# The Water Report

Water Rights, Water Quality & Water Solutions in the West


## In This Issue:



***Check It Out!***
**www.thewaterreport.com**

## Next Issue:

**Aquifer Storage Recovery**

**Watershed Assessments**

**& More**

## BASIN-WIDE WATER MANAGEMENT

**COOPERATION IN THE DESCHUTES BASIN: A MUNICIPAL PERSPECTIVE**

by Patrick Griffiths, Water Resources Coordinator, City of Bend, Oregon

As first promoted by John Wesley Powell in the late 1800's, management of water in the West must occur at the watershed scale. So must any attempt at developing new water governance policies that include voluntary water banking or marketing. Nowhere is this more evident than in the Deschutes Basin, Oregon, where the confluence of history, hydrology, geology, politics, demographics, land use, and personalities all come into play.

Water policies in the western United States have worked well for allocating water for agricultural use. We all recognize that these policies were intended to encourage settlement. Originally laid out in the late 1800's, these policies were effective for their intended goals. John Wesley Powell's watershed perspective, however, was largely ignored by Congress. Consequently, the unique qualities of each western watershed (as well as other possible water uses) were largely ignored as water projects were developed.

Today, there is wide agreement that a new model of collaborative water governance is required in the Deschutes Basin. Active participants in this effort include: the City of Bend; other municipal, quasi-municipal and private water suppliers; concerned irrigation districts; the Confederated Tribes of Warm Springs; the Deschutes Resources Conservancy; and other conservation groups. Any new model must move beyond allocation and actually manage the water resources. There is consensus that creation of voluntary water markets combined with a water banking structure will play a significant role in any new management paradigm.

The Deschutes River is unique in the West, as there is much water available to reallocate for flow restoration, to continue agricultural use, and to meet rapidly changing demands associated with growth. Understanding the complexity and unique nature of the Deschutes River will be key to developing a governance model that allows for a groundwater mitigation process to be created which: returns water instream over the next 100 years; allows existing users the beneficial uses they continue to rely upon; and manages the water for fish and other instream values.

### Fundamental Water Supply Issues in the Upper Deschutes Basin

Beginning in October of 1998, a wide range of water interests began meeting to discuss options for future water management in the Deschutes Basin. As this region was experiancing the fastest population growth in Oregon, many agreed to a time-constrained process for completing a plan which ultimately led to the creation of groundwater mitigation rules (Oregon Administrative Rules (OAR) 690-505-0600 *et seq.*). That original process was guided by three goals: 1) to meet water needs by using an approach that is wide in scope — addressing the Basin as a whole; 2) to create a system for mitigating the potential impacts caused by future groundwater development on the surface flows of the lower river; and 3) to use the best available tools and resources to protect and enhance: water quality; instream values (including restoring flows in the Middle Deschutes); and other designated beneficial water uses. Although the mitigation rules are now in place, a range of fundamental issues remain. All these issues must be considered as stakeholders continue to move towards the next steps of basin-wide water management.

## Deschutes Basin

### Issues, Facts and Needs

**ON-GOING UPPER DESCHUTES BASIN ISSUES INCLUDE:**

- Surface water is fully appropriated (except for some winter storage).
- Groundwater sources are the best choice for future municipal needs.
- Instream water rights that protect flows in the Lower Deschutes and Crooked Rivers under the Scenic Waterway Act (1970) further restrict groundwater availability for municipal use.
- Municipal water supply development is heavily regulated. Major regulations include those under the Oregon Water Resource Department's (OWRD's) section of the Oregon Administrative Rules, Division 690 (specifically, OAR 690-086 – Water Management and Conservation Plans and 690-315 Permit Extension Rules). Development of drinking water systems is also regulated by many other agencies, including the Oregon Department of Human Services, (OAR 333-061 *et seq.*).
- Mitigation of groundwater pumping effects on surface waters is now legally required for new groundwater permits. These rules were put into effect statewide in Oregon, despite the well-documented capacity of the Deschutes Basin aquifer to meet foreseeable future needs.
- The range of mitigation options is restricted by regulatory, social, economic and environmental constraints.
- Rapid growth requires timely water supply development by water providers under restricted conditions which can be lengthy and uncertain. The permitting process alone can take multiple years in Oregon, not including legal challenges allowed under public interest protections embedded within various state and federal laws.
- State and Federal land use and other environmental regulations and permitting processes necessary for water systems can add additional time, complexity and opportunity for legal challenge and delay.
- Rapid growth and urbanization of lands within irrigation districts is reducing the assessment base of the districts and increasing the cost and complexity of maintenance and operations.
- Social values are shifting away from awareness as regards the importance of irrigation district and agricultural roles in the Basin economy.
- Agriculture is important to the Basin and farmers need a reliable, affordable water supply over the long term.
- Basin water use facts are not well understood among citizens and Basin stakeholders.
- Flows in the Middle Deschutes River are depleted by irrigation diversions. Low flows cause water quality and other concerns and do not meet the 250 **c**ubic **f**eet per **s**econd (cfs) target flows set by the Oregon Department of Fish and Wildlife (ODFW).
- Flows in the Upper Deschutes are severely depleted during the winter by storage of water in upstream reservoirs.
- Collaborative efforts are required to meet future water needs of the Basin

**The Water Report**
(ISSN pending) is published monthly by
Envirotech Publications, Inc.
260 North Polk Street
Eugene, OR 97402
**Editors:**
David Light
David Moon
**Phone:** 541/ 343-8504
**Cellular:** 541/ 517-5608
**Fax:** 541/ 683-8279
**email:**
thewaterreport@hotmail.com
**website:**
www.thewaterreport.com
**Subscription Rates:** $249 per year; Multiple subscription rates available.
**Postmaster:** Please send address corrections to:
The Water Report
260 North Polk Street
Eugene, OR 97402


**A Whale of a Story**

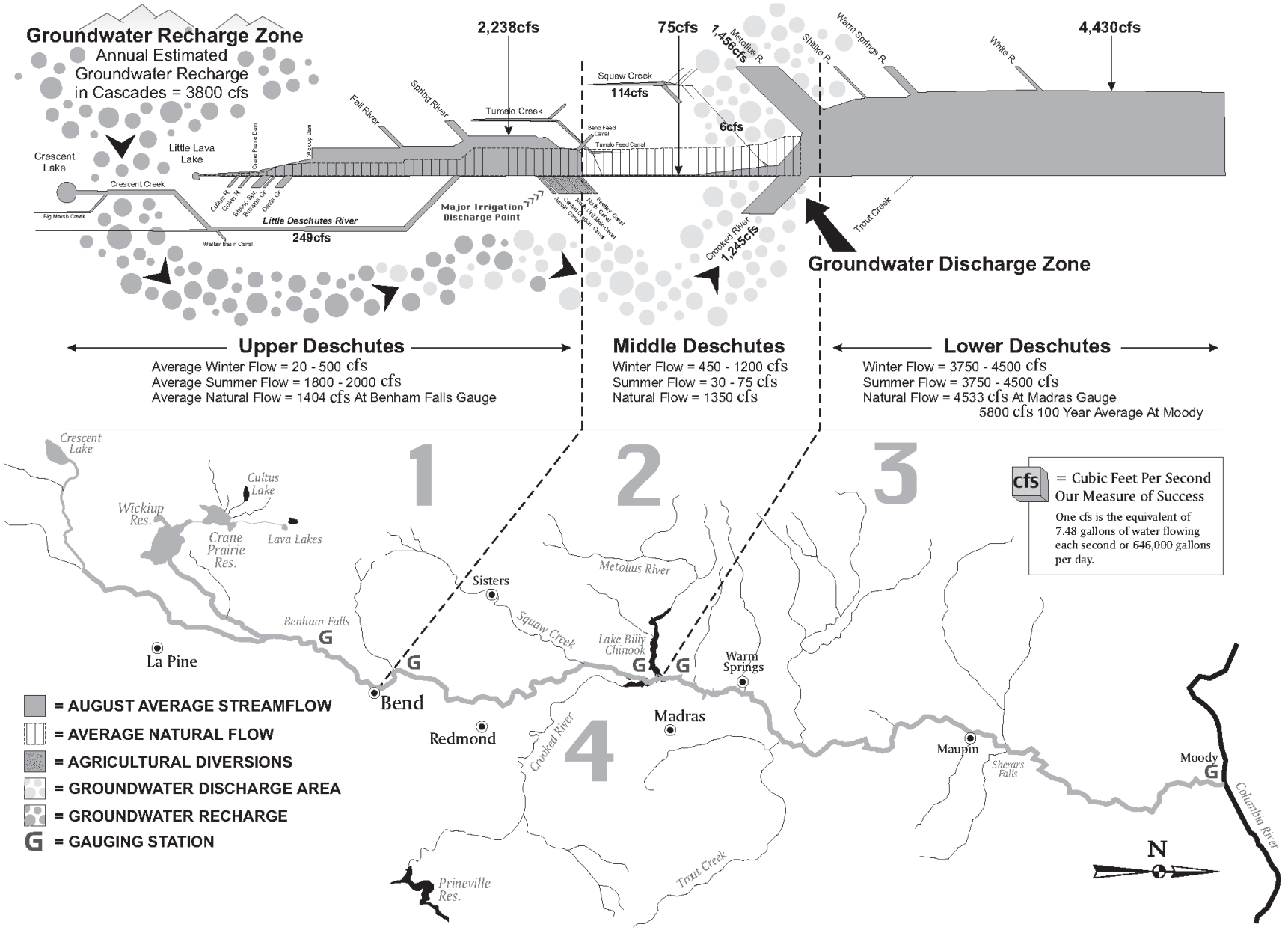
Reading a bulleted list can only go so far in understanding the unique challenges in the Deschutes Basin. Bob Main, the former Deschutes Basin Watermaster, created a graphic tool to explain the complexity of the Deschutes River Flows (see next page) which is clearly worth a thousand words.

Take a moment to study what is known as the "Blue Whale" (when printed in blue). One can imagine the "whale" swimming off to the right.

The width of the graph corresponds to the amount of water at any given point in the river. The more water instream at any given point, the wider the "whale." The graph represents the conditions for one particular month — July of 1986. The numeric average seasonal flows, (both natural flows and managed) are listed below the whale. Note how the river is divided into three distinct reaches, the Upper, Middle and Lower. Pay particular attention to the flows in the Middle Deschutes. This is where the flows of the Metolius, Crooked and Deschutes Rivers meet (near the "groundwater Discharge Zone" arrow on the diagram ) and combine with massive groundwater discharges to infuse the Lower Deschutes in and around Lake Billy Chinook (the lake backed up by Round Butte Dam). The flows in the Lower Deschutes vary throughout the year but have a 100 year annual average of 5800 cfs as measured at the Moody Gauge, at the confluence with the Columbia River.

The impacts of current flow management are very evident when you compare the vertically-lined overlay of the calculated natural flow of the river, with both the Middle and Upper reach flows shown in gray. These reaches are altered by the storage, release and ultimate water diversion by the irrigation districts at the beginning of the middle reach. What does not show on this graph is how winter flows in the Upper Deschutes are severely depleted due to the filling of the upstream reservoirs.

