Statewide Water Roundtables *Fall 2008*

Synthesis Report

by

OSU Institute for Water and Watersheds, Oregon Sea Grant Extension,
OUS Institute for Natural Resources, and the
Oregon House Committee on Energy and the Environment

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Website: water.oregonstate.edu/roundtables

"In the West, when you touch water, you touch everything."
– Former Rep. Wayne N. Aspinall (D - Colorado)

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Executive Summary

Five facilitated Statewide Water Roundtables were held in Bend, Newport, Ontario, Medford, and Salem during September and October 2008; 301 people attended. Since attendees were self-selected, and some attended more than one Roundtable, they are not a representative cross-section of Oregonians.

The attendees responded to eight questions designed to identify their interests and the source of their water. They were also asked which of the following five factors – quantity, quality, economic, ecological, social - they valued most about Oregon and its water. In each region, the majority of the stakeholders are not optimistic about either current or future water supplies, either *disagreeing* or *disagreeing strongly* with these statements: 1) in 2008 Oregonians have enough water to cover their needs, including wildlife; 2) same question, but in Year 2028.

Attendees identified issues/opportunities/threats (issues) and outcomes/expectations/payoffs (outcomes), then prioritized the issues and identified potential solutions, actions to be taken in the short term and long term, existing examples, and groups responsible for action or implementation. Many issues were the same from Roundtable to Roundtable but certain ones were more evident in particular locations, e.g., water rights and protection of existing water rights (Ontario, Bend); and invasive species (Newport).

The participants were knowledgeable about their water supply; only three of 301 attendees could not identify the source of their water. The solutions offered by participants reflected this high degree of knowledge.

Over 200 issues were identified at the five Roundtables. The Roundtables were designed to encourage brainstorming so characterizing the issues cannot be done scientifically. Representative issues included:

- Funding for water and wastewater infrastructure and management
- Integrated long range planning and management at the basin level within a statewide framework
- Protection of existing water rights and uses
- Water quality, especially non-point pollution, micro-contaminants and the impact of urbanization
- Water-land use planning integration
- Climate change impacts
- Wetland, floodplain and instream flow restoration
- Interstate water allocation/management for surface and groundwater

Key messages heard at all sessions were that:

- One size does not fit all; regions vary greatly and regional differences need to be recognized

- Public information and education about water use and management is needed
- Need for integrated water management and implementation

Potential solutions:

- Maximize available funds through agency coordination and streamlining of funding sources
- Water conservation tax credits, like energy tax credits
- Water reuse and recycling
- Water markets, pricing and incentives
- Water storage and conservation
- Measuring water flows and uses systematically
- Local integrated water planning
- Interstate compact(s)

Acknowledgements

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Platinum Sponsors ($2000 and more)

- Central Oregon Cities Organization
- League of Oregon Cities
- Oregon Trout
- National Fish and Wildlife Foundation
- Oregon Water Utilities Council - Pacific NW Section – American Water Works Assoc.
- Schwabe, Williamson & Wyatt

Gold Sponsors ($1000 - $1,999)

- Confederated Tribes of the Umatilla Indian Reservation
- David Evans and Associates, Inc.
- Davis Wright Tremaine LLP
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- Michael E. Campana
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- Stoel Rives LLP

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- ICF Jones & Stokes
- Todd Jarvis
- The Nature Conservancy

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We are also thankful to the many water experts who participated in the Roundtables and graciously lent their expertise through formal presentations: Bill Ferber, Ivan Gall, Bruce Sund, and Kyle G. Gorman (all from OWRD); Eric Nigg, Duane Smith, Michael J. Wolf, Phil Richerson, and Bill Meyers (all from ODEQ); Bob Hooton, Russell Stauff, and Steven Marx (all from ODFW); Tod Heisler (Deschutes River Conservancy); Steven Johnson (Central Oregon Irrigation District); Patrick Griffiths (City of Bend), Michael E. Campana (IWW); Wayne Hoffman (MidCoast Watersheds Council), Gail Achterman and Lisa Gaines (both from INR); Lee Ritzman (City of Newport); Antone Minthorn (Confederated Tribes of the Umatilla Indian

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Introduction

The Institute for Water and Watersheds (IWW) at Oregon State University and the Oregon University System Institute for Natural Resources (INR) were approached by State Representative Jackie Dingfelder (D-Portland), chair of the House Energy and the Environment Committee, and others interested in learning more about Oregonians' vision for water in the 21st Century. Oregon Sea Grant Extension (OSGE) joined the team to plan a series of water Roundtables open to all interested Oregonians. Sponsors from government, private industry, nonprofits, and individuals interested in Oregon's water future provided funding. The Roundtables were conducted during September-October 2008 to provide input for the 2009 Legislative session.

This Synthesis Report describes what we heard around the state. It will be made available to policy makers including the State Legislature, the Governor's Office, the Water Resources Commission and other state and local agencies with water management responsibilities and any interested citizens. It will be available to the public at http://water.oregonstate.edu/roundtables.

