. Although the inefficient use of huge quantities of water in agriculture is notorious, states have done little to promote agricultural efficiency. Kansas did pass a law requiring water conservation plans of all water users and, although the Reclamation Reform Act requires conservation in federal projects, Interior's attempts to implement this legal requirement in existing projects was whittled away and met strong opposition. The regs that were adopted were far more modest than those proposed. The Washington supreme court has held that when rights are adjudicated they can be limited to the amount used over time in a reasonably efficient manner. That is to say they can be diminished from the original amount of the right to the amount used with reasonable efficiency, even if the full amount of the paper right has been used over time.

Taken together, if you were to roll all these reforms in water conservation over decade--the legislation and the court decisions--into one state and say that they all took place there it would amount to a modest change. But they were spread around the entire West and some of the states did nothing.

An exception to the general inactivity, and the most significant legislation in the West concerning efficiency has been package of California laws dealing with reuse. During the decade California has used laws to produce water for millions of people. The understandable distaste that people feel for drinking water that they flushed down the toilet the day before has been overcome by the scientific reality that water can be cleaned up and recycled without sacrificing health or esthetics. Reuse has become a necessity in a place that is growing well beyond the capacity of its water resources. Sensibilities may suffer a bit, but California lawmakers have passed new laws almost every year in the decade that encourage recycling. And districts in southern California have put in motion programs that actually generate hundreds of thousands of acre feet of water per year through reclaiming waste water and using it to replenish ground water. And there are new state laws that allow standards for gray water--the water that hasn't gone down the toilet but has gone down other drains--to be set for residences. There is also a law declaring the use of potable water to be waste if reclaimed water is available.

Groundwater

In the area of groundwater there have been some minor advances. The most significant one is the long-awaited legislation in Nebraska recognizing that water pumped out of wells that are hydrologically connected with a surface stream have to be conjunctively managed with the water from the stream. That is, the legislature has finally admitted that the water all comes from the same source. This brings Nebraska into the 20th century just in time for the 21st. Texas, in response to Endangered Species Act problems caused by depletion of the Edwards Aquifer, has taken control of groundwater management, finally rejecting the antiquated idea that the overlying landowner has absolute ownership of groundwater beneath its property.

One of the issues that one might have expected to be addressed by states during this era, an era of growth pressures and enlightened management, is aquifer recharge, the use of aquifers for storage. But other than the efforts in California to encourage recharge with reclaimed water there's been little legislation. Idaho, for instance did take steps to encourage recharge by recognizing that underground storage is a beneficial use.

Instream Flow

The area of instream flow is one where the states were not legislating on a blank slate. By the end of the 80s, almost all the states had some instream flow protection programs, but only the beginnings. A few states had none. Nebraska did enact a new instream flow law during the 90s and the courts upheld its constitutionality. Utah had an instream flow law but broadened it, allowing the Division of Parks as well as the Department of Wildlife to acquire existing appropriations and convert them to instream flow. Montana fought for years over whether to allow experimental leasing of water rights for instream flows and finally authorized it on five streams. New Mexico is still struggling with the issue and hasn't really made progress toward enacting a statewide law. It remains the only western state I believe where there's no program for instream flow in place, although the state engineer says he will recognize rights to flow in a public agency if a proper application is received.

In Colorado, where we have one of the oldest and most flexible laws allowing instream flow rights, the agency that is in charge of administering the law, the Colorado Water Conservation Board, as well as the legislature and the courts, have continued to trim away at the

edges of it, actually taking away some of the statute's flexibility and effectiveness. In one curious court decision, however, our state supreme court did allow the city of Fort Collins effectively to protect instream flows even though that prerogative is legislatively reserved to the Water Conservation Board. They did this by reading a fiction into what was going on and saying that, because Fort Collins had a dam at the beginning of the stretch of stream and at the bottom of the stretch of stream they hoped to protect, that these controls of the river were like diversion dams and so we weren't really protecting an instream flow. Since Fort Collins was protecting an appropriation by diversion, voila, the city could protect instream flows. So there are ways to get around some inflexibilities that have been read into the law.