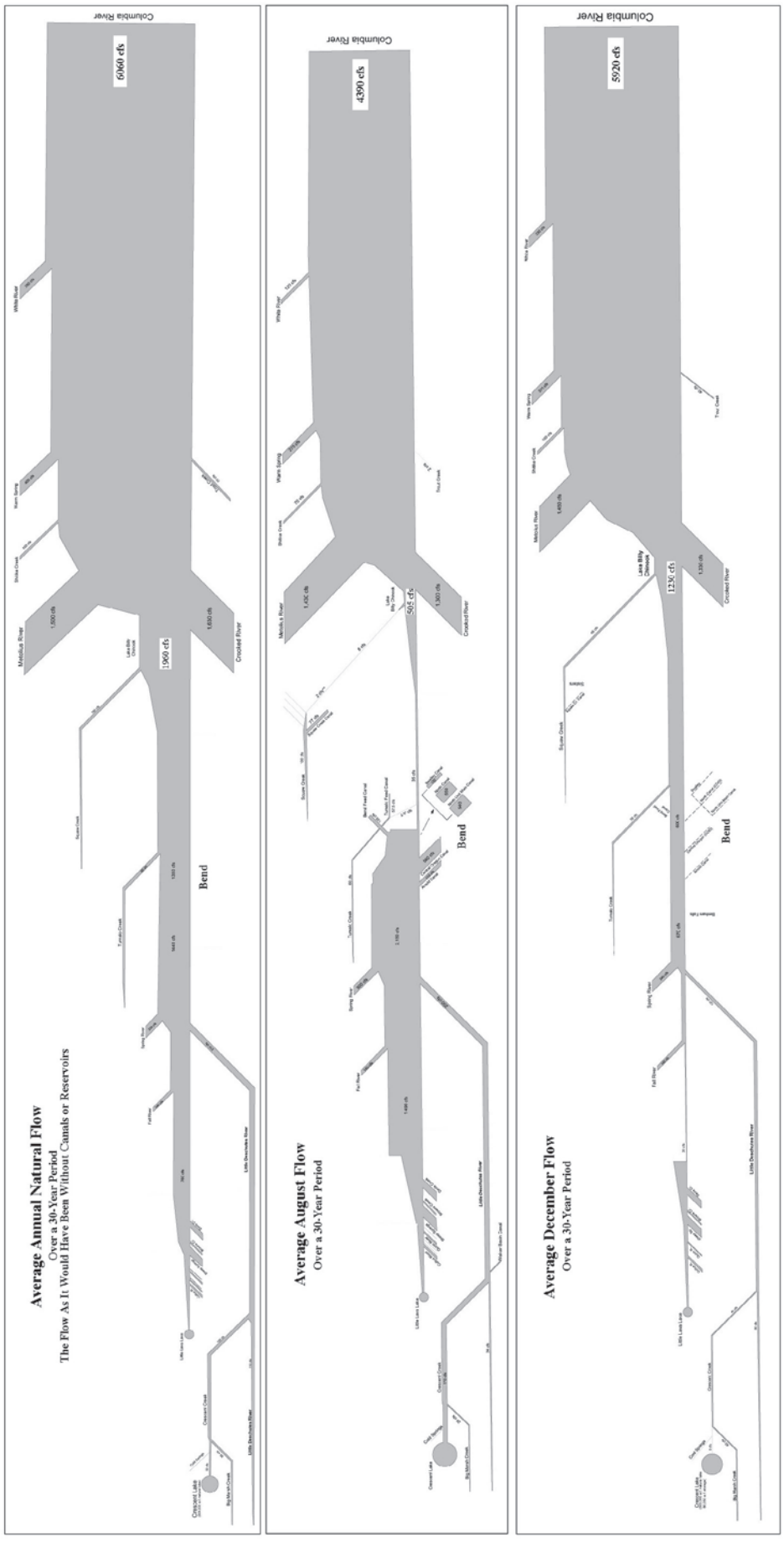


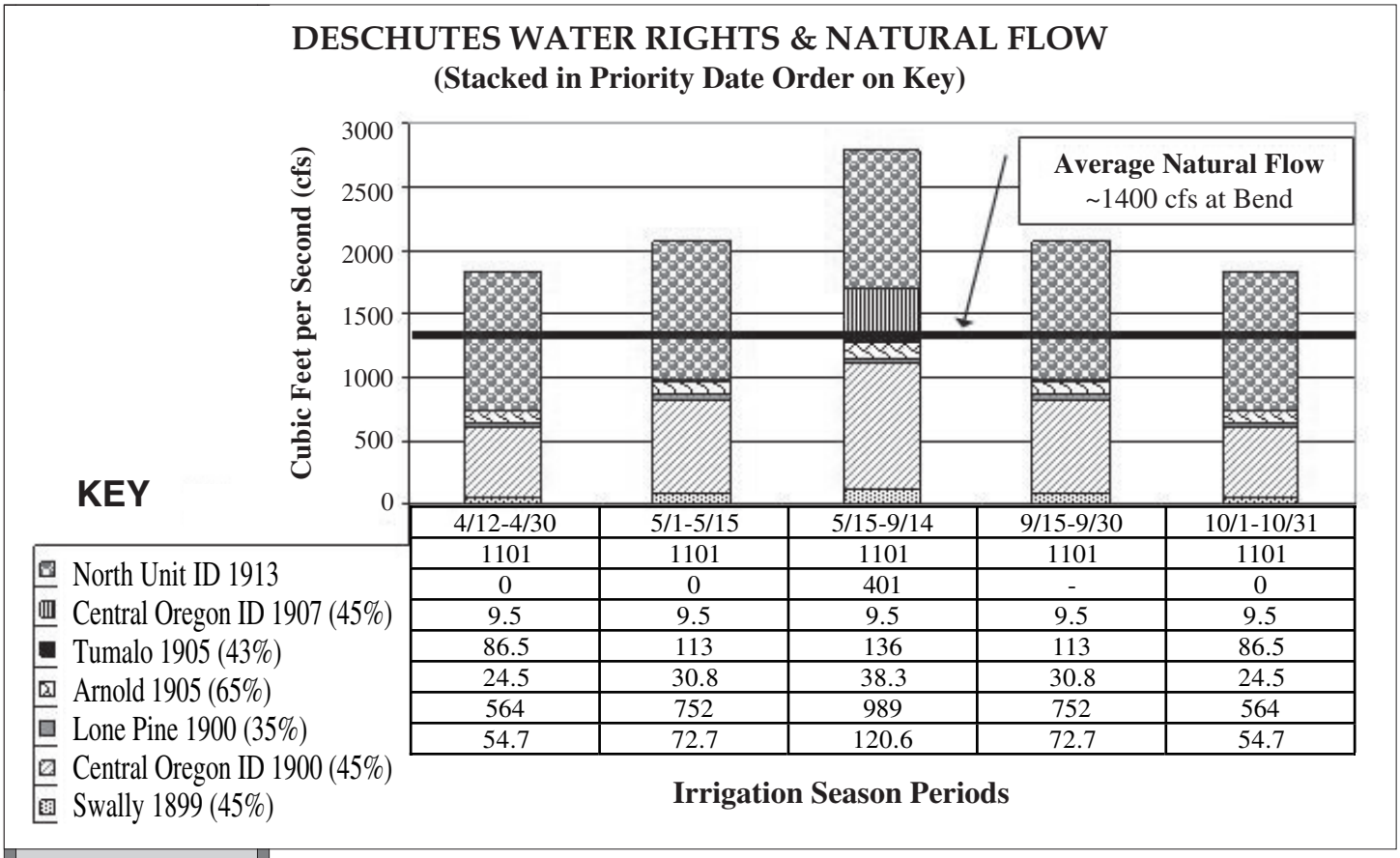

## Challenges
Reach-by-Reach

| 1) Upper Deschutes | 2 Middle Deschutes | 3) Lower Deschutes | 4) Tributary Issues |
|---|---|---|---|
| High Summer Flows | Low Summer Flows | Scenic Waterways (Protected) | Low Flows-Winter/Summer |
| Low Winter Flows | Water Quality Issues | Potential ESA Issues | Water Quality Issues |
| Water Quality Issues | Fish Passage / ESA Issues | Water Quality Issues | ESA Issues |
| Potential ESA Issues | Dam Re-Licensing | | Habitat Change |

## Deschutes Basin

**Figure 2**
Comparing
Natural Flow Estimate
With
Average Summer Flow
&
Average Winter Flow






| 4/12-4/30 | 5/1-5/15 | 5/15-9/14 | 9/15-9/30 | 10/1-10/31 |
|---|---|---|---|---|
| 1101 | 1101 | 1101 | 1101 | 1101 |
| 0 | 0 | 401 | - | 0 |
| 9.5 | 9.5 | 9.5 | 9.5 | 9.5 |
| 86.5 | 113 | 136 | 113 | 86.5 |
| 24.5 | 30.8 | 38.3 | 30.8 | 24.5 |
| 564 | 752 | 989 | 752 | 564 |
| 54.7 | 72.7 | 120.6 | 72.7 | 54.7 |

**Figure 3: Major Deschutes Basin Water Rights**

**Canal Leakage**

**Flow Restoration**

**Stored Water**

**Existing Rights – Opportunities for Improving Transmission Efficiency**

The original "Duffy Decree"—the initial adjudication from the early 1900's issued by Judge Duffy — legalized Deschutes Basin water claims in the early 1900's. The original decree remains largely unchanged. It continues to allow heavy transmission losses for irrigation district water rights.

Allowed leakage for the various districts originally ranged from 35%-to -65% of the water diverted from the Middle Deschutes. This continues today with a cumulative average leakage rate of 46% from all the canal systems in and around Central Oregon (USGS Groundwater Study 00-4162). The major Deschutes Basin surface water rights of the irrigation districts are represented on the graph above.

Almost 50% more water is diverted from the Deschutes than is necessary to meet the legal water rights at the place of use. The reduction of this leakage, combined with irrigation and municipal conservation practices, conserved water projects, long and short-term leases, and storage optimization create many flow restoration opportunities throughout the Basin. The cumulative net benefits of all these actions will help meet current ODFW flow targets of 250 cfs for the Middle Deschutes while producing water quality and other benefits, including providing water for new beneficial uses.

When looking at Figure 3 note how water rights "stack up" compared to the average natural flows at Bend of 1400 cfs. Any water right that is above the 1400 cfs natural flow at Bend, must be met using stored water. The more surface rights that can be met "under-the-line" (i.e., be supplied by natural flow) the less the districts with those rights will have to depend on storage releases from reservoirs.

Imagine how the "stack" might change if one considers the 50% leakage that is currently allowed. Using less storage will increase winter carry over within the reservoirs, and at the same time improve winter flows. Since less water would be necessary to meet the same beneficial uses during the irrigation season, less water would be released into the Upper Deschutes, keeping flows at a more natural level. When one considers the potential benefits of reducing the 50% leakage rate from canal diversions, a return to a more natural hydrograph becomes very possible. It is important point to note that: *no water right holder has to receive less water at the place of use*.

**Deschutes Basin**

**Groundwater Discharge**

**GW Recharge**

**GW Facts**

**Population Growth**

### A "*Peculiar River*" Explained – Groundwater is the Key

The Deschutes Basin is the second largest watershed in Oregon.

It is unique.

According to Gordon Grant, co-editor of "*A Peculiar River – Geology, Geomorphology, and Hydrology of the Deschutes River, Oregon*," (Gordon E Grant, Jim E. O'Conner, editors, 2003), the Deschutes River has one of the most stable flows in North America and possibly the world (as measured at the mouth where it flows into the Columbia River about 205 miles from the Pacific).

However, within its course, the water is highly managed. As is the case with so many other Western rivers, the flow regime or hydrograph has moved far away from its natural regimen. Current surface water management aside, the interaction between groundwater and surface water is the single most important piece of the puzzle for understanding the Deschutes River. It is the confluence area or "groundwater discharge area" where this peculiarity becomes evident. The surface water flow dramatically increases due to massive groundwater discharge of the regional aquifer (See Whale, page 3).

This confluence area is where the relatively young, porous, fractured volcanic basalts terminate at the contact with older less permeable rock units as it surfaces near Warm Springs. This unique geology, combined with the lay of the land and gravity, drive the massive springs throughout the confluence area. The dynamic and ample recharge for these springs comes from the Upper Deschutes Basin, where the porous upper Basin soils allow easy and fast capture of precipitation and channel it directly to the regional aquifer. Almost all of this groundwater eventually discharges to surface water at the confluence area, though its release is significantly attenuated over time due to long travel distances of the groundwater between recharge and discharge, and due to the large storage capacity of the regional aquifer. The value of this vast aquifer and how much it recharges naturally every year is just beginning to be understood. It has become evident that it makes little difference to the regional aquifer if the recharge comes as rain or snowmelt.

ATTRIBUTES OF THE DESCHUTES RIVER BASIN INCLUDE:

- The well established connection between surface and groundwater flows.
- The large annual recharge of the aquifer which averages 3800 cfs (this is equivalent to 2.46 billion gallons per day, 895+ billion gallons per year — for comparison, the City of Bend uses about 2 billion gallons *per year* consumptively).
- The significant attenuation period between recharge and discharge of the regional aquifer provided by it's hydrogeology.
- The Basin's ability to quickly capture and transport vast amounts of water directly into the regional groundwater system without run-off.
- The ability to naturally capture and store additional magnitudes of groundwater during average and wet years, that can buffer the effects of dry years and completely mask the effects of upper Basin groundwater pumping. (Evidence of the ability to capture and hold vast amounts of water without flooding included the two years of record flow events in 1964 and 1996 when little flooding in the Upper Deschutes Basin occurred due to this great recharge capacity.)
- The high storage capacity of the regional groundwater system which filters out large and abrupt changes in groundwater discharge, translating into steady flows in the lower river.
- Climate has the largest effect on groundwater discharge with late season variations from 1962 – 1997 on the order of 1000 cfs at the Madras Gauge, just below the confluence area (see *Ground-Water Hydrology of the Upper Deschutes Basin,* Oregon, Report 00-4162, Gannett).

### Will Growth Dry Up the Deschutes River?

#### CURRENT MAGNITUDES OF USE AND AN INDICATOR

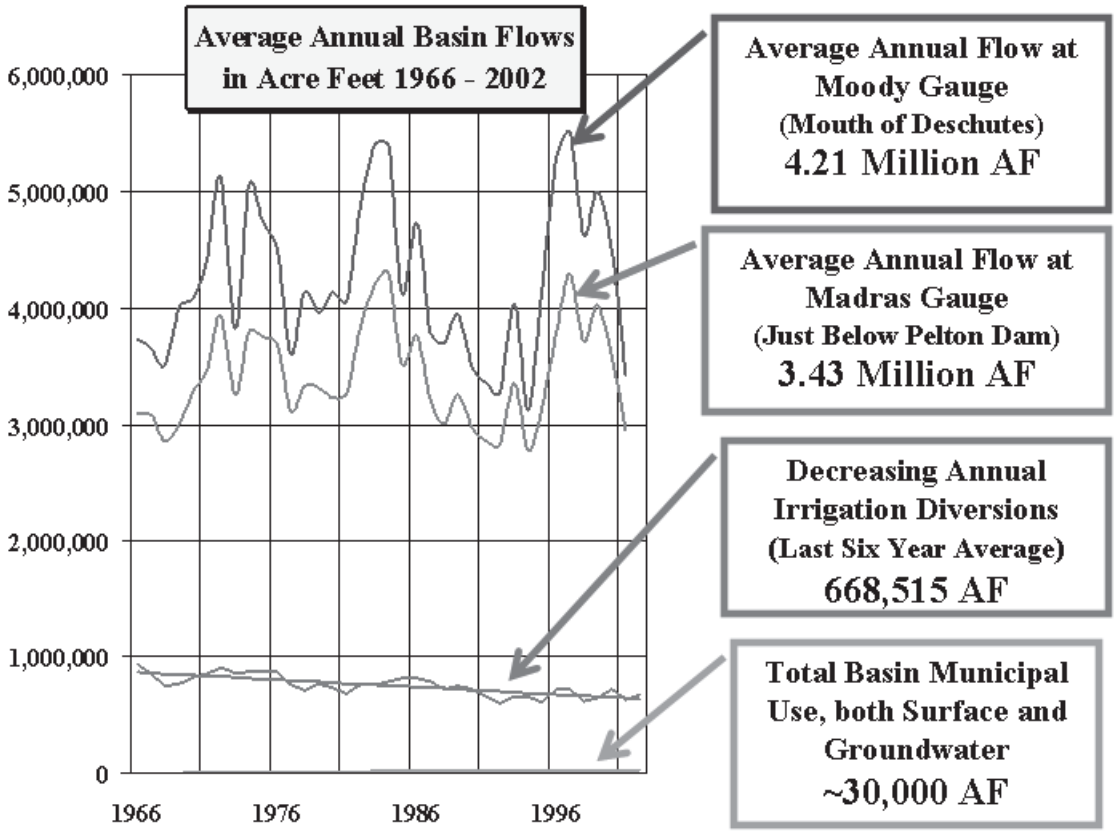
Rapid population growth in the Central Oregon region is a concern to many. Meeting the changing needs of growth will require an understanding of the complexities of the entire Deschutes Basin. Before any water is earmarked to voluntarily market, trade, bank, or otherwise reallocate, knowing where the water will come from is crucial. Recognizing who the large water users are today, and how much they will need in the future, is the next set of "good questions" in the water discussion. Finding methods for "capitalizing" a water bank may help meet the changing water needs in the Basin. Due to the uniqueness of the Basin, there is also the opportunity to put water permanently instream — meeting the needs of fish and scenic flows and addressing other water quality concerns at the same time.

The fear of loss of water rights is a real issue when it comes to convincing any water right holder in an irrigation district, or within any agricultural interest group, that Cities in the Deschutes Basin are not trying to get every drop. The chart below (Figure 4) was created by the City of Bend from flow records provided by OWRD to alleviate Basin stakeholders' fear and allow them to see the big picture of relative water uses. Public misconceptions would lead one to believe that cities (and golf courses) are "drying up"

## Deschutes Basin

the Deschutes Basin. Looking at Figure 4, it is easy to see that use by municipalities is extremely low compared to historical water right holders, primarily those in the irrigation districts who are the largest users of surface water from the mainstem Deschutes. It should be noted that almost all golf courses in the region have their own irrigation water rights (a mix of surface water, groundwater and effluent use) and as such are not included in the municipal totals in Figure 4.

**Figure 4**
**Comparison of Average Annual Flows and Water Uses in the Deschutes Basin, 1966-2002**




### Irrigation Reductions

It is evident that there have been significant reductions in the amount of water diverted to agriculture over the past 30 years. These reductions have arisen from a combination of on-farm conservation projects and urbanization of irrigated lands over that time period. Where this "conserved water" has gone, and why it is not showing up in flow totals below Bend during the summer, is another matter. Complex relationships make understanding where the real conservation and supply opportunities are to be found exceedingly difficult. These complexities include: the historical use of stored water -v- natural flows; the location of diversion points (both on the Crooked and the Deschutes Rivers); the attenuation of the regional aquifer; weather; and historical uses and relationships.

### GW Mitigation Credits

Irrigation districts in the Basin estimate another 1000-5000 irrigated acres will be included in future urban growth boundary expansions in the Deschutes Basin over the next 20 years. They will eventually convert to urbanized uses as allowed under current Oregon land use laws. Any water "released" by urbanization would become available for creation of groundwater mitigation credits that will put water permanently instream in the Middle Deschutes while protecting any potential impacts to groundwater in the Lower Deschutes. The Cities of Redmond and Bend have joint memorandums of understanding with the Central Oregon Irrigation District to plan cooperatively on these types of land use transitions with the stated goal of minimizing impacts to the District and it's patrons.

In studying Figure 4 further, recognize that weather and climate remain the main drivers of river level fluctuation at both gauges shown on the chart (Moody Gauge and Madras Gauge). It is also important to note that substantial instream flow is added between the Madras and Moody gauges within the Lower Deschutes section in any given year. This graph does not show future water needs. It does not purport to show any relationships other than how these various water-use amounts relate to average, annualized flows. The "whale" graph (page 3) remains the best indicator of where significant opportunities exist for restoring flows in reaches of the mainstem Deschutes to a more natural hydrograph.

## Deschutes Basin

### Trends

Growth is not drying up the Deschutes. To the contrary, growth is bringing investment and the awareness to address the historic flow problems. Population increases and related demographic shifts are supporting additional river protections. These new protections, combined with agricultural investment in conservation, have contributed to the declining trend of agricultural diversions over the last 30 years — while still supporting the same beneficial uses.