Background
As we prepare to celebrate the 100-year anniversary of Oregon's water code in 2009, many different parties, including the Governor's Office, the Oregon Legislature, the Oregon Water Resources Commission, Oregon businesses, local governments, environmental organizations, agricultural interests, and the Oregon University System are involved in crafting a vision for Oregon's water resources. Achieving that vision will require, among other things, developing policy, regulatory, infrastructure investment, community empowerment, and funding mechanisms.

Mission
The Statewide Water Roundtables sought to receive input and advice from Oregonians and develop information to inform efforts to identify and communicate a vision describing where Oregon is, where Oregon is going, and where Oregonians want to be with respect to adaptive, integrated, equitable, and sustainable water management.

Roundtable Locations and Dates
Public forums were held during September and October 2008 to identify priority issues, possible outcomes and solutions, and goals for water resources management. Each meeting started at noon with lunch provided at no cost to attendees and adjourned no later than 6 PM. The locations, dates, and number of attendees were:

- Central Oregon – Bend – 25 September (65)
- Coastal Oregon – Newport – 30 September (55)
- Eastern Oregon – Ontario – 7 October (50)
- Southern Oregon – Medford – 14 October (56)
- Western Oregon/Willamette Valley – Salem - 21 October (75)

Attendees totaled 301. Although some key stakeholders were identified and invited, participants were largely self-selected and are *not* a representative cross-section of Oregonians. Some

individuals attended multiple Roundtables. Funding for the Roundtables was provided by donations from a variety of organizations, primarily non-governmental, and a few individuals.

Throughout this report we will refer to a particular Roundtable by the city in which it was held. When we make a statement such as 'In Medford, 29% believed….' we are referring to the Medford Roundtable participants, not those in the city itself.

Roundtable Design and Format

A website was built, http://water.oregonstate.edu/roundtables/, where information about the Roundtables was posted and people could register for the sessions. Agendas, background materials, and copies of experts' presentations are posted on the website. An electronic mailing list was also created.

Local water leaders were recruited by the Roundtable conveners to assist in developing participant lists and key issues for each session tailored to the specific region. Some issue identification was done in advance with regional water leaders and watershed councils.

Each Roundtable had the following format:

1. Introduction with opening remarks by either Rep. Dingfelder or Rep. Cliff Bentz.

2. Large-group facilitated session (Facilitated Session 1) led by Terry Buchholz and/or Megan Kleibacker during which stakeholders identified issues, threats, and opportunities, and participated in a survey. The survey results are summarized in Appendix 1. Stakeholders could also provide written comments (see Appendix 2).

3. Ninety-minute session during which 5-6 experts from government [Oregon Water Resources Department (OWRD), Oregon Department of Fish & Wildlife (ODFW), Oregon Department of Environmental Quality (ODEQ), U.S. Army Corps of Engineers (USACE), et al.], academia, and the private sector discussed local (e.g., pertaining to the area hosting the Roundtable) water and related issues. During these presentations, the facilitators organized the issues, threats, and opportunities identified by the participants during Facilitated Session 1(see Appendices 3a-3e).

4. Break-out facilitated sessions (Facilitated Session 2) where additional issues/opportunities/threats were identified, issues were prioritized, desirable outcomes described, and "low-hanging fruit" (solutions that can be implemented now with little or no additional resources) identified, along with a summary from each breakout group. The Salem group was self-facilitated; each group of 5-7 stakeholders seated at a round table selected a facilitator and recorder. This was done because of the number of stakeholders and room configuration.

5. Brief final session providing an overall meeting summary and a final survey.

Terry Buchholz of David Evans and Associates, Inc. (DEA) and Megan Kleibacker (OSGE) were the main facilitators, assisted by: Todd Jarvis (IWW), Michael E. Campana (IWW), Rep.

Jackie Dingfelder, Gwenn Kubeck (OSGE), Brenda O. Bateman (Oregon Water Resources Department), Gail Achterman (INR), Jane Bacchieri (Governor's Office); and Samuel Chan (OSGE).

All of the agendas and most of the experts' presentations are available at the Roundtable website (see "Related Documents" for the presentations). Not all presenters provided electronic copies of their presentations.

Survey Results

At each Roundtable participants were surveyed using the Qwizdom system, allowing each participant to respond immediately to a question on the screen by operating a handheld remote device similar to a TV remote. The number who took the surveys does not equal the number of attendees, as some attendees came late or left early.

Participants were surveyed at the beginning (Questions 1-5) and the end (Questions 5-8) of the Roundtable; results are shown in Appendix 1. The following questions were asked:

1) *In which community does your primary use of water occur?* Results show that most participants were from the county where the Roundtables were held. Water users from over 20 counties were represented.