Public Interest

The area of public interest is one where we expected a great deal of activity. All states (except Colorado) have some type of public interest review and had it at the beginning of the 90s, at least for all new appropriations. Many of them have begun to apply the same standards to transfers of existing rights. But all these laws have room for expansion of the purposes of public interest protection, and for clarification of the standards. There's a lot of ambiguity in what public welfare public interest is, and a demand for more public involvement. The states, however, have done little during this decade to meet these needs. Our Colorado supreme court actually ruled that our water courts have no role in accepting or considering evidence of impacts on environment, local economies, farming, rural communities, or other public interest effects of new water uses as part of their regional beneficial use determination.

The public trust doctrine, a subject that Joe Sax has continued to write about, was in the 1980s, depending on your perspective, the greatest threat ever known to the prior appropriation doctrine and perhaps to western civilization, or a godsend necessary to protect a public resource. But the public trust doctrine in water rights that was born in California hasn't fertilized, or infected as the case may be, other states. The Mono Lake litigation that gave life to this doctrine in the field of water allocation appears to have ended finally, with an amendment of Los Angeles' water rights to ensure that instream flows and channel restoration are maintained. In Idaho the supreme court has actually pulled back from its earlier nominal recognition of public trust doctrine, saying that it doesn't apply to the massive Snake River Basin adjudication.

Secondly, Idaho legislation now restricts application of the public trust doctrine in water allocation matters.

Transfers

The field of transfers and marketing is an area where there has been some state activity. States are understandably concerned about transfers between basins, from ag to urban, and out of the state to other states. And here are some of the things that have been done.

In Colorado we now require, thanks to legislation long pressed by Senator McCormick, revegetation when farm land is dried up. In Oregon and Kansas we see the states imposing special requirements on major appropriations. Large appropriations go through a special level of review. Oregon, Nevada, and Texas have placed controls on transbasin diversions. Arizona, Oklahoma, Alaska, and Utah have tried to take control of inter-state transfers and still stay within the commerce clause limitations that are incumbent on states who want to control those things.

Outside-the Box Approaches

Now to see the real innovation of the 90s we have to look beyond the realm of activity in the courts and the legislatures of the several western states. We have to look at some “outside-of-the-box” efforts or approaches to problem solving that are not part of the traditional western water institutional framework.

Macro-Watershed Efforts

First, I identify as “outside-of-the-box efforts” those efforts in major watersheds where there are problem solving efforts being conducted by representatives of diverse interests. They are not formally institutionalized by state legislation, but they are instances where people have gotten together and attempted to solve a particular problem or multiple problems. The most notable is one Secretary Babbitt mentioned last night. That is CALFED, where representatives of agricultural business and environmental and urban concerns are trying to solve the problems growing out of the Bay-Delta dispute. That necessarily means looking at water issues throughout the state of California: dealing with water quality, ecosystem restoration, water use efficiency, water transfers, and storage of water. All these issues have traditionally been dealt

with piecemeal by state legislation and courts. Failing effective solutions by existing state institutions, a new ad hoc institution had to be created.

On the Colorado River the operations of Glen Canyon Dam have been subjected to an experimental process in the hands of an adaptive management work group. A group of states, tribes, power purchasers, recreational users, federal agencies, and environmental organizations have been brought together, charged with monitoring what Glen Canyon Dam does, and recommending changes in its operating regime. This is an unprecedented idea.

Other macro-basin efforts include the Platte River issue where, after 20 years of conflict over the effects of water projects on endangered species in the central Platte River in Nebraska, we find Colorado, Nebraska, and Wyoming joining together with the United States and addressing these special endangered species concerns and collateral issues. Other such approaches include the Truckee River/Pyramid Lake issue and the lower Colorado River multi-species conservation program.

Local Watersheds

In addition to the macro-watershed efforts, we also have seen the emergence of a very exciting area of problem solving that's also "outside of the box." Local watershed efforts involve people in neighborhoods, watersheds, and communities who get together to develop solutions to water and other resource problems. People who haven't been traditional allies or even had to deal with one another may be brought together by their common concern for the river that runs through their town or community. They may be brought together because they are concerned about a mine upstream that is polluting and they want to work out ways to solve the problem. They may be concerned because there's an endangered species issue and it's inhibiting the way that the town can respond to growth. Together, disparate interests find multi-faceted solutions, often employing a systems approach. The Center here has produced research on local watershed groups. I cited *The Watershed Sourcebook* in my outline which is undergoing revision and expansion. Doug Kenney has taken leadership on these issues and is doing more important research for the Center. These groups typically are created and operate from the ground up. Many are "grass-roots" efforts. Although some states like Oregon and Washington

have passed enabling legislation, the use of local watershed groups has been largely an outside-of-the-box approach.