VARIOUS BASIN ACTIVITIES INCLUDE:

- Newcomers being more efficient water users
- Basin stakeholders and water users (both new and old) making investments in conservation
- Leasing of water instream by Deschutes Resources Conservancy and water right holders
- Efficiency projects such as piping and lining by the Bureau of Reclamation and various irrigation districts and others
- Reduction in overall irrigated acreage in the region

Ultimately, a flow model that recognizes both surface water and groundwater will be required to use as a planning tool and to demonstrate the changes occurring in the Deschutes Basin, including the cumulative benefits of new water management plans and policies.

### GW v. Surface Flows

**Groundwater – A Responsible Choice for Future Municipal Supply**

Municipalities are choosing groundwater as a responsible choice for future supply for a variety of reasons including: superior water quality; meeting current and future regulatory standards; and the robust renewable supply available from the regional aquifer. Remember, most new municipal water needs in the Deschutes Basin over the last 30 years have been met using groundwater. The impacts to surface flows in the Basin (as seen in the Whale charts) are not caused by groundwater withdrawal. It is agreed that surface water management has the greater affect on stream flow in the upper and middle reaches of the Deschutes River (second only to long-term climate affects). It should be noted that the flows at the Moody Gauge (near the confluence of the Deschutes and the Columbia Rivers) are also "controlled" by the re-regulation policies used in the operation of the Pelton-Round Butte Hydro-Electric project. All surface water (of which over 80% at the Madras gauge is comprised of groundwater discharges) in the Upper Deschutes, Crooked and Metolius rivers are passed through that project.

### OWRD Policy

Impacts from groundwater withdrawal may not even be measurable. While OWRD has been working with a surface water mathemetical model, it has yet to be scientifically peer-reviewed. OWRD's model does not incorporate the complexity of the surface water / groundwater interactions. This points out that OWRD's policy of shutting off new groundwater appropriations has yet to catch up with the ability to prove impact to, or improvement of, the change in flows attributable to any one policy action.

### Flow Models

While the precautionary intent of the groundwater mitigation policy seems reasonable, our analysis tools are not currently asking the right questions. This points out a key opportunity for better coordination. There are currently no less than three flow models in different stages of independent development for use in the Deschutes Basin. These models-in-development include: one being developed by the Confederated Tribes of Warm Springs and National Resources Consulting Engineers, Inc. (NRCE); another by the federal Bureau of Reclamation and OWRD; and a third by United States Geological Survey (USGS). Municipal water users and others are proposing to get all the flow modelers together and funding one model, agreed upon by all stakeholders. We need a model that measures the net changes inherent in the cumulative effect of any and all new water management policies. Bottom line conclusion: the Deschutes River is indeed a "Peculiar River." It must be managed — with impacted reaches restored, protected, and new needs met — in a way that takes into account its distinctive circumstances. So far, State and Federal policies have fallen short in recognizing this uniqueness.

The Deschutes is not a limitless resource. Many in the Basin agree that restoring flows diverted from the Middle Deschutes during the summer irrigation season and increasing the flows in the Upper Deschutes normally held back for storage in the winter are priority issues. Conflicting priorities within State agencies charged with protection of fish and instream flows have hindered progress on restoration of these sections of river. These flow alterations are now understood to contribute to water quality issues and fish habitat concerns as well as the obvious flow impacts. This is where the new groundwater mitigation rules come into play.

**Mitigation – A Starting Point**

### Price Speculation

With the advent of new groundwater mitigation rules (OAR 690-505-0600 *et seq*; Internet site: http://arcweb.sos.state.or.us/rules/OARS_600/OAR_690/690_505.html), trying new ways of moving water where it is needed in the Deschutes Basin has truly become a basin-wide experiment. One of the most feared unintended consequences of the slow progress in this policy development (and with the water markets associated with groundwater mitigation) is rampant water pricing speculation. Many unrealistic expectations for water prices have developed due to the combination of headlines proclaiming water

**Deschutes Basin**

shortages across the West and the belief that municipal suppliers need vast amounts of water and are willing to pay huge sums. There is consensus among informed water professionals in the Basin that today the amount of new groundwater mitigation necessary to meet growth demands is dwarfed by the magnitudes of water that could be made available from mitigation/conservation projects. Increased awareness of the existing supply and demand should go a long way to alleviate this speculation. Informing Deschutes Basin residents, elected officials, stakeholders, decision makers in the legislature, and the Oregon Water Resources Commission remains a high priority task for Basin suppliers.

**Supply Study**

The groundwater mitigation program and various studies completed in the Deschutes Basin have increased our knowledge of the issues, illustrated the range of associated costs of the various options, and brought the stakeholders together in meaningful ways. [See *Initial Assessment of Water Supply and Mitigation Alternatives*, Public Review Draft, City of Bend website: www.ci.bend.or.us/publicworks/NewtonStudy.htm] Never has there been more positive communication in the Basin. Benefits of prioritizing flow restoration in the Middle Deschutes will be many. This apparent simple step has begun the process of unknotting the bigger problem regarding water use in the Basin — sorting out complex issues faced by the irrigation districts due to urbanization. These impacts include: the loss of assessment base; Clean Water Act related flow concerns arising from the altered hydrograph; Endangered Species Act related issues; and Oregon water law and other regulatory concerns revolving around current water management in the Basin.

**Irrigation Districts' Issues**

Mitigation projects will contribute permanent instream flows to the Middle Deschutes, but will only begin to address other root causes of instream flow problems and related water quality concerns. Even with advances in understanding Basin issues and general agreement of what the priorities of water management need to be, these new ideas are bumping up against age-old water policies, misinformation, anti-growth groups, inconsistencies in State planning requirements, and erroneous historical beliefs.

**A "Crooked" Connection – Problem or Opportunity?**

**Unintended Consequences**

One of the discussions occurring within the Deschutes Basin is whether water conserved from leaky irrigation canals around Bend could injure the Lower Crooked and Lower Deschutes Scenic flows. Additionally, the leakage is used in base flow calculations in some Basin reaches. For example, the USGS Groundwater Report (USGS Report Study 00-4162) indicates that leakage from canals around Bend artificially enhance Lower Crooked River flows by over 400 cfs. This "artificial recharge" is being provided *at the expense of depleted flows in the Middle Deschutes.* It is easy to overlook this hidden groundwater transfer caused by inefficient transport of water, but addressing this issue directly will have multiple benefits.

**Benefits v. Costs**

Understanding where the benefits will occur and how to produce them are complicated. For example, an average 62 cfs of irrigation water is currently pumped directly from the Lower Crooked River by the North Unit Irrigation District (NUID) and is added to the NUID main canal as it crosses the Crooked River canyon. This water supplements their primary irrigation diversions in Bend and waters additional "Deschutes Project" lands (Bureau of Reclamation related storage, delivery and appurtenant lands are collectively known as the "Deschutes Project"). By conserving water currently lost in transport on the NUID main canal — and by reallocating and optimizing the use of stored water within Crane Prairie, Wickup and Prineville Reservoirs, along with additional coordinated conserved water projects within other irrigation districts — the need for this supplemental water now being pumped from the Lower Crooked could be reduced or eliminated. This water is currently pumped at a cost of over $350,000 per year in energy costs to NUID. With reduction or elimination of pumps, NUID could also reduce or eliminate the need for required fish screens on these nine pumps located in the Crooked River. For example, the estimated $1,000,000 investment that will be required to screen the existing pumps could be used more productively, such as funding the required re-screening of the main NUID Deschutes River diversion which also needs to be brought up to current standards.

**Basinwide Approach**

Coordinated integration of supply and reallocation will help meet many goals. This broad view of the Basin capitalizes on the domino effect of the many positive net-benefits that will occur through strategically thinking about how water is used and flows in the region. This is one example among many which could go a long way toward stabilizing water supplies and preserving our important agricultural economy — in addition to meeting new municipal demands. At the same time, the entire watershed benefits from the flow enhancement of two waterways that are in need of restoration. It would also allow the reallocation/reprioritization of millions of dollars of remediation investment otherwise necessary for remediation of flow-related impacts to water quality. Other benefits include firming up more reliable supplies for agricultural users and providing flow enhancements in both winter and summer.

Voluntary water markets would be a key component in providing incentives to accomplish these types of forward-thinking projects. Renewable energy is also possible by capturing the hydraulic energy

**Deschutes Basin**

through piping various sections of the main irrigation canals. This energy can add revenue to irrigation districts' budgets already strapped by the loss of assessment resulting from urbanization and the increasing costs of operation and maintenance for delivering water to smaller acreage parcels in more urban settings. Revenue from renewable energy would also sustain investment in ongoing conservation and efficiency projects.

**New Alliances, New Ideas & Cooperative Spirit**

A little south of the Deschutes River Basin there is a national model of conflict and uncertainty over water management that will take years to sort out. The Klamath Basin has attracted millions of dollars of investment in crisis management and will require millions more.

The Deschutes is poised to become the opposite — the "Un-Klamath" — a national model of cooperative, integrated planning in regard to water management. So what are the critical differences that separate the Deschutes Basin from many other western basins in crisis?

**Distinctions**

Differences include:

- Fully adjudicated water rights for the Basin
- A negotiated settlement for the water rights of the Confederated Tribes of Warm Springs
- A robust groundwater resource that has active annual recharge of 3800 cfs
- Unique geology and hydrology that provide "natural" underground storage which buffers the effects of drought and can store a vast amount of water during wet years, which it releases slowly during drier years
- The ability of the aquifer to capture recharge at any time during the year, from either rain or snow. This is a result of the porous nature of the soils in the upper Basin and the elimination of peak flash flows and more stable groundwater-fed surface flows. This is a bright spot in the face of climate change predictions that may bring higher precipitation rates as rain, but less as snow, in the future.

**FERC Settlement**

- Historical diversions that include an average of 46% leakage that can be reduced and left instream.
- Settlement of the FERC license for the Pelton Project that will include over $130 million dollar investment in fish passage, flow management improvements/restoration, and improved monitoring.

**Cooperative Partners Are Key**

In addition to the unique Deschutes Watershed, it is the Basin resident stakeholders and their cooperative and collaborative spirit that are providing the institutional readiness necessary to try new ideas. These new solutions will improve the use and management of water for all users. The following sections discuss two examples of this cooperative spirit which are poised to bring sustainable water management and restore impacted reaches of the Deschutes: the Central Oregon Cities Organization and the Deschutes Water Alliance.

**Central Oregon Cities Organization (COCO)**

**Regional Approach**

The cities of Bend, Culver, Metolius, Madras, Maupin, Prineville, Redmond and Sisters are recognizing the changing face of stewardship in the Basin by developing a more regional approach to collectively address water management issues. COCO was formed several years ago to help focus attention on problems unique to the region and to have a larger voice within the State legislature. The following *Summary of Water Management Goals* was developed at the COCO Water Summit held in 2003.

COCO Water Management Goals & Objectives

Develop a comprehensive package of linked actions which will unify and prioritize water management investment in the Deschutes Basin that:

- Provides reliable and safe water supply for the region's agriculture, economic and river basin health
- Protects the fishery, wildlife, recreational and aesthetic values of the Deschutes River

**Principles**

Guiding Principles

- Recognize and protect the unique nature of the Deschutes Basin
- *Water management and conservation are the top priority!*
- Many tools are available to help natural resources, agriculture, people & industry thrive
- Instream flow restoration will have multiple benefits for our regions' water users and natural systems
- Recognize *flexibility* as a key tool for the protection and use of water resources
- Increase understanding of our Basin's water resources and make information accessible to enhance public and private decision making

**Actions**

Long Term Actions

- Initiate a framework for regional water resources management to bring stakeholders together
- Complete a basin-wide long-term water needs analysis ("A coordinated water-use forecast")
- Initiate the planning for major congressional appropriation to invest in water conservation
- Provide water education information for the public
- Initiate the planning for long-term funding mechanisms to pay for regional water management

## Deschutes Basin

### Tools

TOOLS
- Water management forums
- Conservation – Urban & Agricultural (delivery and use efficiency)
- Aquifer Recharge
- Voluntarily reallocating water rights from urbanization of agricultural lands (and other methods)
- Legislation
- Federal/State Pilot Projects
- Partnerships
- Market Approaches: Water Trading, Mitigation & Water Banking

**The Deschutes Water Alliance (DWA): Politics & Policies Appropriate to Place**

Creating A Water Governance Model for the Deschutes Basin

### Water 2025 Grant

In addition to COCO, three other major stakeholders have come together to explore more fully, the governance models that will be required along with the next wave of water management tools. The four stakeholder groups were recently granted $234,000 from the Department of Interior's Water 2025 Challenge Grant Program, administered by the Bureau of Reclamation (see US Department of the Interior's Water 2025 website: www.doi.gov/water2025/). The goal of the grant is to create the Deschutes Water Alliance (DWA). The DWA proposes new water governance policies and a pilot water bank to implement water sales and transfers with the goal of addressing long-term Basin water needs for urban water supply, irrigation, and industrial use, as well as instream needs for: fishery, recreation and water quality enhancement.

### Four Partners

DWA GRANT STUDY PARTNERS INCLUDE:

Deschutes Basin Board of Control (DBBC): Seven Basin irrigation districts including Reclamation's Deschutes (North Unit Irrigation District) and Ochoco Projects (formed under ORS 190.125)

Central Oregon Cities' Organization (COCO): Basin cities (e.g. Bend, Redmond, Madras, Prineville) and affiliated regional drinking water suppliers (municipal, quasi-municipal and private drinking water entities)

Deschutes Resource Conservancy (DRC): a 501(c)(3) non-profit corporation carrying out ecosystem restoration projects in the Basin (with federal authorization and representation Under PL106-270, Deschutes Resources Conservancy Reauthorization Act of 2000) and its sub-entity, the Deschutes Water Exchange (DWE)

Confederated Tribes of Warm Springs (CTWS): a tribal entity representing Warm Springs, Paiute and Wasco Tribes

The chart below illustrates the basic framework of how water and investment would flow between the "bank" and various water user groups (See Figure 5).

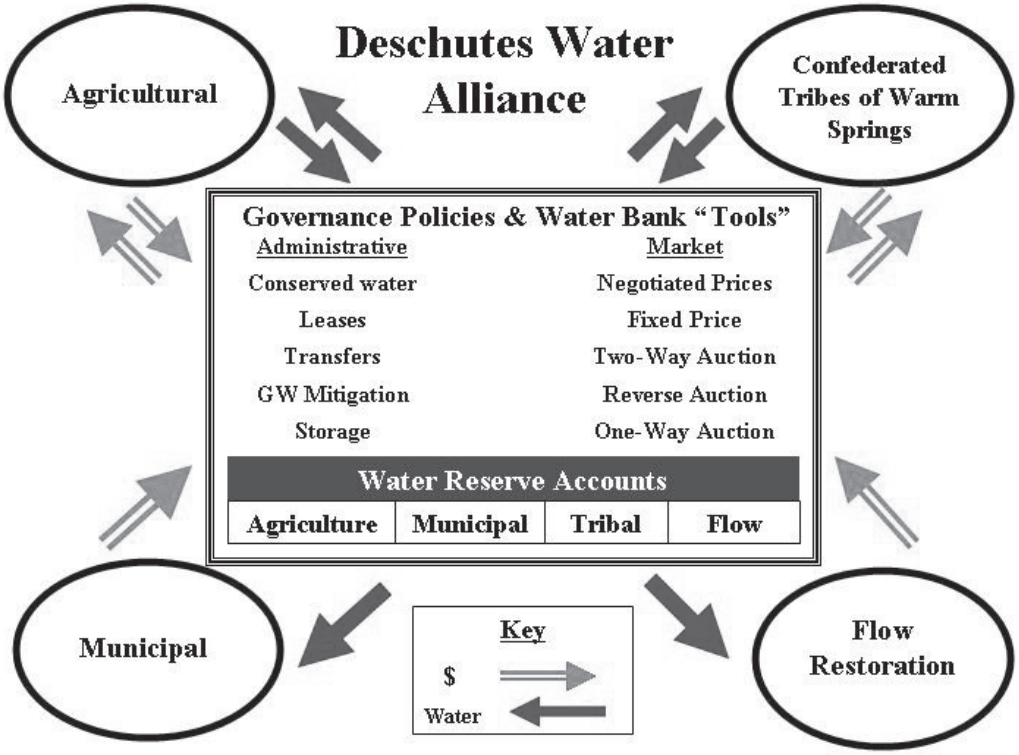



**Figure 5**
Deschutes Water Alliance
Water Bank Model

**Deschutes Basin**

**DWA Tasks**

**Tasks & Activities**

Specific tasks and activities to be undertaken are grouped under their respective components:

Alliance Formation and Operation - The initial step develops agreements among Alliance members, creating the mission statement and strategic plan. It also facilitates initial communications functions and support of Alliance operations and management.