2) *Which best describes where you use water?* Respondents chose either inside or outside an urban growth boundary (UGB). Overall, 56% of participants use water outside UGBs and 44% inside UGBs, reflecting more rural than urban participants in the Roundtables. Water use inside UGBs was highest in Newport (51%) and lowest in Ontario (30%).

3) *Which of the following best represents your interests as a Roundtable participant?* Participants fell into 13 categories of interest, two of which were general ('other' or 'citizen'). Participants could check more than one interest (see Figure 1).

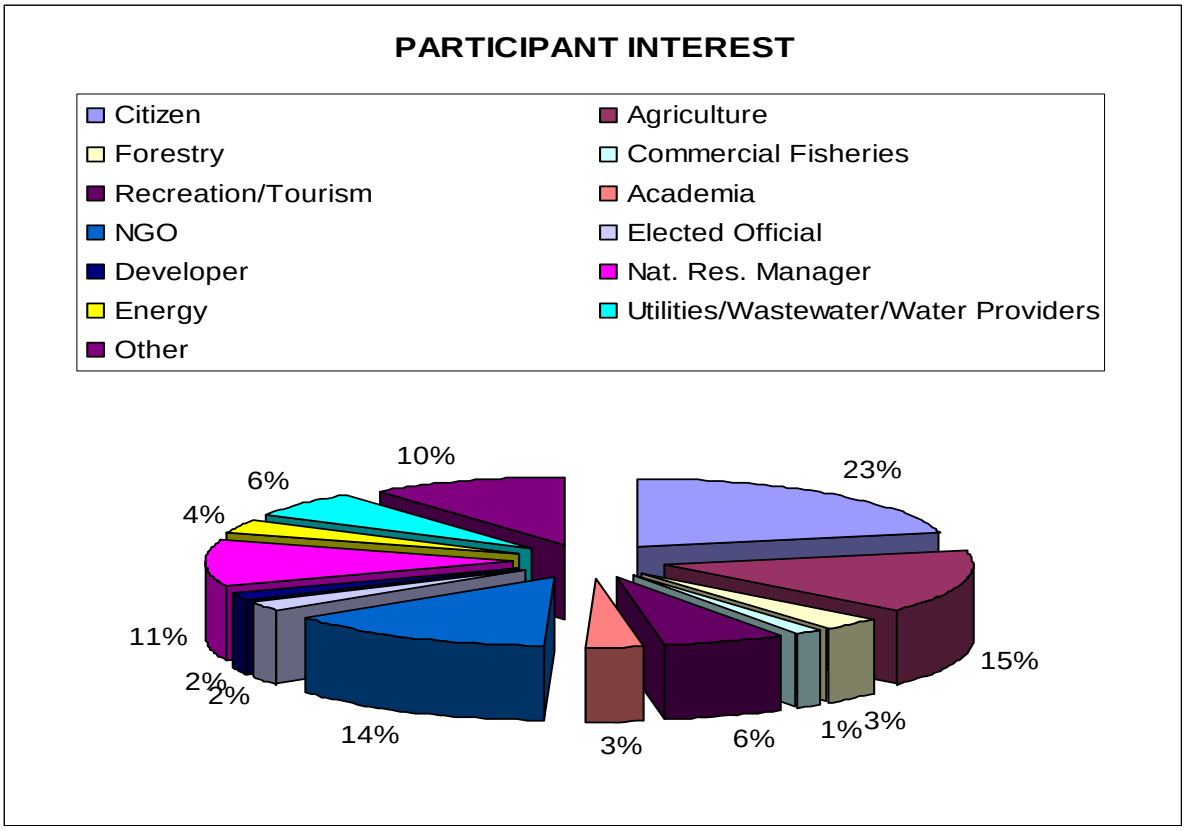

Figure 1. Participant interests.

The largest specific interest was agriculture (15%), closely followed by non-governmental organizations (14%). Agricultural interests were most heavily represented in Ontario and Medford. Recreation and Tourism interests participated more heavily in Newport and Medford. Utility/Wastewater/Water Providers participated more in Bend and Salem.

4) *What is your primary supply source for water?* Users could check more than one water source. Municipal water utilities (28%), single user private wells (19%) and surface water diversions (16%) were named most often. Figure 2 shows the range of sources.