Dam Removal

Now another outside-of-the-box approach has been the revolutionary and controversial issue of dam removal. This is something that was not on the table in the 1980s, not even the topic of polite conversation. Reoperation of dams was something that progressive thinkers were talking about. Larry McDonnell was at the cutting edge, writing articles and reports while he was director of the Center here, about how major dams and facilities, especially Bureau of Reclamation projects, could be reoperated and in some cases retooled to accomplish the new environmental purposes and demands on water resources. But removal of dams was something else. It popped on to the screen first in Federal Energy Regulatory Commission (FERC) proceedings. The Edwards Dam on the Kennebec River in Maine and the Elwah Dam on the Elwah River in Washington, were examples of proposals to remove antiquated dams that were doing little good and lots of harm. Now we see others being removed, and we joked last night with Secretary Babbitt about his zeal when he swings a sledge hammer or takes a jack hammer to these facilities. It's notable that a Secretary of Interior stood here last night and talked about three water holes for the West in the future, one of which was removal of dams.

To my surprise, serious discussion is being given even to removal of big dams. Diverse interests are talking about removal of major dams on the Snake River. Don Miller is working on that and others here in the audience are heavily involved. There are also proposals for removal of Glen Canyon Dam. The idea was raised as almost a casual suggestion at a Sierra Club meeting. However, some people were so worried about it that they focused attention on it. Members of Congress called hearings on the idea, giving it unexpected dignity. Then members of the public became more intrigued. So now the proposal is being studied more seriously as a result of the opponents' attention.

Stream Adjudications

Another outside-of-the-box approach is seen in the several general stream adjudications around the West. We'll talk about those adjudications later in this conference. These approaches give the watershed major importance. They are created by state legislative action

and therefore are exceptions among the outside-the-box approaches. They all exist pursuant to special laws and under the jurisdiction of special masters. These basin-wide adjudications do not really reflect a shift to watershed-based management. They are designed to sort out water rights and the only rational way to do it is on a river basin scale. They are, among other things, ways of keeping lawyers fully employed. Virtually every water lawyer in the four or so states where there are general stream adjudications is involved in these adjudications.

Indian Water Rights

The desire to quantify Indian water rights was the motivation for most general stream adjudications. After the federal government and the tribes lost every attempt to prevent the McCarran Amendment from being applied to allow Indian reserved water rights from being adjudicated in state courts, the states realized that they needed to pursue quantifications of those rights in state courts. So the general stream adjudications were partly a response to a legal development that secured state jurisdiction to adjudicate reserved rights.

The idea of settling, rather than litigating, these claims had been embraced by states and by the federal government since the early 80s. Efforts at settlement, however have kind of fizzled. There was a flurry of activity in the 1980s, a dozen or more settlements. But except for the settlements that were in the works when the Clinton Administration came into office, there's been virtually no settlement concluded in the last seven years. It does appear with the Warm Springs settlement that the log jam may have been broken. Several others are in the pipeline and may achieve resolution of disputes in three or four other areas.

Assessing the 90s

What happened to all the good intentions and wise advice of the 1980s? The 1990s did produce some reforms consistent with the ideals that propelled us into the decade. But the existing legal and institutional framework, at least at the state level, did not change very much.

The watershed gained in importance, but this came about in most states largely through two phenomena both of which create new institutions rather than being integrated with state systems. The watershed concept is inherent in the basin-wide adjudications that I mentioned, though enabling intergenerational litigation can hardly be called reform of state water law. The

other embodiment of the watershed concept is in the potpourri of efforts to solve one or several problems by convening local watershed groups.