Alliance Planning - Several planning efforts will provide the technical and governance foundation of the Alliance and the Water Bank such as assessing means of increasing water availability through: a) on-farm and off-farm water conservation in irrigation districts; b) marketing to allocate water that becomes available from urbanization of irrigable lands; c) optimized reservoir management; and d) assessment of municipal and irrigation water needs over the near and long-term. This planning will quantify water supply, demand and reallocation needs. Scenarios to meet near-term benchmarks and long-term targets will be developed to establish the Alliance's operational plan.

Pilot Activities - Develop governance structure, policies, procedures, and market tools and begin implementation of water bank for water reallocation and management among the Alliance members. Support initial bank capitalization including: a) a large-scale project using water from piping to shore up North Unit water rights, save pumping costs and improve flows and water quality in the Middle Deschutes and Lower Crooked Rivers; b) develop and fund trials for implementation of an On-Farm Conservation Program; and c) a reservoir optimization project with management program. Market and transaction tools, existing as well as new, will be applied and developed to build Alliance market infrastructure.

Project Management and Administration - As much of the work under this project will be contracted to a number of Alliance members or consultants, project management and administration is an important component of the project.

**Municipal Wish List for Future Water Management and Reallocation**

Any combination of water management changes that include voluntary water marketing or water trading mechanisms must fit into a coordinated, long-term water master planning effort.

**Master Plan**

Any such master plan should include:

**20 Year Supply**

The ability for municipalities to hold and plan for a minimum of a 20 year supply of water consistent and integrated with other planning requirements - This could include the use of existing law such as the ability to create a municipal reserve within a water bank, and/or require rule changes or legislation that will allow better coordination of the normal water right permitting processes. There must be better coordination between existing rules and the new Division 86 Water Conservation and Management Planning rules and the new Division 315 Extension Rules to allow for longer planning horizons that recognize the complexity of the process. Preventing injury to existing users, demonstrating long term stewardship and use of voluntary water markets must be included in any changes. (See Oregon Adminstrative Rules, Divisions 86 and 315)

**Needs Forecast**

Coordinated water needs forecasting for both municipal, agricultural and instream flows - Much progress has been made in this regard. Municipal interests have contracted to provide a coordinated municipal water supply forecast report for the next 20, 30 and 50 years. Agricultural interests, represented by the 7 irrigation districts in the Basin, collectively known as the Deschutes Basin Board of Control, are beginning to coordinate their own 20 year planning efforts as well. Memorandums of Understanding (MOUs) between the cities of Redmond, Bend and Central Oregon Irrigation District (COID) are providing a much more consistent and very positive climate of shared information for coordinated planning efforts. The interplay between land use and water supply planning, and responding cooperatively to the effects of urbanization, will be required to maximize investment in conservation projects.

**Land Use Planning**

Aligning water policy with Oregon land use planning rules - The timelines alluded to in the Oregon Land Conservation and Development Department's Goal 11: Public Facilities and Services, and Goal 14: Urbanization, do not coordinate well with often contradictory goals or timelines of other State agencies with regulatory authority. Today, much of this critical coordination is occurring at cursory levels between the irrigation districts, regional cities, counties and agencies, but is bumping up against conflicting regulatory mandates and timelines between the parties. This is a perfect example of where local pilot planning projects could be encouraged and locally-led teams could be created to work together to include the various agency planning goals with local needs in any water management system. The creation of water banks or special accounts dedicated to the various user groups could "buffer" the effects of water reallocation until the results are better understood by district boards, patrons, and other stakeholders. Water banks could also help by creating a bridge

**Water Banks**

**Deschutes Basin**

between when water is needed and when it becomes available through development and other processes. Better recognition and streamlining of all the opportunities for public interest tests throughout the various related processes will also be crucial.

**Transfer Flexibility**

DEVELOPMENT OF REALISTIC PERFORMANCE STANDARDS AND INCENTIVE-BASED MEASURES FOR THE VOLUNTARY REALLOCATION OF WATER WHICH TAKES INTO ACCOUNT THE UNIQUE GEOLOGY AND HYDROLOGY OF THE DESCHUTES BASIN. This should include agreed-upon priority projects coupled with a long-term plan that increases instream flows, while providing mitigation for any new groundwater uses. At the same time, OWRD must continue to work with Basin stakeholders to provide increased flexibility to transfer water where it is needed among existing users. This may need to include an updated view of injury determination and clarification or creation of more realistic extension rules for water permit development by municipal water providers. Trust or reserve accounts or leases, combined with storage optimization could contribute to dry-year preparedness with additional methods included to protect various interests of the Basin stakeholders during the transition periods.

**Federal Policies (BOR)**

RELIEF FROM FEDERAL WATER PROJECT RULES THAT PREVENT WATER USE FLEXIBILITY AND CONTINUED FEDERAL INVESTMENT IN CONSERVATION EFFORTS - Many of the conservation projects in the Deschutes Basin will hinge on the renewed attention of federal water policies regarding the use of stored water and the use of existing federal Bureau of Reclamation (BOR) projects to be used in more cooperative and flexible ways. The BOR has been very responsive in these issues and we applaud their willingness to assist. From the use of unallocated storage water in BOR projects, reauthorization of existing storage, transport of non-project water within project canals, to innovative conservation ideas, we are glad to see the Water 2025 program on the same track as ideas coming forward from the Deschutes Basin.

**Agrimet Savings**

Another exciting example of a relatively minor investment BOR could make would be to include increased funding for additional Agrimet Weather Stations within the Deschutes Basin, and other basins in Oregon and the West. Recently the City of Bend contracted and installed an "enhanced" Agrimet station for multiple uses. This is a slight enhancement of the many Agrimet weather stations in the West. These existing stations have provided farmers localized weather data for years and have gone a long way in improving their irrigation practices. Urban water users can benefit from this technology as well. Test projects by the City Bend's Large Landscape Program using the new Agrimet station along with state of the art "smart watering application technology" controllers have documented water savings of 20-50%, and energy savings of 16% from reduced pumping. [See Agrimet website: www.usbr.gov/pn/agrimet/agrimetmap/bewoda.html]

**Summary – A Bright Future for the Deschutes Basin**

**New Municipal Rights**

Obtaining new municipal water rights in the Deschutes must include the development of water trading and marketing tools, as well as new governance policies and procedures. How these tools are constructed and used, and whether they will meet the competing and complementary needs of water users over the long term, is yet to be determined. It will depend in large part on the development of more flexible, more responsive, water policies that are in part watershed-specific. Municipalities must be able to hold water rights in sync with the longer term planning periods mandated in other state agency goals. Water must be more closely coordinated with land use planning, especially in regard to urbanization impacts on irrigation district lands. Opportunities to mix mitigation and restoration should also be looked at as a way to increase investment efficiency on agreed upon flow restoration targets. Development and use of mitigation credits, use of incentives and water markets, along with the use of performance-based standards for conservation and stream flow restoration, is the direction the Deschutes is heading – all will be required to recognize and proactively manage the uniqueness of the Deschutes Basin.

**FOR ADDITIONAL INFORMATION:**

PATRICK GRIFFITHS, City of Bend, 541-317-3000 or email pgriffiths@ci.bend.or.us

CITY OF BEND PUBLIC WORKS WEBSITE: www.ci.bend.or.us/cityservices/publicworks/water_supply.htm

Most of the graphics appearing in this article, which have been much-reduced and simplified for TWR publication purposes, are expected to be available in their complete versions from this website in the near future.

**Patrick Griffiths** is the Water Resources Coordinator for the City of Bend. He works throughout the Deschutes Basin on water conservation and water supply planning. He writes and speaks frequently about historical, current and future water management and policy issues in the Deschutes Basin.

# BENNETT RALEY INTERVIEW

US DEPARTMENT OF INTERIOR WATER POLICIES UPDATE

Interviewed by David Moon, Editor

With water issues now recognized as the battleground of the future and a drought still gripping the West, the man who is at the heart of controversies in the West pushes on with implementation of the Bush Administration's policies on water. Bennett Raley is the Assistant Secretary of the Interior for Water and Science, overseeing both the Bureau of Reclamation and the US Geological Services. Raley has the authority and direct responsibility to manage and direct programs supporting the development and implementation of national water and mineral policies. Asked to cite the accomplishments he is proud of while serving as the Assistant Secretary, Raley deferred, insisting "You know, I don't keep score like that. I just keep my head down and keep moving forward." He graciously agreed to an interview with The Water Report and held forth on a variety of water topics.

**WATER 2025: Interior's Vision for the Future**

At the beginning of our interview, Raley extolled the virtues of Interior's "Water 2025" Program, as the administration attempts to prevent crises and conflict in the West. "The Secretary's Water 2025 initiative... articulates some of the [Interior] Department's perspective and the administration's perspective. The President is very proud of it. It's a path for moving forward."

**"Hot Spots"**

The Assistant Secretary explained that the Department maintains a Water 2025 "hot spots" map which combines "data and judgment to identify areas where, if nothing more is done beyond what we have today, we are likely to have crises [develop within] the next 25 years, because demands for water will exceed the available supplies. And that's true even in normal years in some basins. The hot spots map is kind of a reality of expected growth and the emerging needs and demands for water for endangered species and other purposes," Raley said. [See Interior website: www.doi.gov/water2025/supply.html]

**Water 2025 Tools**

WATER 2025 IDENTIFIES FOUR KEY TOOLS:

- Conservation, Efficiency, and Markets
- Collaboration
- Improved Technology
- Remove Institutional Barriers and Increase Interagency Cooperation

Raley provided additional details on Interior's view of the four tools. "The first and most powerful [tool] is water conservation and efficiency, combined with markets. Number 2 is collaboration...and by that we mean in the general sense, but we also have a very specific goal in mind and that is more general biological opinions and fewer annual irrigation ... cycles of despair like we ran into in the Klamath."

**Desalinization Focus**

"Tool three is technology. Primarily, the focus from Interior's standpoint is on desal [desalinization], as opposed to water reuse and wastewater treatment. Those are all important aspects of cost-effective water supplies, but Interior can't be all things to all people, so we chose to focus on desal. There is interest in desal along the southern coastal areas, stretching from Oregon to California, as well as internationally. But we also have a lot of brackish groundwater throughout the West, and Interior has some responsibility under various Congressional acts to provide drinking water for rural communities, which hopefully we can do through a brackish desal in a cost-effective way that people will probably find is preferable to building long pipelines for rural drinking water systems."

"Tool four is system optimization. It makes no sense to us to have existing infrastructure that isn't fully utilized within the existing constraints of compacts and state law. And in some cases, that's an opportunity. We have facilities that are not fully utilized and we want to say "yes," rather than "no." People want to optimize use of facilities. So, that's the [Interior] Secretary's vision for moving forward."

**Storage**

Storage is another aspect of the Bush Administration's water policy that some groups view as essential, while others feel will only create additional problems. "In some areas, there will be additional storage built, without a doubt. In California you'll hear both Republicans and Democrats talking about a need for more storage in California. There are other places in the West where more surface storage will...be built. And in some cases, there will be increased use of groundwater storage and then there will be some places where it's just not cost-effective to build more storage." Raley pointed out that adding to the storage component "will be something that's determined at a local and regional level."

**FY 2005 Budget**

The Water Report posed the question of funding for Water 2025 – would the $21 million proposed in the FY 2005 budget be adequate to accomplish the things Interior believes is necessary? "Well, the focus on the budget is somewhat negated. For example, water conservation combined with markets ...is ...perhaps the most powerful tool for meeting needs, consistent with contracts and values that we have. The biggest example of where that happened is the Imperial Irrigation District [Colorado River Agree-

**Bennett Raley**

ment]. That was funded by non-federal sources in essence. There are other places where water banks and water conservation are moving forward that didn't come out of the $21 million that we've asked for [to fund] Water 2025. So it's far more than just the dollars applied with the "tag" Water 2025 attached to it. It is the philosophy of using those tools to stretch existing supplies further."

The Water Report asked the Assistant Secretary if the Department of Interior, in addition to Water 2025, had any other specific programs it sees as worthwhile to pursue in regard to conserving or "creating" new water to meet shortages in the future. "They are all worthwhile to pursue. We've just drawn the distinction that we don't have the budget or the expertise to lead on all alternative water source options. So, as I indicated earlier, we've elected to funnel our scarce funds into the desal aspect of alternative water supply development. Remember earlier, we were talking about Water 2025, tool 3. There's nothing wrong, and we're not morally opposed to wastewater recycling or reuse, or whatever, if you're determined to apply for what is essentially the same technology. The Interior budget can't even hope to match the resources and expertise of the wastewater treatment providers. Typically, they are in the lead and they know their stuff better than we ever will."

**Colorado River Agreement: Shift in California's Use**

**Ag to Urban Transfer**

For the seven states in the Colorado River Basin, the news last Fall involved the settlement of decades of controversy with the October 16, 2003 signing of the Colorado River Water Delivery Agreement ("Agreement"—see Interior website: www.doi.gov/issues/colorado.html to view the Agreement and its technical attachments). The Agreement compelled California to reduce its dependence on the Colorado River and at its core resulted in a dramatic shift from agricultural to urban water use. Following intense pressure, the Imperial Irrigation District agreed to utilize a market-based transfer to sell its water rights for municipal use in the largest "ag to urban" transfer in the West. Newspaper reports stated that the San Diego County Water Authority would pay market value for the water – approximately $258 per acre-foot to begin with (this price is expected to rise). By doing so, "chaos on the River has been avoided, and the Law of the River has grown stronger," Raley said in a speech given December 4, 2003, to the Association of California Water Agencies.

**Provisions**

KEY PROVISIONS OF THE AGREEMENT INCLUDE:

- Caps previously unquantified water entitlement of the Imperial Irrigation District and Coachella Valley Water District
- Provides for the conservation and transfer of up to 277,700 **a**cre **f**eet (AF) from the Imperial Irrigation District to the San Diego County Water Authority
- Resolves long-standing disputes over the beneficial use of Colorado River water
- Reinstates the availability of Colorado River surplus water for California and Nevada urban water users, providing for a 14 year gradual reduction to California's allocated share of Colorado River water (a reduction from 5.2 to 4.4 million AF)
- Provides water and wheeling arrangements for settlement of the San Luis Rey River Indian Tribes

**Thirst of Cities**

The Water Report asked the Assistant Secretary about this Agreement and fear in the agricultural community that the unquenchable thirst of cities will inevitably lead to more water rights sales from irrigators to urban use. Raley's response points out the different scenarios that are possible. "I grew up outside of a community of 500 that was an hour and a half from the nearest stoplight, hospital and movie theater. And I have strong familiarity with what it's like to live in a small community and I very much understand their concerns and fears about their economic future. From my Department's standpoint, the only time we've talked about the transfers is on a willing seller, willing buyer basis.

**Willing Seller**

We think that there are models for moving forward that seem to be far more supportive of agriculture than some others. Let me be specific. In Colorado, we've got two models side by side. We've got the Arkansas Valley with actually kind of a 'buy and dry up' history there. I'm not saying that's good or bad, that's just what's happened down there. There's the Platte drainage to the north [where] you've got a system where the water is rented back and forth between agriculture and urban areas, and sold. Typically, though, all the sales out there go one way from Ag to urban. But then the cities used the rental market to put that water back out where it's needed and it sustains agriculture, where there are pretty attractive fiscal implications for the producers who do it that way. So you've got different models. We're seeing a fairly complex model emerge in northern California where rice farmers are able to make decisions as to what they want to do and choices as to what they want to do with their water. There are other places where markets are emerging in a way that isn't a winner take all and 'buy and dry up' scenario where you put the sacrifice on."