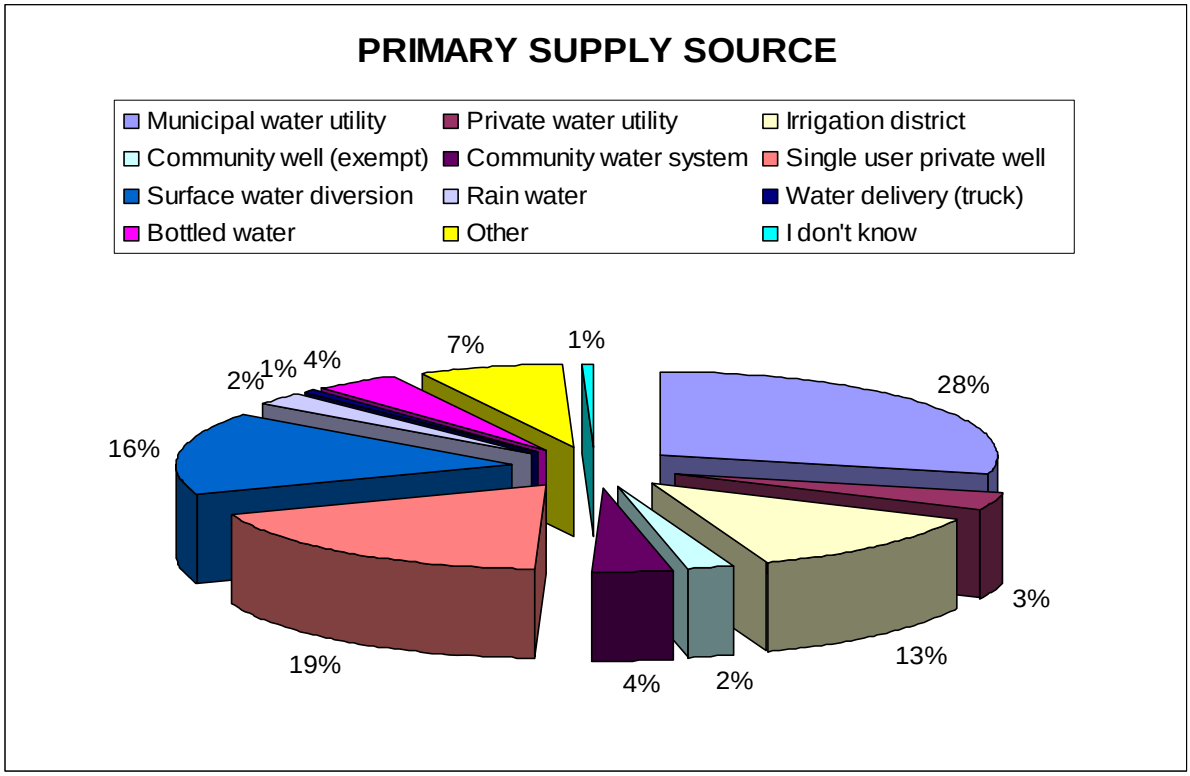

Figure 2. Participants' primary supply source.

Only 3 respondents indicated that they did not know the origin of their primary water source, attesting to the fact that the attendees were knowledgeable about water.

5) *When it comes to the future of Oregon and water what do you care about most?* Participants were asked which of these five factors – quantity, quality, economics, ecological, social – they cared about the most when it came to Oregon and water, recognizing that they might have multiple interests. Water Quantity was identified most often (33%) with Water Quality and Ecological tied at 25 percent (see Figure 3). Interests varied regionally (see Appendix 1).

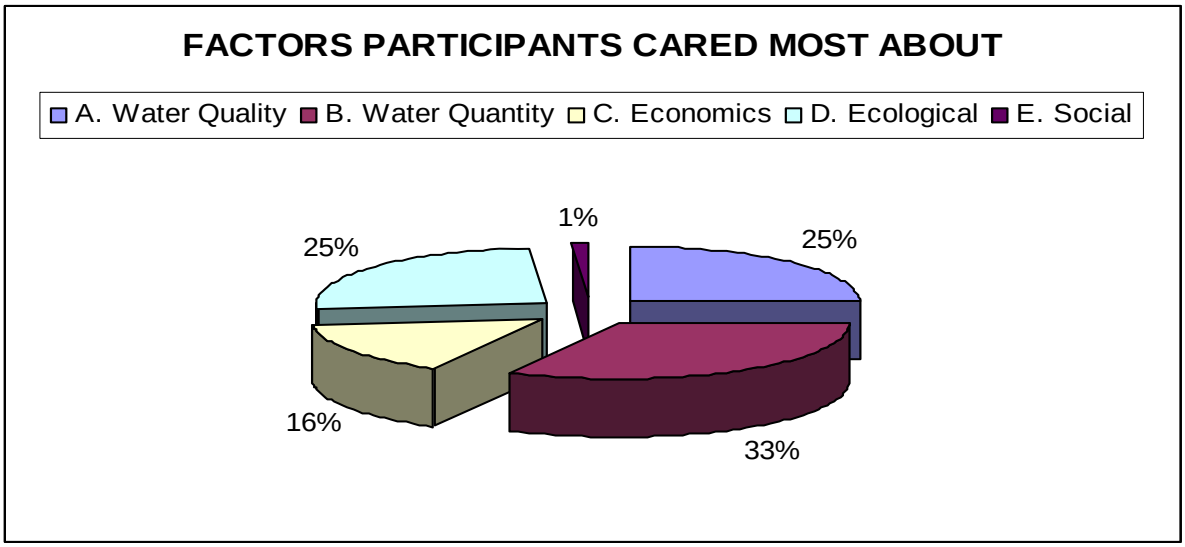

Figure 3. Factors participants cared most about.