Today, we do find that water decisions are more sensitive to the public interest. We find that the environmental, fish and wildlife, social, economic impacts, the involvement of more people, and the greater integration of water management as well as market mechanisms are being widely used. However, after looking over the history of the last decade, I conclude that three changes are largely due to two phenomena. One is the increase in federal programs and laws. And the other is the growth of watershed or locally-based citizen efforts. In the federal arena I think the two most powerful legal influences today on water development and use are the Endangered Species Act and section 404 of the Clean Water Act. The Endangered Species Act puts basin-wide and statewide pressure on all major watersheds. ESA listing of salmon species is what is driving the major changes in management in the Snake and Columbia Rivers and throughout the Northwest. The Texas reform of groundwater law was really driven by litigation that enforced the Endangered Species Act, a federal law, thereby provoking the changes in state law. I mentioned Colorado and Nebraska and Wyoming being brought to the table on the Platte River, again over endangered species. The Bay-Delta issues that eventually led to CALFED was driven by the Endangered Species Act and the Clean Water Act, which caused a rethinking of reform of water use in California statewide. Colorado River management today is driven heavily by the need to protect endangered species, limiting the scope and type of water use and power generation on the river and through the seven states. Section 404 of the Clean Water Act is our wetlands protection law, filling an important gap because the states have very little wetlands protection in their laws. And we see all over the country validation of the Corps and EPA's role in using 404 to deny permits to dredge and fill the waters of the United States, which we now know means putting anything in a stream or even a wetland including concrete used to build a dam. Section 404 was the reason that the Two Forks dam in Colorado was vetoed by the EPA. The 404 permitting process further triggers a look at endangered species and other federal interests that may be connected with the project that is the subject of the 404 permit.

I want to make two observations here. One of them is that these federal laws have ended up motivating most of the significant state reforms. This is different from what we thought would happen during the 90s. We thought there would be state reforms to take the hard edge off

of the federal laws. Secondly, and oddly I think, the federal government has emerged as more agile than the states. Policies have changed within the federal establishment and, even without new laws being enacted, federal officials are behaving differently. The Bureau of Reclamation has changed. Representatives of the BLM, the Environmental Protection Agency, the Fish and Wildlife Service, and the Forest Service are participating in collaborative processes. They're taking on new mantles, new assignments and learning new skills not originally required for jobs.

My view is that federal programs run a risk of substituting national determinations of the public interest for state judgements, even on matters of essentially local or state importance and expertise. Of course there are broad federal interests that need to be represented and driven by federal standards. But now, in default of state leadership, the federal government is getting involved and filling the void. I find this ironic given the traditional state insistence and federal recognition of the primary state role in western water policy. I think it's illogical, given the importance of finding practical solutions that tailor water uses to local needs and conditions. We really ought to be solving these problems within the watershed.

But I also conclude, after saying it's ironic and illogical, that it's necessary to have this strong federal role. The states have not taken responsibility for reconciling strong and widely held demands for more diverse economic uses of water with competing demands for fulfillment of ecological, social, and esthetic values from western water, as well as the protection of Native American water rights. So this expanded federal role appears to be a result of a default of state leadership rather than an overbearing federal presence. And, for now, the federal agencies seem committed to facilitating local problem solving through the macro and local watershed approaches. But if the states step up and assert their leadership in the areas where the federal government is now responding to public demands for change in water policy they still have a chance to supplant much of the need for federal roles.

Why have the states not taken on a stronger role? With the fragmentation of water interests, those occasional alliances we saw within states in the past when the goal was to generate financial support for water projects, is not there any more. There is no perception of a common interest in forming an alliance to drive forward state water reform legislation. There was a common cause in getting federal funds, but there is no similar rallying point today.

It is true that in the four facilitated meetings that we called the Park City Workshops, and which led to solid agreement on the Park City principles, all the diverse interests were there and they all agreed that action was needed. But it seems that agreement on what's right for the long run doesn't motivate alliances for action. Absent a crisis--drought, federal regulatory coercion, inexorable growth pressures, interstate or Indian litigation, or some site-specific ecological collapse--reform just doesn't happen. People of good will, good intentions, and wisdom won't mobilize to pass the legislation just because it is good. And I think that's the challenge we need to discuss: how to mobilize political action. For the time being, the federal government's regulatory requirements are creating crises in town, and this seems to be motivating the occasional state legislation that we have seen.

Thank you.