**"Buy and Dry Up"**

In a speech Assistant Secretary Raley gave to the Association of California Water Agencies on December 4, 2003, he also addressed this issue, stating that "Ag-to-Urban transfers will occur. Your challenge will be to find a way for these transfers to occur that strengthens, and not destroys, important

**Challenge**

**Bennett Raley**

agriculture in a particular area. Likewise, you will have to find the right balance between protecting historic lifestyles and rendering transfers infeasible because of demands for mitigation of third party impacts or external factors."

The Imperial Irrigation District, in the beginning at least, was not exactly a "willing seller." The District challenged the Department of Interior's actions via litigation (see *Imperial Irrigation District v. United States of America, et al.*, CV 0069W (JFS)(D.Cal. filed January 10, 2003)(JFS)). The lawsuit led Interior to utilize the "water hammer" (also known as a "417 proceeding") authorized under 43 C.F.R. Pt. 417. The Bureau of Reclamation conducted a meticulous study of the District's water use to determine whether their use was reasonable and beneficial. Farmers and ranchers throughout the West have long-resisted attempts to scrutinize their water use to decide whether or not there is "waste" involved.

**"Waste" Issue**

Raley explained the limitations of a "417 proceeding" and how the situation came about. "Part 417 on its face has no applicability beyond the lower Colorado region and the contracts entered into under the Boulder Canyon Contract Act. It just simply doesn't apply anywhere else, number one. Number two, there's a little irony that people often miss and that is that we [Interior] didn't proceed with the 417 process of our own volition, we were directed to do so by a court. We had taken a different approach, which the court rejected. Of course, that's what courts are for, is to make decisions. But we'd taken a different approach that had far less exposure to the Ag community than the 417 process and even less applicability elsewhere. The Ag community...let me just say, they won a battle and lost the war. Because, in challenging the limited approach that we took, they basically opened the door for mainstem [Colorado River] entities to come in and raise before the court and get the court to agree to direct the Department to proceed in 417. It's one of the ironies. We didn't want to go there in the first place. Our preference is to work with people through the Water 2025 approach."

**417 Proceeding Required**

The Water Report asked Raley about the Agreement and efforts underway to help California wean itself from over-dependence on the Colorado River and deal with shortages. "Well, actually, California has gone overnight to what most people believed it couldn't do over 14 years. And that is, [California's water use] is down to 4.4 million acre-feet (AF). First, this is a result of the Secretary's decision to curtail the delivery of surplus, domestic surplus...We're doing what we can to deliver water in accordance with the contracts of the Colorado River Compact; the same thing with the contracts in the State Water Project. In California, we have some very talented problem solvers at the Fish and Wildlife Service to find ways to meet the Endangered Species Act requirements in the Central Valley and also provide for continued delivery of water. I count those efforts by Steve Thompson and Fish & Wildlife Service to be every bit as valuable as the local efforts by Kirk Rogers in the Central Valley regional office."

**California's Reduction**

As far as surplus waters being available to California water users in the near future, Kip White of the Bureau of Reclamation informed The Water Report that "the estimate says that the projected elevation of Lake Mead for January 1st is 1124.3 feet and if it's below 1125 feet a normal year is declared. So there will be no surplus." Under the 2001 Interim Surplus Guidelines for the Colorado River, the Secretary of the Interior is required to cut surplus supplies to California, Arizona and Nevada if Lake Mead drops below the 1125 feet elevation.

**No Surplus for 2005**

**Treaty with Mexico, Drought, & the Rio Grande**

The on-going drought is also putting increasing pressure on Upper Basin states of the Colorado River Basin to comply with their end of the bargain. These four "upper division states" (Colorado, Utah, Wyoming and New Mexico) are required to deliver 7.5 million AF (AF) per year to the three "lower division states" (Arizona, Nevada and California). The upper division has been delivering an additional 750,000 AF to provide a one-half share of the United States' water delivery requirements under the 1944 Treaty with Mexico (1.5 million AF to Mexico). The upper division's share of the water is delivered from storage in Lake Powell.

**Upper Division Deliveries**

Larry Anderson, the Director of the Utah Division of Water Resources, recently discussed a lingering question concerning water delivery mandates for the Mexican Treaty with The Water Report. "This is an unresolved question — is there a deficit in the water delivery at the Mexican border, and if so, how much is the deficit?" Anderson noted that although upper division states have so far been delivering one-half of the Treaty total out of Lake Powell, the upper division states believe that they are only required to deliver one-half of the actual deficit as listed in Article III (c) of the Colorado River Compact. "The amount of the deficit may be a question if the drought continues," Anderson said, while recognizing that the issue "will be contentious." Director Anderson went on to say that the upper division states may ask the Secretary of the Interior to deliver less than 8.23 million AF in 2005, based on the shortages caused by the drought. "We're hoping the seven basin states can come to an agreement, in the basin states technical committee looking at shortage criteria, about the delivery quantity without the need to raise the question of treaty deficits with the Secretary."

**Mexican Deficit**

**Bennett Raley**

In reply to The Water Report's question about Interior's position on the Upper Basin states' possible request for a delivery of less than 8.23 million AF from Lake Powell, Assistant Secretary Raley noted that the Department does not have a position "...that I'm prepared to share." In regard to the issue of delivery requirements under the 1944 Treaty with Mexico – one-half of the treaty amount versus one-half of an actual deficit – Raley said that the Department of the Interior does not have any position "that it can state publicly" at this time. If drought conditions persist for a sixth straight year, the issues may come to a head.

**Yuma Desal**

Another unresolved Colorado River issue that the drought has brought back into play is the operation of the Yuma desalinization plant, which was planned as a means to improve quality for water delivered to Mexico. The plant was built to treat drainage water from the Wellton-Mohawk Irrigation District, so that water delivered to Mexico was suitable for beneficial use. While the plant was being constructed, the drainage water was bypassed around the Mexican diversion at Morelos Dam, and the 100,000 acre-feet was not counted in the Colorado River delivery to Mexico. The bypassed drainage water, however, ended up creating the Cienga de Santa Clara wetlands in Mexico. If the Yuma desalinization plant goes on line, the reduced wastewater going to the Cienga would have a higher salinity level — which would threaten, rather than maintain, the wetlands.

**Wetlands Created**

**Operational Impacts**

Currently, the Yuma desalinization plant is not operational. The result is that over 100,000 AF of water is released from Lake Mead by the Bureau of Reclamation to comply with Treaty obligations. At a time when "agricultural users in Utah and other Upper Basin states are heavily impacted by the drought and the Lower Basin states are watching Lake Mead drop in elevation" this additional release of water is problematic for the Basin states, according to Director Anderson. "We'd like to see the Yuma Desalinization Plant operated" to eliminate the need to release the extra 100,000 AF." Anderson added that it is a federal responsibility to replace the by-pass water or to negotiate with the Mexican government, to either obtain the credit for the 100,000 AF or to begin operating the plant. Anderson recognized that operation of the Yuma plant would be "costly" and "if run, the Cienga wetlands in Mexico would be impaired."

**Interior's Plans**

The Water Report asked Raley if Interior has any plans to operate the Yuma Desalinization Plant (YDP) in the future. "The Department is taking measured steps to throw YDP into operational status, at least partial operational status. That's going to take some time to do that, but we've committed to the extent that we will move forward with bringing it into an operational condition." In response to a further question about what impact operation of the plant would have on the Cienga wetlands, Raley stated simply, "We will fully comply with the 1944 Treaty."

The Assistant Secretary stressed that "the United States has always met its water delivery obligations under the Colorado River, under the 1944 Treaty. Now there's the history of concerns that they've [Mexico] declared about water quality [Minute 242 of the Treaty with Mexico addresses water quality]... but we've always achieved compliance with the delivery obligations."

**Rio Grande Basin**

The Water Report also inquired about the current situation with Mexico in regard to water use in the Rio Grande Basin. In this basin, unlike the Colorado River Basin, the headwaters are in Mexico. Raley informed us that "there has been a very intense history in past years with, with the under-delivery by the Republic of Mexico to the United States of water proposed to the United States under the 1944 Treaty." Discussions with the Mexican government have been going on "at the highest levels in the State Department [which has] been involved in this...in a very intense way throughout this administration."

**Colorado River: Collaboration or Regulation**

**Feds Fill Vacuum**

The next area discussed dealt with the future for the Colorado River Basin – would it be collaboration or regulation by the Secretary of the Interior, in her role as water master for the lower basin? "I think the history of the Colorado River is very clear. That history is...when the States cannot develop a solution that is mutually acceptable to them and the federal government, a vacuum is created that one or more branches of the federal government fills. Whether it's the Supreme Court, as in *Arizona v. California*, filling the vacuum of that dispute [or] whether it's Congress filling the vacuum, because the lower basin states couldn't agree on an apportionment of the lower basin share between themselves, or whether it is the executive branch as the Secretary recently did [Colorado River Agreement] acting to resolve disputes when there wasn't a consensus, the vacuum gets filled."

**States' Solutions**

Raley elaborated on the collaborative approach, noting that "the history of the Colorado River is one of the administration and the other branches of the government giving the states as long as possible to come up with a solution that they agree to between themselves, because everybody knows it will be more durable. So, I see no reason for that pattern not to apply. As we move into issues, some of them may be quite difficult."

## Bennett Raley

**Bennett Raley** was sworn in as Assistant Secretary for Water and Science on July 17, 2001. From 1983 to 1991, Mr. Raley was an associate, then partner, with the law firm of Davis, Graham & Stubbs in Denver, Colorado. He served as Staff Counsel to US Senator Hank Brown during the 102nd Congress. Upon returning to Colorado, he practiced law at Hobbs, Trout & Raley. He served as a Special Assistant Attorney General for the State of New Mexico in federal court litigation and as Co-Chair of the Federal Water Rights Task Force established pursuant to the 1996 Farm Bill.

Lower basin States may have some negotiations required, due to the current water situation in the West, Raley pointed out. "If the drought continues, there is the potential need for shortage criteria in the lower basin. And the Secretary has been very clear that she wants the States to come up with measures to either obviate the need for shortage criteria, or for a recommendation of what the shortage criteria will be. And we're sitting in neutral as the States are debating that. The Colorado River is very unique in that regard...[we're] very, very deep in constant consultation [between] the federal government and the States, and the States [consult amongst] themselves. There is far less done unilaterally than people might think."

**Municipal Water Supply Privatization**

The Water Report asked Assistant Secretary Raley about the issue of privatization of municipal water supplies. "Privatization has had a lot of attention in certain intellectual sectors, and at times has made it to the public's attention. In western water, that typically is not true privatization. It is devolution more to local water districts, which as you know are not private corporations; they are some subset of a State entity under that State's unique laws. The actual examples of privatization aren't as many as people think. One of the reasons for that, I've observed...is that politically it is quite difficult to get a city to give up control of its water supply and water rights to a for-profit corporation. It's just a very controversial political matter. And the other thing is many cities use their water utilities in a way that sometimes, for example, subsidizes the rates for water, subsidizes other functions that are more deeply intertwined into the entire city's operational fabric than one might think. As a consequence, it is very difficult for privatization to penetrate. There are some examples but they're few and far between."

**Klamath Basin**

When The Water Report queried Assistant Secretary Raley about specific projects in the offing in the Klamath Basin, he encouraged interested people to contact Sue Ann Wooldridge of the Department of the Interior. He said that she is the Department lead on the Klamath and would have a more detailed knowledge of the current situation in the Klamath Basin.

**For Additional Information:**
Kip White (US Bureau of Reclamation), 202/ 513-0684 or email: kwhite@usbr.gov
Sue Ellen Wooldridge (US Department of the Interior) email: Sue_Ellen_Wooldridge@sol.doi.gov

**BOR Leasing**

# WATER RIGHT DONATIONS

**COULD THE FEDERAL TAX CODE HELP SAVE OUR STREAMS?**

by Neal Stelting, In-House Council, WestWater Research, Inc. (Laramie, WY)

**Water Markets & Environmental Regulation**

Finite water supplies and burgeoning demands are driving the development of water markets in nearly every western state. A share of water market activity is due to environmental efforts, particularly in the Pacific Northwest where salmon, sucker, and additional fish species have received protection under the federal Endangered Species Act. Water markets spurred-on by increased environmental concern and regulation are not isolated to salmon country, however. Most other western states are also experiencing them in one form or another. As water's market demand and value escalates, donations of water rights could be critical to the future success of environmental water transfers.

Most environmental water market funding is associated with state and federal efforts to provide sufficient streamflow to endangered species and related habitat. One of the first major developments in environmental water markets was in 1991, when the US Bureau of Reclamation (Bureau) initiated salmon recovery in Snake River Basin through a water leasing program. In 1995, the Bureau started an aggressive campaign to lease water for salmon species in the Columbia River Basin — a process which still continues. The Bureau's Columbia River efforts began following the National Marine Fisheries Service biological opinion that called on the Bureau to provide 427,000 acre-feet of water annually [Rigby, Richard. 1997. *Acquiring Water For Flow Augmentation.* Special Report. Boise, ID: US Bureau of Reclamation, Pacific Northwest Region.] Today the Bureau operates several additional environmental acquisition programs in California, Idaho, Oregon, and Washington.

## Water Donations

### Non-Profits

One-by-one, states are entering the environmental market for water. Arizona initiated its Water Protection Fund in 1994. California spends millions annually on water acquisitions in the San Francisco Bay/Sacramento-San Joaquin Delta estuary system. The Washington Department of Ecology leases water rights for the State's instream flow program. Texas is looking to establish minimum stream flow requirements and will likely turn to environmental markets for assistance in fulfilling those requirements. Environmental water markets are blossoming in nearly every western state (with the exception of Utah and Wyoming). This activity shows no sign of recession.

Non-profit organizations also account for a small but growing segment of the market. Groups such as: The Nature Conservancy; National Fish and Wildlife Foundation; and water trusts in Colorado, Montana, Oregon, and Washington are buying and leasing water for environmental conservation purposes. Most of these groups have relatively small operating budgets and focus attention in smaller basins where limited funding can return greater perceived good.

Table 1 summarizes market activity in several Western instream leasing programs in 2001 – 2002. The table reflects acquisitions in five Western states, and quantities of water and monies involved.

**Table 1: Summary of Selected Western Instream Leasing Programs**

| Program | Lessee | Average $/AF | Quantity (AF) | Approximate Total $ | Average $/AF | Quantity (AF) | Approximate Total $ |
|---|---|---|---|---|---|---|---|
| Dungeness Water Leasing (WA) | WDOE | $288 | 583. | 168,00 | | | |
| Environmental Water Account (CAL) | CALFED | $177 | 336,034 | 59,573,000 | $ 118.22 | 239,543 | 28,333,000 |
| Klamath Crop Idling Program (OR/CAL) | USBR | $ 74 | 37,543 | 2,778,200 | $ 100.00 | 6,322 | 632,200 |
| Klamath Groundwater Replacement (OR/CAL) | USBR | $ 35 | 50,902 | 1,781,500 | - | - | |
| USBR Snake River Leases (ID) | USBR | $2 - $43 | 18,113 | - | $ 18.50 | 40,762 | 754,000 |
| Lemhi River (ID) | USBR | $ 218 | 1,000 | 218,000 | $ 245.49 | 1,000 | 245,000 |
| Salmon Creek (WA) | WWT | $ 48 | 1,719 | 82,500 | $ 58.00 | 1,873 | 108,600 |
| Deschutes River (OR) | DRC | $ 12 | 8,793 | 105,500 | $6.39 | 7,840 | 50,100 |
| Walla Walla Bank (WA) | OWT | $ 16. | 217 | 3,500 | $ 20.47 | 340 | 7,000 |
| Montana Programs (MT) | MFWP | - | - | - | $ 7.38 | 22,753 | 168,000 |

WDOE: Washington Department of Ecology
CALFED: California Bay-Delta Program
USBR: United States Bureau of Reclamation
WWT: Washington Water Trust
DRC: Deschutes Resources Conservancy
OWT: Oregon Water Trust
MFWP: Montana Fish Wildlife and Parks

### Donations

### Non-Use Protection

A small but growing portion of environmental water transfers are facilitated through donations. Non-profit groups facilitate the majority of water donations. Large numbers of donations are temporary, as most individuals do not want to give away their water asset forever. Donated water rights are enrolled in state-authorized trust programs solely for environmental purposes. Enrollment in trust programs maintains the right's original priority date and assures the right will not be cancelled for non-use. Protection against cancellation due to non-use is one of the leading motivations behind temporary donations.