6) *Currently (2008), I believe Oregonians have enough water to cover all of their basic needs, including the needs of wildlife.*

7) *In 2028, I believe Oregonians will have enough water to cover all of their basic needs, including the needs of wildlife.* Participants are not optimistic about either current or future water supplies. At each Roundtable the majority of the participants either *disagreed* or *disagreed strongly* with these statements: 1) in 2008 Oregonians have enough water to cover their needs, including wildlife; 2) same question, but in Year 2028. Ontario and Newport were most pessimistic about 2028 water supplies (both 78%), followed by Salem (71%), Medford (66%) and Bend (59%). In terms of current (2008) water supplies, the percentage *disagreeing* or *disagreeing strongly* declined or remained the same in each region except for Newport: Newport (81%), Ontario (69%), Salem (71%), Medford (50%), and Bend (57%). Note that these two questions deal with having enough water for *Oregonians,* and not the *individuals* responding to the question.

8) *I feel satisfied with today's proceedings.* Most participants were satisfied with the Roundtables.

Facilitation Results

Facilitation results for each Roundtable are in Appendices 3a through 3e. Each Roundtable has two spreadsheets, containing the results of the two facilitated sessions.

In Facilitated Session 1, stakeholders identified a number of issues/threats/opportunities (issues) and the outcomes/payoff/expectations (outcomes) for some of the issues. Tables 1 through 5 contain the issues and outcomes for each Roundtable, with one of eight categories indicated after each issue: Water Quality; Water Quantity; Water Rights; Ecological; Economic; Policy, Planning, and Management; Exempt Groundwater; and Social. Some issues were difficult to

categorize and a number could have easily fit into several categories. We exercised our judgment to choose the category that fit best, while trying to avoid "value judgments".

In Facilitated Session 2, the issues identified in Session 1 were grouped into themes and each theme assigned to a breakout session and facilitator. Breakout session participants were self-selected, although the lead facilitator asked that if there were multiple representatives from a particular group they should distribute themselves among the various themes.

Each group then prioritized issues and focused on several judged most important. Solutions were then identified, along with "low-hanging fruit", which are actions that could be taken to address the issue with little or no investment of additional resources. Action steps were then identified, along with major groups responsible. Finally, where possible, an existing best practice example was identified.

Over 200 issues were identified. The Roundtables were designed to encourage brainstorming so characterizing the issues is not scientific and categorization is inherently subjective. With this caveats, Figure 4 illustrates the number of issues identified by theme.

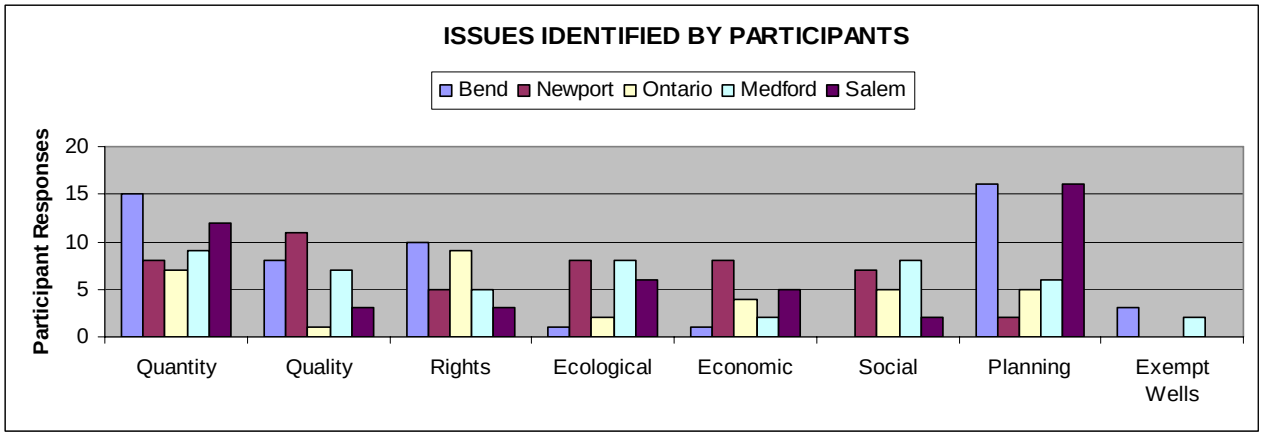

Figure 4. Issues identified by participants.

The issues raised varied regionally. For example, more water quality issues were identified in Newport, while more water quantity issues were identified in Ontario.

Representative issues included:

- Funding for water and wastewater infrastructure and management
- Integrated long range planning and management at the basin level within a statewide framework
- Protection of existing water rights and uses
- Water quality, especially non-point pollution, micro-contaminants and the impact of urbanization
- Water-land use planning integration
- Climate change impacts
- Wetland, floodplain and instream flow restoration

- Interstate water allocation/management for surface and groundwater

Key messages heard at all sessions were that:

- One size does not fit all; regions vary greatly and regional differences need to be recognized.
- Public information and education about water use and management are needed.
- Need for integrated water management and implementation.

Some solutions were mentioned several times at different sessions, including:

- Creating and making a database of existing water rights with seniority and availability, like the ones used by Watermasters, readily available to all users
- Augmenting supply with new storage, especially aquifer storage
- Completing water supply assessments
- Facilitating and promoting water reuse and recycling
- Measuring water flows and use systematically
- Promoting and funding water conservation by all users
- Promoting and implementing use of permeable surfaces, on-site treatment and stormwater infiltration
- Streamlining agency funding sources for watershed restoration, water conservation and water infrastructure
- Maximizing funding through agency coordination
- Water conservation tax credits, like energy tax credits
- Local integrated water planning

Tables with major issues and outcomes identified by participants at each Roundtable follow. Full lists of all issues, outcomes and potential solutions are can be found in Appendices 3a-3e. Possible solutions and best practices are described below each table. Note that some theme groups progressed no further than the issue identification stage. Other groups suggested a number of solutions, responsible parties and low-hanging fruit.

Central Oregon - Bend

Table 1. Issues/Opportunities/Threats and Outcomes/Expectations/Payoffs Identified at the Central Oregon (Bend) Roundtable

Water Quantity	Outcome/ Expectation/ Payoff
Water quantity for private property uses	
Water on Lake Billy Chinook	
Water quantity on the middle Deschutes River	Beneficial fish habitat (more water in the river)
Protection of in-stream water flows	Adequate flows for fish, recreation, etc.
More replication of research, for example, the Gannett (USGS) Study	
Certainty of water supply	Long term water use plan, orderly process with long term certainty
Exploration of containing transportation ditches	
Update our transmission system	Efficiency of water use and in-stream flows
Vegetation choices (Juniper), water efficiency and use	
Aging infrastructure, in need of repairs	Efficient system that still serves the purpose
Existing water facilities can capture water when its there	Balanced water management
Surface water storage, more research, more regulatory attention on artificial groundwater storage and recovery	Better coordinated understanding, accounting and appreciation of what a managed underground storage program would look like.
Reexamine reservoir management	More water during certain periods of the year
Robust demand projections for new uses	
Water Quality	
Water quality, fish barriers	
How can municipalities' water quality requirements be implemented economically (stormwater, UIC)	
Reuse of municipal water for agriculture use	Using as much water as we can efficiently
New technologies, impact on water quality	Better understanding of new technologies, avoiding unintended consequences
Water Rights	
Water measurement	Informing where water is for future policy decisions
Impacts on springs, Deschutes Basin groundwater	Protection of springs
Transfer of water, water rights	Order
Holes in the adjudication process	
De-watering of the land through transfer of water from agriculture to in-stream uses	Future food security
Water rights remain connected to the property they were given to	
Transfer of agriculture water to municipal and in-stream	Balanced plan for cities, agriculture lands, etc.- find an equitable solution
How to balance interests of individual water right with the community interest	Reaching a rational solution
How does OR protect use of large water sources, i.e. Columbia River	
Balance between rural water rights, urban water rights, and agriculture water rights	
Ecological	
Reintroduction of native fish species	Water use that is mutually beneficial for all stakeholders

Economic	
Water marketing, water transfers	Equitable water marketing
Exploration of water markets	Capitalization of water bank, regulations on limits
Planning, Policy & Management	
Allocation in state budget towards natural resources	More balance among competing interests, an integrated approach to natural resources
Better coordination and integration of the regulatory framework	Single investments that brings multiple benefits
Adequate funding for OWRD and other natural resource agencies	On the ground field services, data collection, ground water studies, etc.; expand the way WRD funds local watermaster staff
Adequate funding for ODFW	Better management of our water resources
Prioritization of how mitigation dollars are applied	
Integrating of water resource issues into comprehensive land use planning	Oregon Big Look
Impacts of global warming and input from climate change models	
Wetland and flood plain restoration	Greater ground water volumes in natural ecosystems, protection
Systematic way to find long term funding for water conservation needs	Competitive grants, modeled after other states,
Water education	Statewide multi-disciplinary natural resources curriculum
How does water resource management affect the overall hydrologic cycle	Looking at the unintended consequences of water transfers and reuse
Need for funding to support water conservation projects	
Investments in water conservation and efficiency	Best use of a limited resource
Need for integration of basin planning and implementation	Systematic way for Oregon's basins to identify and resolve their future water use
Better system for multi-county collaboration (across boundary)	Better collaboration
System better utilized	
Exempt Groundwater	
Exempt wells	Analysis of groundwater pre-well installation
Moratorium on groundwater withdrawals without evidence	Relaxing of the groundwater moratorium that's in place
Inventory of groundwater and exempt wells, and livestock watering	Comprehensive picture of water sources, uses
Abandoned wells	Identify and mitigate if necessary

Potential Solutions

Solutions were suggested for several of the funding issues including:

- Look at Measure 66 funding for long-term fee increases
- Reallocating existing funds
- Maximizing funding through agency coordination
- Increasing non-governmental and other partnerships
- Water conservation tax credits and other incentive programs
- Long-term consistent funding availability, including carrying funding over beyond a biennium
- Streamlining agency funding “pots” and creating more “criteria-based” funding systems

- Expanding the Energy Trust program model to non-PacifiCorp/PGE areas.