Water donations, and the non-profit groups who receive them, may soon play a larger role in environmental protection. State and federal agencies spend millions on aquatic ecosystem protection. What if that cost could be lowered by encouraging more voluntary 'conservation' donations? The Federal Tax Code may provide just the encouragement some water right holders are looking for.

**Lowering the Cost of Environmental Water**

### Incentives

Water right donations are a cost-effective means of obtaining water for environmental purposes. The easiest way to encourage donations is to provide a financial incentive for those who donate. The Federal Tax Code (Code) currently allows an itemized deduction for the permanent donation of land or conservation easements [see Code, Title 26, Section 170 Title 26, Subtitle A, Chapter 1, Subchapter B, Part VI, Section 170; "Charitable, etc., contributions and gifts"]. While these deductions certainly do not provide the grantor with fair-market value, they may be useful as part of an overall tax strategy and/or provide personal satisfaction. The pertinent statute used for these types of deduction is also being used for water right donations, though no one is certain whether it's legal to do so.

The Code allows individuals and corporations a tax deduction for the donation of a "qualified conservation contribution." A qualified conservation contribution is the donation of a "qualified real property interest" to a "qualified organization" exclusively for "conservation purposes."

## Water Donations

### Code Provisions

The Code classifies a qualified real property interest as any of the following:

- the entire interest of the grantor other than a qualified mineral interest, (or)
- a remainder interest, and
- a restriction (in perpetuity) [see 26 U.S.C. § 170 (H)(5)(a)] on the use of which may be made of the real property [see 26 U.S.C 170(H)(2)(a)(b), and (C)]

In layman's terms, a landowner can donate his land but keep his mineral rights, or keep his land but grant an easement on the property.

The Code allows a variety of "qualified organization[s]" as recipients of the qualified real property interest, including, but not limited to government agencies and 501(c)(3) organizations such as: The Nature Conservancy; Trout Unlimited; the Nevada Department of Conservation and Natural Resources; and the Colorado, Oregon and Washington Water Trusts [see 26 U.S.C. 170(H)(3)].

### Purpose

THE CODE DEFINES "CONSERVATION PURPOSE" AS:

- the preservation of land areas for outdoor recreation by, or the education of, the general public;
- the protection of a relatively natural habitat of fish, wildlife, or plants, or similar ecosystem;
- the preservation of open space (including farmland and forest land) where such preservation is for the scenic enjoyment of the general public, or pursuant to clearly delineated Federal, State, or local governmental conservation policy, and will yield a significant public benefit; or
- the preservation of an historically important land area or a certified historic structure. A conservation contribution shall not be treated as exclusively for conservation purposes unless the conservation purpose is protected *in **perpetuity*** (emphasis added) [see 26 U.S.C. 170(H)(4)].

### In Perpetuity

Therefore, under Section 170, a grantor is allowed a tax deduction for the perpetual donation of her/his entire interest in her/his real property, so long as the donation is for conservation purposes. Section 170 also allows a tax deduction for the donation of a conservation easement granted in perpetuity. Of course, this doesn't relate to water donations unless water rights are "real property."

**Is Water Real Property?**

The Code allows for the donation of a "qualified real property interest." Real property almost always means land. Black's Law Dictionary defines "real property" as: "Land and generally whatever is erected or growing upon or affixed to land. Also rights issuing out of, annexed to, and exercisable within or about land. A general term for lands, tenements, and hereditaments; property which, on the death of the owner intestate, passes to his heir."

It is unlikely that the drafters of Section 170 contemplated water donations for conservation purposes. Legal precedent has found the nature of water ownership to be inherently different from land ownership:

### Usufructary Right

"[T]he right of property in water is usufructuary, and consists not so much of the fluid itself as the advantage of its use" [see *Eddy v. Simpson*, 3 Cal. 249, 252-253 (1853)].

"Unlike real property rights, usufructuary water rights are limited and uncertain"— since climactic conditions determine water supply [see State Water Res. Control Bd., 227 Cal. Rptr. At 170].

In addition, most Western states constitutionally claim all water as a "property of the public" [see Colorado Constitution, Article XVI, § 5].

Because of these differences between land and water ownership, courts and state legislatures have been faced with deciding whether a water right is actually a "real" property interest at all.

### State Legislatures

Idaho, Utah, and Kansas are just a few examples of states which recognize water rights as real property through statute [see Utah Code Ann. § 57-1-1(3) (1994); Kansas Water Appropriation Act of 1945; Idaho Code § 55-101]. In other states, such as Nevada and Colorado, common law doctrines protect water rights as real property [see *Town of Eureka v. State Engineer*, 108 Nev. 163, 167, 826 P.2d 948, 951 (1992); *Southeastern Colorado Water Conservancy District v. Twin Lakes Association*, 770 P.2d 1231, 1239 (Colo. 1989)].

In addition, federal courts, as early as 1931, recognized water rights as real property under a "takings" analysis [see *Int'l Paper Co. v. United States*, 282 U.S. 399 (1931), which held that water rights were recognized by New York law as real property].

Subsequently, an assumption may be made that a water right may be a "qualified real property interest" for the purpose of a charitable donation. Not all western jurisdictions view water rights as real property and some states may consider water rights as partial property interests rather than whole property interests. States have the ability to classify and regulate water rights to whatever extent they please, subject to a Fifth Amendment takings claim.

### States' Power

The IRS will look to state law in analyzing whether water rights quality as "real property" for the purposes of Section 170. For instance, riparian water rights may not qualify. The entitlement to water under a riparian system is granted by the ownership of the land abutting a watercourse. Historically, the

## Water Donations

property interest in riparian water rights was not an independent interest, but connected to the ownership of the land. Because a riparian right was not an independent property right, the permanent donation of a riparian right would probably not qualify as "qualified real property interest."

However, in the majority of riparian jurisdictions, water rights are severable from the riparian land either by grant or reservation, and conveyed separately [see Water Resource Management - A Case Book in Law and Public Policy, Fifth Addition, Foundation Press (2002). pg 144]. In riparian jurisdictions that recognize water rights as "real property" and recognize the right to sever the water from the land, water rights might be donatable as a charitable contribution under Section 170.

**Severable Right**

Western water law is governed by the doctrine of "prior appropriation" (first in time, first in right). To establish a typical appropriative right, a person must divert water out of the stream channel and put the water to beneficial use. Unlike riparian rights, the ownership of land is not a factor in perfecting an appropriative right. Appropriative water rights are easily severable from the land and many western states recognize appropriative water rights as "real property." Therefore, a "prior appropriation" water right seems to qualify as a "qualified real property interest" as required by the Code.

### Can a Temporary Fix Provide a Permanent Solution

**Flexibility Factor**

Judging from the Pacific Northwest experience, the amount of participation in environmental water markets would appear to be directly proportional to the degree of flexibility available. States that allow for water to be temporarily placed instream have much greater environmental participation than states that do not. Following that logic, one concludes that if the Code was amended to allow deductions for temporary donations, more instream flow donations would occur.

**Wyoming Restriction**

In 1986, Wyoming passed its instream flow law allowing (among other things) the change of an existing right to flow enhancement. To make this change, however, water right holders must permanently give up ownership of the right to the State. The original water right certificate is then amended to reflect both the change in use and ownership. The requirement to permanently relinquish the water right is a huge disincentive for those wishing to participate in instream flow efforts. [**Editor's Note:** An interesting sidebar regarding instream water rights in Wyoming is that after the instream water right is established, all or part of it remains subject to condemnation by a city or town for their use (see Wyoming Statutes 41-3-1013, "Condemnation for municipal water purposes").]

**Temporary Transfers/Leases**

On the other hand, the five states represented in Table 1 (see page 19) allow for temporary instream flow transfers. Temporary transfers currently represent the bulk of environmental water transactions throughout the West. State approval for temporary transfers paves the way for temporary donations. Temporary donations provide the same environmental benefit as permanent donations but over a shorter period, and are much more likely to occur.

Under the Code, a donative lease is not a "qualified real property interest." First, 'temporary' and 'perpetuity' are not synonymous. Second, leases of real property are not considered a transfer of the "entire interest" because the owner still retains a reversionary interest in the property. To allow deductions for donative leases, Section 170 would have to encompass "temporary" donations of "partial" interests.

### IRS Views on Water Rights as Real Property

It is becoming an increasingly common practice to claim a permanent water donation as a charitable contribution under Section 170. Many people within the tax and water law communities believe that a permanent water donation is perfectly acceptable under Section 170. A statement by the IRS either confirming or denying such practice would be helpful for the purpose of assessing the applicability of Section 170 for water donations. Other than the IRS's silence on the issue, no information is available to clarify the agency's position on the "water rights as real property" question.

**IRS Silence**

The IRS's Northern California District has issued a non-binding field service advisory opinion that discussed charitable contribution deductions for the donation of conditional water rights [see Internal Revenue Service*, Field Service Advisory*. 33313932 (IRS FSA) 1997]. A conditional water right is usually a "permit" to appropriate waters of the state, which is granted following the application for a water right. The permit is assigned a priority date, even though the appropriation has yet to be completed. Once the right has been perfected by use, the holder of the conditional right can then receive a "perfected" water right with the same priority. Depending on the jurisdiction, conditional rights may not be able to have the place of use or point of diversion relocated. Lack of transferability can certainly hinder market value, but conditional rights are still a valid water "right."

In the case of the Northern California opinion, the deductions were disallowed due to timing of the actual donation and how it coincided with the tax filing deadlines, not because the water rights were unperfected. Nowhere in the opinion does the IRS's agent question the legality of donating water rights to obtain the charitable contribution deduction.

## Water Donations

### Official Ruling Coming

Since the IRS has had the opportunity to —yet has not — challenged the validity of water donations as charitable contributions, the IRS's silence on the issue could be construed as acquiescence. It is possible that the IRS may clarify its stance as early as 2005. The Colorado Water Trust announced that it will be requesting an official ruling on the issue for the 2004 tax year. If the IRS decides that permanent donations of water rights are not charitable contributions, an amendment to Section 170 embracing such donations will be needed. Regardless, an amendment to Section 170 will be required to legitimize temporary water donations.

**Potential Benefits of Amending the Code**

Increased Conservation Participation

Due to the increasing value of water, few individuals or corporations are interested in permanently "donating away" a water asset. Amending the Code to provide incentives for the donation of water leases means more water consistently instream. When viewed economically, permanent donations often get stifled. The theory behind amending the Code is that more individuals will participate in conservation that does not require a permanent loss of their water asset.

Mitigating the Economic Effects of the Endangered Species Act

### ESA Impacts

Municipalities, manufacturing, agriculture, and the energy sector have all felt the economic impact of the federal Endangered Species Act (ESA). Sufficient streamflow is necessary to protect critical habitat so that economic progress is not adversely effected by ESA actions. Amending the Code to encourage the temporary donation of water for conservation purposes may be an effective way to minimize the impact of the ESA upon water-dependent entities. Rather than facing the expensive proposition of purchasing extra water for stream augmentation, public and private organizations could develop a cooperative program of water lease donations within a basin.

Stabilizing Municipal Water Supplies

### Albuquerque and the Silvery Minnow

Albuquerque, New Mexico can attest that low stream flow is a critical issue. Last summer, the reliability of Albuquerque's water supply was put into question when the Tenth Circuit Court of Appeals held that the US Bureau of Reclamation must consider endangered fish when it releases water or operates any federal program along the Rio Grande [see *Rio Grande Silvery Minnow v. Keys*, 333 F.3d 1109 (2003)].

In drought conditions, Albuquerque may not be able to divert water that it had purchased from the Bureau. A secondary effect of temporary donations for conservation would help maintain stream flow, and would enable Albuquerque to continue to divert Rio Grande water during drought conditions.

Communities in Oregon, Washington, and California situated along critical endangered fish habitat may also benefit from temporary donations in their region. In drought conditions, those communities that receive Bureau water will be less likely to have their water supply withheld to protect endangered fish habitat if temporary donations for instream flow are already providing sufficient flow. Municipalities will not benefit from the tax incentives per se, but would receive a benefit from the secondary effects of temporary donations.

Maintain Agriculture Lands

### Donation Rotation

Water donations can be used in agricultural regions where over-appropriation has drawn down streams to unhealthy levels. Theoretically, in a basin with 20 irrigators, each irrigator could donate water for a single season and receive a tax deduction. The agricultural community is much more likely to support and participate in conservation programs that allow for the retention of water assets. In addition, viable agricultural land will maintain its water supply and agricultural classification, and the tax base of the region would not be impaired. A frequent argument against permanent water rights sales is the impact on the tax base when land is taken out of production.

### Tax Base

Government Program Administrative Cost Reduction

Federal and State programs already spend millions of dollars in the West for the fallowing of agricultural lands to maintain stream flows. The Bureau spent $4 million during the summer of 2003 for water acquisition programs in the Klamath Basin alone. California paid nearly $60 million in 2001 for water to help restore the San Francisco Bay/Sacramento-San Joaquin Delta Estuary system. Amending the Code to provide donative incentives may reduce the overall cost of obtaining instream water. Paid leasing will certainly remain a more economically viable option, but some irrigators may opt to donate for tax planning purposes.

### Paid Leasing

While the overall offset cost to the Federal Reserve is unknown, the governmental administrative costs of operating land fallowing programs may be reduced if the Code is amended. If temporary donations become as popular as land donations, the government may be able to do slash land fallowing programs and allow non-profit groups such as the National Fish and Wildlife Foundation, The Nature Conservancy, and the Trust Organizations to facilitate the instream programs.

## Water Donations

### Eastern States

### Southern States

### Remaining Questions

### Tax Credit Trading

### Criteria

### Amendment Needed

EFFECTS IN THE EASTERN UNITED STATES

While the major impact of amending the Code should be felt to a greater degree in the arid West, eastern states can certainly benefit as well. A perception exists that eastern rivers do not need additional stream flow for ecosystem health. However, instream flows are becoming a concern across America. Many eastern states have water quality and supply problems. Temporary donations can help dilute aquatic pollution, raise dissolved oxygen levels for impaired fisheries, and provide ascetic value for recreational purposes.

The Wildlife Resources Division of the Georgia Department of Natural Resources developed recommendations for protecting instream flows throughout the state, and published them in December 1995. Florida, Louisiana, Arkansas, Mississippi, Texas, South Carolina, Tennessee, and Oklahoma are also attempting to deal with low flow problems [see proceedings of the Southern Division of the American Fisheries Society Midyear Meeting, San Antonio, TX (1997)].

**Forthcoming Policy Considerations**

If the Code is to be amended, additional questions are forthcoming. Should all water donations qualify or should only donations enhancing threatened habitat be accepted? Should there be a term limit for these donations, perhaps five years? How will the fair-market value of a temporary donation be calculated? Should the incentive be a Section 29-type tax "credit" rather than a deduction (tax credits yield substantially better results for taxpayers)?. [See website: www.vcnet.com/carlson/deduction.html for a good explanation of tax credit v. tax deduction.]

In addition, Section 29 tax credits may be bought and sold. By utilizing the Section 29 credit format, a water right holder could donate a certain amount of water creating a formulated credit (for example: 5AF = 1 credit), which could then be purchased by a private party or corporation at fair-market value or foregone net revenue (amount of money lost by not putting the water to use).

**Summary**

Market-based environmental solutions often result in greater overall ecological recovery, better participation due to heightened financial incentives, and less expense for public agencies. [see US Environmental Protection Agency wetland mitigation bank website: www.epa.gov/owow/wetlands/facts/fact16.html].

Instream water is critical to protect and conserve the Nation's river ecosystems. One potential method to maintain instream water for habitat management is through the charitable donation of water rights for conservation purposes. However, due to the rising economic value of water, few individuals are willing to permanently donate away their water asset. It is unclear whether US Tax Code, Section 170 allows a tax deduction for the permanent donation of the grantor's entire real property interest in the water right; many professionals in the tax and water communities believe it does. The IRS may clarify the issue as early as 2005.

Assuming the IRS approves tax deductions for water right donations, the following criteria are required under the Code:

- The donation is made with the intent to protect natural habitat of fish, wildlife, plants, or similar ecosystems.
- The water right is donated to a governmental agency or a 501(c)(3) organization that will then apply the water right to the conservation purpose.
- The donation of the water right is permanent and the grantor relinquishes all property interest in the water right. Temporary donations do not qualify at this time.

Donation of environmental water could increase if the Code was amended to allow for temporary donations. This could be done through a simple amendment to Section 170 allowing for "temporary" donations of "partial" interests in water rights. Temporary donations may also lower costs associated with agency leasing programs.

Anyone interested in claiming a tax deduction for a water right donation should contact a licensed attorney and accountant who can advise them on the Code and relevant laws of their jurisdiction.

**FOR ADDITIONAL INFORMATION:**
NEAL STELTING, WestWater Research, Inc., 307/ 742-3232 or email: Stelting@waterexchange.com

**Neal Stelting** is a market associate and in-house council for WestWater Research, a water marketing and consulting firm. Stelting holds a biology degree from Northeastern State University (Oklahoma) and a law degree from the University of Wyoming.

## WATER BRIEFS

### NOAA COLUMBIA - SNAKE DRAFT STRATEGY ID/WA/OR

As of TWR press-time, NOAA Fisheries planned to release a draft Biological Opinion (BiOP) covering 13 Endangered Species Act (ESA) listed salmon populations in the Columbia and Snake Rivers by September 10. The strategy addresses how the basin's hydroelectric system must be operated to minimize harm to the fish.

NOAA touted improvement of virtually every Columbia and Snake River salmon and steelhead population over the past four years. NOAA credits measures to restore hundreds of miles of in-river and estuary salmon habitat, state-of-the-art technological upgrades to hydroelectric dams and other facilities, aggressive predator control, better hatchery and harvest practices, and favorable ocean conditions. The new strategy calls for "historic federal commitments to improve fish passage at hydroelectric dams." After public review, a final version is expected on or before November 30.

NOAA Fisheries concludes that actions proposed by federal agencies in the draft BiOp are not likely to jeopardize ESA-listed fish, due to the success of on-going salmon protection and proposed additional recovery efforts. Federal agencies will measure the performance of their proposed operations and adjust efforts accordingly. NOAA officials pointed to a request by the Bush Administration for an additional $100 million in the 2005 budget to fund hundreds of collaborative, locally-driven projects.

The draft document responds to a federal district court order (June 2003) that a prior version must be revised to provide more certainty for ESA-listed salmon. NOAA's Notice to the court states: "The draft BiOp will also respond to the opinion of Judge Redden in this case that measures to help endangered species that are relied upon are reasonably certain to be carried out. This is done by clearly identifying remedial actions necessary for each species and by providing the tools to measure results. It will define in greater detail the specific hydropower, habitat and hatchery actions that need to be taken and ...provide specific performance standards ..."

"The new draft BiOp performance standards will require the federal agencies operating the dams to achieve specific levels of survival for juvenile and adult fish passage through the dams, but they will be given flexibility as to how best to achieve that survival. The new draft BiOp will continue the major salmon protection efforts included in the prior BiOp, including predator control and habitat improvements, and the funding by BPA of its fish and wildlife program - currently providing an average $139 million each year for such projects." (NOAA Notice, 8/31/04)

Some conservation groups have criticized the draft plan. According to Idaho Rivers United, the government's "no jeopardy" conclusion means essentially that, in the opinion of federal hydrosystem managers, dams do not negatively impact endangered salmon stocks. Idaho Rivers United Executive Director Bill Sedivy said: "This no jeopardy opinion is absurd ...Our endangered fish runs really took a nose dive after the Lower Snake dams were completed, these dams contributed to the fact that only two sockeye returned to Redfish Lake in 2003 ...How in good conscience can these administration appointees now say that dams on the Lower Snake and Columbia rivers don't harm salmon?"

The Coalition for Idaho Water, Inc. (water users group) is especially concerned with "flow augmentation" demands on water stored in Idaho reservoirs that have been used to increase flow in the Columbia River to enhance downstream salmon migration. The Coalition warned of an Idaho water crisis which could potentially dwarf the Klamath Basin water calamity. Coalition officials say the threat by conservation groups to sue the Federal government to use all the water from Idaho's storage reservoirs for flow augmentation is a blatant attempt to extort the state to support removal of the four dams on the lower Snake River in exchange for keeping its own water. "If this eco-extortion strategy is successful, Idaho will have 'Klamath-times-ten' on our hands," said Norm Semanko, Executive Directorof the Idaho Water Users Association and president of the Coalition.

**For info:** website: www.salmonrecovery.gov/remand; Norm Semanko (IWUA), 208/ 863-7921; Bill Sedivy (Idaho Rivers United), 208/ 343-7481

### WATER PURCHASES CA

#### CDWR DRY-YEAR PROGRAM

The California Department of Water Resources (CDWR) is initiating a 2005 Dry Year Water Purchase Program (Program) to help public water agencies and other entities throughout California supplement their water supplies if 2005 is dry.

The Program will allow purchasing entities that enter the Program in the fall of 2004, to request CDWR to obtain options for water. The Program is designed to reduce the possibility of adverse economic impacts and hardship associated with water shortages, and is open to all California water entities.

**For info:** Interested buyers and sellers may contact Teresa Geimer at CDWR, 916/ 653-4547, email: tgeimer@water.ca.gov; website: www.water.ca.gov/

### NAVAJO SETTLEMENT NM

#### MOTIONS DENIED - MORE ADJUDICATION

On August 20, Judge Sanchez denied motions in San Juan County District Court, which sought to restrain the New Mexico from negotiating a water rights settlement with the Navajo Nation. Motions were filed by the San Juan County Agricultural Water Users Association and Attorney Gary Horner (on his own behalf), to restrain the State Engineer from signing any settlement agreement between New Mexico and the Navajo Nation and to restrain him from entering into any further negotiations. Judge Sanchez found that the court had no jurisdiction over the settlement negotiations and that the motions were premature. This means settlement discussions can proceed as planned between the parties. Additional phases of the adjudication case will continue, including adjudication of all non-Indian water rights claims.

Officials of the Navajo Nation, the State of New Mexico, and the federal government will be reviewing the revised draft documents during the upcoming weeks. The New Mexico Congressional delegation also will be reviewing the revised draft settlement. The Navajo Nation will be considering

the revised proposed settlement, and the revised settlement will come before the New Mexico Interstate Stream Commission for endorsement at a meeting later this year. The settlement agreement proposes to adjudicate the Navajo Nation's water rights and provide associated water development projects for the benefit of the Navajo Nation in exchange for a release of claims to water that could potentially displace existing non-Navajo water users and impact the local economy. A revised draft of the agreement was made available for public inspection last July.
**For info:** Karin Stangl, NM State Engineer's Office, 505/ 827-6139

### CANAL SEEPAGE
**BOR GRANT**

The Bureau of Reclamation has provided a $140,000 grant to the Desert Research Institute to evaluate water conservation effectiveness and environmental issues of Polyacrylamide (PAM) when used to reduce seepage in irrigation canals in 17 western states. "This research will help ... [b]y enhancing water conservation, use efficiency, and resource monitoring to allow existing water supplies to be used more effectively," said BOR Commissioner John Keys.

PAM is a relatively new tool. It is spray-applied and forms a layer at the bottom of the canal. This layer combines with soil particles to seal the canal and reduce seepage. It can be applied at low per unit cost.
**For info:** Peter Soeth (BOR), 303/ 445-3615, website at www.usbr.gov

### TEXAS PROMOTES DESAL TX
**COASTAL DESAL**

Texas Gov. Rick Perry told a national gathering of water policy experts, suppliers and engineers that he wants Texas to become the national leader in water desalination by developing the first large-scale coastal desalination project in the country. Perry also called on Congress to exempt water infrastructure projects from the cap on private activity bonds, which could free up further financing for desalination projects.

Last year, Texas provided seed money for three seawater desalination projects in Brownsville, Corpus Christi and Freeport. A large-scale desalination project, however, is crucial to address the State's growing demand, Perry said. The State already has almost 150 inland desalination units which produce 40-to-50 million gallons of fresh water from brackish ground and surface water each day. He predicted that utilizing the almost limitless supply of coastal water would lead to fewer disputes concerning rule-of-capture, inter-basin transfers and regulation of groundwater.
**For info:** Kathy Walt (TX Governor's Office), 512/ 463-1826

### BORDER STATES MEETING NM
**WATER ISSUES**

The 22nd Border Governors' Conference concluded August 10 in Santa Fe, NM. NM Governor Bill Richardson praised the "Governors' commitment to have the states continue to work together on important water issues such as conservation, shared ground water and the effects of water management on human consumption and sustainability, agriculture, and economic development."

During the Conference, Richardson and Texas Governor Rick Perry agreed to begin a dialogue on issues relating to compact delivery issues under the Rio Grande Compact and the Pecos Compact. The Governors also agreed to continue evaluation of groundwater development, particularly in Dona Ana County, El Paso and Ciudad Juarez and to begin planning for its sustainability. New Mexico and Texas plan to propose water quality initiatives and strategies to deal with salinity control as well.
**For info:** Karin Stangl (NM State Engineer's Office), 505/ 827-6139, NM Governor's website: www.governor.state.nm.us/

### WILD & SCENIC WATER ID
**SNAKE RIVER ADJUDICATION**

After nearly two years of negotiations, conservationists, the US Forest Service, and the State of Idaho have settled a court case over Wild & Scenic water rights for the Salmon, Middle Fork Salmon, Selway, Lochsa, Middle Fork Clearwater and Rapid rivers that will protect flows in those streams. The agreement, filed last week in Idaho's Snake River Basin Adjudication (SRBA) Court effectively prohibits the construction of major new water storage facilities (dams) in the adjudicated river basins; prevents out-of-basin transfers of water; sets minimum stream flows; protects high water flows; and requires the State of Idaho to actively protect the Wild & Scenic water rights. The settlement must still be approved by the SRBA court before taking effect.

"Our Idaho case could have turned out very differently had these five Idaho Rivers United and Wilderness Society members not intervened in the court case after we were excluded from engaging as an organization," Bill Sedivy, Executive Director of Idaho Rivers United said. "This settlement shows what a difference a few dedicated individuals can make."
**For info:** Bill Sedivy, Idaho Rivers United, 208/ 343-7481

### IRRIGATION FINE WA
**FAILURE TO MEASURE**

A $20,200 penalty has been levied against the Methow Valley Irrigation District (MVID) for failing to measure and report how much water it receives from the Barkley Ditch Company, which supplies water from the Methow River to MVID. MVID is under an order from the Washington Department of Ecology (Ecology) to limit how much water it takes from the Twisp and Methow rivers and is required to report how much water is being diverted. The Methow River Basin is one of 16 watersheds in Washington where fish runs are most threatened, particularly due to low stream flows. In 2002, large water users in these basins were ordered to begin measuring their diversions. State law requires all surface water diversions be measured.

The district's irrigation system of open canals and lateral ditches has been found to be leaky and inefficient when compared to similar open-ditch systems. In 2002, Ecology cited

## WATER BRIEFS

MVID for unlawfully wasting water. That citation was upheld by the Pollution Control Hearings Board (PCHB) last year. As part of that ruling, MVID is required to measure the water entering its east canal from the Barkley ditch. In July, Okanogan County Superior Court denied MVID's request for a stay of the PCHB decision. MVID has 30 days to apply for relief from the penalty with Ecology or appeal the penalty to the Pollution Control Hearings Board. Ecology has the authority to levy penalties up to $5,000 per day.

**For info:** Joye Redfield-Wilder (WA Ecology), 509/ 575-2610

### GROUNDWATER DECREE CA

**US ARMY SETTLES - $75 MILLION**

The City of San Bernardino, CA, (City) will receive $69 million, and the US EPA will receive $6.5 million, as part of a Consent Decree for the Newmark Groundwater Contamination Superfund site, located near the City. This Consent Decree — among the EPA, the US Army, the City, and the California Department of Toxic Substances Control (DTSC) — resolves claims by the City and DTSC against the Army over groundwater contamination, and provides funds for cleanup. Under the settlement, the City is required to use most of the funds to operate and maintain EPA's groundwater extraction and treatment remedies at the site for up to fifty years. The City may use some of the funds to build additional treatment plants to expand its water delivery capacity. More than 25 % of the municipal water supply for the City's 175,000 residents has been affected by water contamination. According to the settlement, the City will provide clean replacement water for area residents and prevent contamination from reaching downstream production wells, which affect over 800,000 people in several nearby counties. Water contamination was not discovered until 1980, revealing the presence of chlorinated solvents, tetrachloroethylene, and trichloroethylene.

**For info:** EPA website: www.epa.gov/region09/cleanup/newmark .

### KLAMATH UPDATE

**WATER PURCHASE / RELEASE**

The US Bureau of Reclamation (BOR) purchased 36,000 acre-feet of water from irrigation districts in California's Central Valley Project to replenish flows in the lower Klamath River. The water was purchased from the Trinity Reservoir and released into the Trinity River (main tributary of the Klamath River) to prevent conditions that killed at least 34,000 salmon two years ago. Based on US Fish and Wildlife Service and NOAA Fisheries recommendations, the additional flows were designed to lower water temperature to reduce the potential for fish disease and assist upstream migration. The releases increased flows from 450 cubic feet second (cfs) to 1650 cfs, then gradually ramped back down to 450 cfs on September 13.

The Yurok Tribe, whose reservation is located on the lower Klamath River, goes to trial against BOR in US District Court in Oakland, California on September 20. The Tribe is claiming that the BOR's operations in 2002 caused the fish kill and thereby breached federal tribal trust obligations.

Meanwhile, six members of the House of Representatives' Committee on Resources sent John Keys, Commissioner of BOR, a letter dated August 27, urging them to "seize the storage initiative" and develop new storage options for interim and long-term solutions to the water shortages in the Klamath Basin. The six representatives, including Chairman of the Committee Richard Pombo (R-CA), stated their concern about the "water bank," which was intended to provide a short-term solution while other alternatives such as storage were developed "to bring about water supply certainty" in the long term. "As substantive progress on new, long-term storage opportunities continue to be delayed, we are very concerned that the water bank will emerge as a permanent solution." The letter also questioned BOR's focus on the storage potential of the Barnes Ranch proposal, noting the "significant water consumption of this wetlands-intensive proposal" and asked that BOR evaluate that proposal against "the effectiveness of other potential storage solutions." Besides Pombo, the other Representatives signing the letter were Greg Walden (R-OR), and Ken Calvert (R-CA), George Radanovich (R-CA), Wally Herger (R-CA) and John Doolittle (R-CA).

The Representatives wrote another letter to Craig Manson, Assistant Secretary of the Interior, to "request that the FWS [US Fish & Wildlife Service] promptly assemble biologists affiliated with the affected parties in the Klamath Basin — such as the irrigators and Native American Tribes — to develop a methodology based on peer reviewed science and state-of-the-art statistical sampling to begin such a population estimate and status review" when the agency conducts its five-year status review of the fish protected under the Endangered Species Act (Lost River sucker and shortnose sucker). On July 21, FWS announced it had concluded that the fish should remain protected by the ESA during the review, saying that a petition to delist the species does not provide substantial new information to warrant delisting.

The proposed FY 2005 budget recommends significant increases in federal spending directly related to the suckers, including a $5.9 million increase for partnerships with other parties to restore Klamath fish habitat, $4.6 million to purchase critical Klamath lands and restore it to wetlands that helps the suckers, $2.5 for new studies of the suckers, and $2.1 million more to remove Chiloquin Dam and reopen 70 miles of sucker habitat on the Sprague River.