Solutions were suggested for some of the water quality issues:

- Address reuse by investigating the reuse plans of other large cities, like Phoenix
- Increase upstream storage for release at critical times to reduce water temperatures and increase flow
- Use aquifer storage as an alternative to reservoirs that block fish passage

Solutions were also suggested for the exempt wells issues, including:

- Landowner incentives and protection
- Need information, resources, monitoring and analysis

Solutions for the water quantity theme included:

- Measurement, accounting and reporting
- Conservation, piping, transfers, ASR and water banks
- Requiring agreement before transfer of agricultural water to other uses
- Legislation to resolve transportation issues associated with harvest of junipers across federal and state lands
- Congressional reauthorization of Upper Deschutes Basin reservoirs to allow management for winter flows to protect instream flow needs

Coastal Oregon - Newport

Table 2. Issues/Opportunities/Threats and Outcomes/Expectations/Payoffs Identified at the Coastal Oregon (Newport) Roundtable

Water Quantity	Outcome/ Expectation/ Payoff
Emphasis on conservation instead of consumption	
Climate change, timing and amount of water available	Decrease consumption
Water rights, an obstacle to ecological goals	Halting human contributions to climate change, building resiliency into our systems
Lack of minimum flows in streams	Improvement in reaching ecological goals
Development of a water budget, similar to carbon footprint	Make sure minimum stream flows are met before additional appropriations are made
Avoid channelization of surface systems	Protocol for reporting water footprints
Lack of information of on interconnections of water, understanding of the systems	Allow rivers to move
Rainwater collection and greywater reuse	Better research
Water Quality	
Overuse of herbicides	
Water storage (dams), nutrient storage, cyanobacteria	More education on use of herbicides, alternatives used, etc.
Used water disposal; water reuse and use of recycled water	Free flowing streams with no stagnant water
Quality of domestic water in wells and springs	Fertilizers contained, soapy water contained, proper disposal and reuse
"Micro" containments	System in place for improving water quality and adequate supply
Impermeable surfaces	Appropriate treatment
No mixing zones as a way to reach water quality standards	Reduce impermeable surfaces
Pharmaceuticals and antibiotics, mixing in with water supply	Accountable for reaching water quality standards
OR Marine Boards antagonistic attitude toward local water quality concerns	Decrease of release, decrease of resistant viruses, etc
Pollution from non-point sources, stormwater, septic systems, etc.	OR Marine Board responsive to local needs
Better protection of groundwater resources	Protect and enhancement through collaborative/enforcement efforts
TMDL development and implementation	Better water quality
Water Rights	Meet water quality standards
Better water management; water measurement	
Concept of water as private property instead of a public resource	Adequate staffing of field offices, measurement of all diversions, funding and telemetry on gauging stations, conservation strategies across all uses
Domestic wells, water rights	Prioritization of water uses
Unnecessary adversarial process in order to get input into water rights decisions	Roll domestic wells into existing water rights list
Reconciling multiple stakeholder demands on water	Collaborative process for reaching water rights decisions
Lack of protected ecological flows	Multiple uses without degrading other stakeholder use, fair distribution
Exempt wells	Make sure the full suite of ecological flows is protected.
Ecological	
Invasive species, impacts on availability of water and water quality	

Promote stream to improve fish and wildlife habitat	Recognition of invasive species, safe and effective ways to control invasive species
Adequate abundance and quality of water for healthy ecological systems, instream and groundwater dependent	Improve the carrying capacity of streams for fish
Restoration of wetlands, enforcement of wetland loss or fill	Adequate clean water for those systems
Wetland mitigation as a last resort	Better water quality
Systematic monitoring of mitigated wetlands	Preservation of existing wetland habitat
Give other species the right to exist, water use not an exclusively human	Mitigation processes that are successful
Need to keep natural filter areas in place such as wetlands, estuaries	Protect urban/rural interface
Planning, Policy & Management	
Energy policy, dams, nuclear	
Interagency planning and coordination	Wind, alternative energy sources
Monitoring water quality, quantity, etc**.**	Shared local vision of water and water use
Social	Adequate monitoring for adaptive management
Conservation ethic	
Overpopulation	Improvement in conservation ethic and practice
Quality of life in remote areas, make sure mandates wouldn't change way of life	Comprehensive family planning
Reconnecting kids with the outdoors	Continual quality of life
Land use practices, deforestation	Sustainable OR schools initiative, No Child Left Inside, reconnecting kids at an early age
Watershed councils as a resource	
Education and guidelines for small acreage landowners	Using watershed councils as a resource to solve water issues
Ecological education with conservation ethic for all ages and groups	More education and guidelines for small acreage landowners
Economic	
Food security as national security	Respect for agriculture as an important part of our economy
Pricing to reflect the value of water	More use should reflect higher costs
Erosion as a result of development, deforestation	Preservation of existing vegetation
Better water management, water measurement, increased field staff, adequate funding of natural resources agencies, enforcement	Better water management
Good infrastructure for water and waste water, including financing	Affordable financing
Lack of funding for bookkeeping to manage grant and stipend money	More funding for bookkeepers to manage grant and stipend money
Balancing economics/jobs with ecosystem services	Economically vibrant communities and ecologically vibrant ecosystems
Conservation activities comparable to other land use	Compensation for conservation