BOR's "water bank" is used to boost flows for fish downstream. In 2004, more than 80,000 acre feet (AF) has been released from water bought for $5.5 million from irrigators in the Klamath Irrigation Project. The Project will use a total of about 240,000 AF in 2004. BOR plans to purchase 100,000 AF for $7.5 million for 2005.

**For info:** Curt Mullis (USFWS), 541/ 885-8481; Jeffrey McCracken (BOR), 916/ 978-5100, email: jmccracken@mp.usbr.gov; website: www.usbr.gov/mp/; Troy Fletcher (Yurok Tribe), 707/ 482-1350; Sue Ellen Wooldridge (DOI), email: Sue_Ellen_Wooldridge@sol.doi.gov

# CALENDAR

**September 15-18 AZ**
**"Focusing on the Value of Water" Arizona Hydrological Society 17th Annual Symposium, Tucson**. For info: website: www.hydrosoc.org

**September 16 TX**
**Water Quality Seminar (Texas Commission on Environmental Quality), Austin**, Red Lion Hotel. For info: Jeanne Cordell (TCEQ), 512/ 239-3846, email: jcordell@tceq.state.tx.us

**September 16-17 CO**
**Natural Resources and Environmental Administrative Law & Procedure Conference, Denver.** For info: Rocky Mountain Mineral Law Foundation, 303/ 321-8100, website: www.rmmlf.org

**September 17 OR**
**9th Annual Conference on Stormwater, Portland**, World Trade Center Two, RE: Clean Water Act Permitting; Legislative Concepts; Coordinating Compliance: Clean Water Act, Safe Drinking Water Act, Endangered Species Act & Other Acts; Land Use and Water Quality – Goal 6 and NPDES Permits; TMDLs & Stormwater Permits; Permit Appeals, Enforcement, Citizen Suits & Litigation; Sediment & Erosion Control at Construction Sites; BMP Effectiveness; New Turbidity Standards; More. For info: ELEC, 503/ 282-5220 or website www.elecenter.com

**September 17-18 AZ**
**Arizona Game & Fish Commission Meeting, Safford**, Manor House Conf Ctr, 415 E. Highway 70, 7am, RE: Litigation Report Including General Stream Adjudication for the Little Colorado River and Gila River, Update on State and Federal Lands Proposed Projects, Cooperative Agreement between Bureau of Rec and AGFC, Donation of Mason Property Near Gila River, Acquisition of Coal Mine Springs and Coal Mine Canyon for Recovery of Endangered Gila Topminnow, Proposal for Arizona Wildlife Conservation Fund Grants. For info: Dana Yost, 602/ 789-3281

**September 20-21 CO**
**Colorado Water Congress Water Law Seminar, Denver**, CWC Conference Room, 1580 Logan Street, Suite 400, RE: Colorado Water Law, Water Distribution Orgs, Water Court System and Procedure, Impact on Colorado of Interstate Compacts, Relationship Between the Federal Government and Colorado Water Law, Colorado Ground Water Law, Water Conservancy Districts, Engineering Aspects of Water Rights, Power Development Authority. Colorado Water Conservation Board, Denver Water System, Western Colorado Water Projects, Federal & State Water Quality Laws, Ethics and Water Law. For info: www.cowatercongress.org/

**September 20-21 AZ**
**Environmental & Natural Resources Law on the Reservation 8th Annual Conference, Phoenix**, Hilton Phoenix East, Sponsored by CLE International. For info: CLE Int'l, 303/ 377-6600, or toll-free 800/ 873-7130, email:registrar@cle.com, website: www.cle.com

**September 21 CO**
**Water Availability Task Force Meeting (Colorado Water Conservation Board), Fort Collins**, CSU Foothills Campus. For info: Brad Lundahl, 303/ 866-3339, or Kathie Luckie, 303/ 866-3370.

**September 21-22 NM**
**Water Desalination and Reuse Strategies for New Mexico, Ruidoso**, Ruidoso Convention Center. For info: New Mexico Water Resources Research Institute, website: www.wrri.nmsu.edu

**September 21-22 NM**
**49th Annual Water Conference, Ruidoso,** New Mexico Water Resources Research Institute. For info: Cathy Ortega Klett, 505/ 646-1195; email:coklett@wrri.nmsu.edu, website: http://wrri.nmsu.edu/

**September 22-23 CA**
**Continuing Legal Education for Water Attorneys, Association of California Water Agencies, South Lake Tahoe,** Harrah's, RE: Latest Information on Hottest Legal Issues Facing California's Water Community. ACWA is State Bar of California approved MCLE provider. For info: Ellie Meek, 888/ 666-2292, email: elliem@acwanet.com; internet: http://acwanet.com/events/04

**September 22-24 UT**
**State Management. Issues in Terminal Water Bodies/Closed Basins, Salt Lake City**, Sheraton City Centre Hotel, Sponsor: Western States Water Council. For info: Jeanine Jones, 915/ 651-0752, email:jeanine@water.ca.gov, website: www.watereducation.org

**September 23-24 OR**
**Oregon Wetlands Conference, Portland,** 5th Avenue Suites Hotel, 9am Both Days. For Attorneys, Government Officials, Developers, Consultants & Engineers, and Environmental Professionals. RE:: Perspectives from the Oregon Division of State Lands; US Army Corps; Wetland Identification and Valuation; Isolated, Artificial & Agricultural Wetlands; Enforcement; and the Role of Interest Groups. More. For info: The Seminar Group, 800-574-4852 or website: www.theseminargroup.net/

**September 23-24 CA**
**Managing Aquifers for Sustainability - Protection Restoration, Replenishment & Water Reuse, Sonoma County**, 13th Annual Meeting & Conference of the Groundwater Resources Association of California, DoubleTree Hotel Rohnert Park. For info: GRAC, 916/ 446-3626, website: www.grac.org.

**September 23-24 WA**
**"The Mighty Columbia: Where's the Power?" Seminar, Seattle**, The Westin, Sponsored by The Seminar Group, RE: Legal, Financial, and Public Interest Aspects of Electric Power Generation and Transmission. For info: The Seminar Group, 800/ 574-4852, email: registrar@theseminargroup.net

**September 25 TX**
**Sierra Club Coastal Water Conference, Houston**, University Hilton, RE: Desalinization Update. For info: Ken Kramer (Sierra Club) 476-6962

**September 26-29 AZ**
**Dam Safety 2004, ASDSO's 21st Annual Conference, Association of State Dam Safety Officials, Phoenix,** Pointe South Mountain Resort, RE: Dam Failures/Incidents, Hydrology&Hydraulics, Emergency Preparedness, Security, Dam Owner Issues, Safety Regulatory Programs, Inspections, Construction, Rehabilitation and Design. For info: http://www.damsafety.org.

**September 27 AZ**
**Arizona Dept. of Environmental Quality Meeting, Phoenix**, ADEQ Building, 1110 W. Washington, Rm. 145, 6 pm, RE: Central and Camelback (Water Quality Assurance Revolving Fund) Site Community Advisory Board (CAB). For info: Wendy Van Deusen, 602/ 771-4410

**September 27-29 UT**
**Western Water Supply Challenges Conference, Salt Lake City**, Little America Hotel, 500 South Main Street, Sponsored by the Western States Water Council. For info: 801/ 561-5300, website: www.westgov.org/wswc/

**September 28-29 TX**
**Watershed Protection Seminar: Planning for the Future of Source Water, Austin**, Omni Austin Hotel Southpark, Sponsor: American Water Works Association. For info: AWWA, 800/ 926.7337, website: www.awwa.org/

**September 28-29 OR**
**Energizing the Northwest, BPA Conference, Portland,** DoubleTree Hotel/Jantzen Beach, RE: Energy Efficiency; Transmission; System Reliability; Environmental Stewardship; More. For info: website: www.bpa.gov/conferences

**September 30 CA**
**State Water Resources Control Board (Cal EPA), Sacramento,** 1001 I Street (Coastal Hearing Room), 10am. For info: Debbie Irvin, Clerk, 916/ 341-5600, email: dirvin@swrcb.ca.gov, website: www.swrcb.ca.gov/wksmtgs/schedule.html

**September 30 - October 1 DC**
**Criminal Enforcement of Environmental Laws, American Law Institute-American Bar Association Study Course, Washington DC.** For info: ALI-ABA, 800-253-6397 or website: www.ali-aba.org

**October 1-2 OR**
**Northwest Tribal Water Rights Conference, Eugene**, RE: Water Protection Issues And Strategies, Tribal Fisheries, Instream Flows, Treaty Rights and Water Quality, Sustainability, Sponsor: Center for Tribal Water Advocacy, the University of Oregon School of Law, and Indian Law Section of the Oregon State Bar. For info: Center for Tribal Advocacy, 541/ 276-1624, website:www.tribaladvocacy.com, email: waterlaw@uci.net

**October 2-6 LA**
**WEFTEC '04: Water Quality Event, New Orleans**, Ernest N. Morial Convention Center, RE: Water and Wastewater, Collection Systems, Membrane Technologies, Plant Operations, Regulations, Residuals and Biosolids, Water Reuse/Recycling, Water Quality and Watershed Management, Stormwater & More. Sponsor: Water Environment Federation. For info: WEF, 800-666-0206, website: www.weftec.org/registration/instructions.htm

**October 6 NM**
**New Mexico Water Trust Board Meeting, Albuquerque**, Capitol Room 309, 1:00 pm. For info: Chrissy Salazar (Meeting Coordinator), 505/ 984-1454, email: csalazar@nmfa.net

**October 7-8 ID**
**Idaho Water Resources Board, Location TBA**. For info: IWRB, 208/ 327-7880

**Oct 12-14 MT**
**Northwest Power and Conservation Council Meeting, Location TBA**. For info: NPPC, 800/ 452-5161, email:info@nwcouncil.org, website:www.nwppc.org/

**October 13 CO**
**Workshop on Water Quality, Denver**, CWC Conference Room, 1580 Logan Street, Suite 400, Sponsored by Colorado Water Congress. For info: 303/ 837-0812, email: macravey@cowatercongress.org, website: www.cowatercongress.org/

(continued from previous page)

**October 14 OR**
**Environmental & Natural Resources Section CLE, Portland**, Oregon Convention Center, Oregon Ballroom 203, 1pm-3pm, RE: Real Property Transactions - Environmental Issues, Hatchery v. Wild Fish. For info: OSB, 800/452-8260 x413, website: www.osbar.org

**October 14 CO**
**Workshop on Endangered Species, Denver**, CWC Conference Room, 1580 Logan Street, Suite 400, Sponsored by Colorado Water Congress. For info: 303/ 837-0812, email: macravey@cowatercongress.org, website: www.cowatercongress.org/

**October 14-15 MT**
**Montana Water Law – 4th Annual Conference, Helena**, The Montana Club, Sponsored by The Seminar Group, RE: Legislative Update, Adjudication, Permitting, Water Trading, Enforcement of Instream Water Rights, Clean Water Act, Dam Removal, Wetlands, Cyanide Leaching, What's Working and More. For info: The Seminar Group, 800/ 574-4852, website: www.theseminargroup.net/

**October 14-15 NE**
**Law of the Missouri River, Water Rights, Management and Policy, Omaha,** Sheraton Hotel, 1615 Howard Street. For info: 800/873-7130 or website: www.cle.com

**October 14-15 TX**
**Endangered Species Act and Habitat Conservation Planning, Austin**, Hilton Hotel. For info: 800/873-7130 or website: www.cle.com

**October 18-20 ID**
**Water Information Management Systems Workshop, Western States Water Council, Sun Valley,** Sun Valley Resort, For info: : WSWC, 801/ 561.5300, website: www.westgov.org/wswc/meetings.html

**October 19-20 WA**
**Environmental Conference Washington, Seattle**, Washington State Convention & Trade Center, 800 Convention Place, RE: Emerging Environmental & Policy Issues, Sponsors: Northwest Environmental Business Council & Association of Washington Business. For info: Amy Johnson, 800/ 521-9325, website: www.ecwashington.org

**October 19-20 OK**
**2004 Governor's Water Conference: Oklahoma Water: A Quality of Life, Oklahoma City**, Cox Convention. For info: Oklahoma Water Resources Board, 405/ 530-8800, website: www.owrb.state.ok.us/about/contact/contactus.php

**October 21 CA**
**State Water Resources Control Board (Cal EPA), Sacramento,** 1001 I Street (Coastal Hearing Room), 10am. For info: Debbie Irvin, Clerk, 916/ 341-5600, email: dirvin@swrcb.ca.gov, website: www.swrcb.ca.gov/wksmtgs/schedule.html

**October 21-22 TX**
**Desalinization – Managing Concentrate in the Desert, El Paso**, Sponsor EPWU, Greater El Paso Chamber, Council of Engineering. For info: Paula Apodaca, email: papodaca@EPWU.org

**October 21-22 OR**
**Oregon Environmental Quality Commission (EQC) Meeting, Tillamook**. For info: Mikell O'Mealy, DEQ, Office of the Director, 503/ 229-5301

**October 21-22 OR**
**Oregon Water Resources Commission Meeting, Ontario.** For info: Dianne Addicott, WRD, 503/ 986-0875, website:www.wrd.state.or.us

**October 21-22 WA**
**"The Mighty Columbia: Where's the Power?" Seminar, Seattle**, The Westin, RE: Development Of Electric Power System in the Columbia River Basin, Fish Issues, Legal, Financial, Public Interest. For info: The Seminar Group, 800/ 574-4852, website: www.theseminargroup.net/04rivwa/agenda.htm

**October 25-26 UT**
**Utah Water Law, Salt Lake City**, Little America Hotel. For info: CLE International, 800/ 873-7130, website: www.cle.com

**October 27-29 NM**
**Western States Water Council Fall Meeting, 146th Council Meeting, Santa Ana Pueblo,** Hyatt Regency Tamaya Resort & Spa, 1300 Tuyuna Trail, For info: WSWC, 801/ 561.5300, website www.westgov.org/wswc/meetings.html

**October 27-29 CA**
**Water Quality Conference, Ontario**, Sponsored by East Valley Water District and the Water Education Foundation. For info: www.eastvalley.org/Water%20Quality%20Conference/home-wtr-quality-confinfo.htm

**October 28-29 CA**
**California Water Law, San Diego,** For info: 800/873-7130 or website: www.cle.com

**October 28-29 DC**
**Clean Water Act: Law and Regulation, ALI-ABA, Washington, DC,** Hilton Embassy Row. For info: 800/ 253-6397 or website: www.ali-aba.org

**October 31-November 5 OR**
**Pacific Fisheries Management Council Meeting, Portland,** Embassy Suites Hotel Portland Airport, , For info: For info: Kerry Aden, 866/ 806-7204; email: Kerry.Aden@noaa.gov, website: www.pcouncil.org

**November 1-3 WA**
**Watershed Planning: Approaches, Challenges, and Strategies for Success, Symposium, Stevenson,** Skamania Lodge. North Pacific International Chapter of the American Fisheries Society and the Sustainable Fisheries Foundation Presentation. Ecosystem-Based Watershed Plans; Overcoming Barriers; More. For info: Sustainable Fisheries Foundation, 250/ 729-9625

**November 3 NM**
**New Mexico Water Trust Board Meeting, Albuquerque**, Capitol Room 309, 1:00 pm. For info: Chrissy Salazar (Meeting Coordinator), 505/ 984-1454, email: csalazar@nmfa.net

**November 4-5 OR**
**Oregon Water Law – 13th Annual Conference, Portland**, Sponsored by The Seminar Group, RE: Legislative Directions, Klamath Basin, Strategies for Tomorrow, Deschutes Basin, Municipalities, Hydropower Relicensing, ESA, & Contested Cases. For info: The Seminar Group, 800/ 574-4852, website: www.theseminargroup.net/

The Water Report
Water Rights, Water Quality & Water Solutions in the West
260 N. Polk Street • Eugene, OR 97402