Potential Solutions

Potential solutions were identified for the invasive species issues including:

- Invasive species education specific to their impacts
- Keeping boats in local areas in order to keep potential carriers isolated to their local areas
- Continuing research on control efforts

Solutions aimed at social issues included:

- A workshop or conference to showcase who is already doing environmental/ecological/conservation education at local scales.
- Stepping up ecological and conservation ethics programs in churches
- Summits of local government, policy makers and citizens about water and water uses to create community water visions and commitment
- Implement and fund No Child Left Inside legislation and use existing community groups to develop conservation ethics

Solutions for economic issues included:

- Looking at what agriculture produces, not what it uses
- Encouraging producers to grow crops that are most water efficient for the region and soil
- Education and training on more efficient uses of agricultural water
- Encouraging Country of Origin Labeling
- Using local food products and encouraging a diversity of crops
- Integrated Pest Management
- Encourage organic farming

Solutions for water quality issues included:

- Creating systematic water testing systems for municipal and other drinking water
- Providing regulatory teeth for development and implementation of Water Management Conservation Plans
- Testing people's hair for contaminants to motivate them to engage and learn and to create cluster maps to pinpoint water quality issues
- Community-wide policies to require permeable surfaces and incentives not to use asphalt
- Develop codes supporting green infrastructure and smaller on-site treatment solutions
- Expand pesticides stewardship partnerships and take-back programs
- Outreach on toxics, pharmaceuticals and personal care products

Solutions for water supply and water rights included:

- Restoring forest capacity to capture fog drip and release water to groundwater systems
- Incentives for development of natural storage systems
- Automatic arbitration when water rights are transferred or permitted
- Making it easier to connect rainwater capture systems and graywater
- Establishing a scientific process for establishing ecological flows and identifying and setting both peak flows and ecological flows statewide
- Voluntary rotation agreements among users

Eastern Oregon - Ontario

Table 3. Issues/Opportunities/Threats and Outcomes/Expectations/Payoffs Identified at the Eastern Oregon (Ontario) Roundtable

Water Quantity	Outcome/ Expectation/ Payoff
Surface water groundwater hydraulic connection	
Stored water for spring flows	
Water for food production	
Invasive species, Juniper impact on infiltration	
State and federal storage opportunities	Long term water storage, and long term management
Water storage vs. conservation	Conservation will come with increased storage
Water quantity in river and aquifer, above ground and below ground storage	
Social	
Population increase, food production and increased water needs	
Analysis paralysis	
Knowledge and understanding of irrigated agriculture and eastern OR needs	
Food safety, local food supply	
Water use education at young levels	Remedy false assumptions in adulthood
Water Quality	
E.coli, sediments and nutrients, water quality	
Water Rights	
Preservation of existing senior water rights	
Water measurement requirements	
Impact of in-stream water rights on historic water rights	
Impact of environmental regulations on historic water rights	
Disconnect between urban and rural populations on water use, esp. agriculture	Educational effort regarding local food
Tribal reserved water rights	
Interstate water right allocation- surface water, groundwater	Interstate agreement on water allocation, MOU
Reallocation of agriculture water to municipal and conservation	Preserve agriculture water use
Fixed storage and other irrigation seasons and rules do not allow flexible water management in response to actual hydrologic conditions	Use water when it is available to optimize instream and our of stream/storage uses
Use it or lose it rule	Educate people so that they understand that the rule requires the capacity to use water, not use itself
Ecological	
Unreasonable environmental expectations, i.e., water temps in summer	
Healthy watersheds, properly functioning	
Invasive species/juniper impact on infiltration	
Planning, Policy & Management	
Government representation and expertise	
Water supply for communities/master plans, water and waste water	
Water plan for water for agriculture	

1909 Oregon water code, revisit as a comprehensive plan	
People should be educated in the subject they claim jurisdiction over	
Economic	
Over-regulation for environmental standards- spend $ without benefit	
Rural voice not being heard	Funds for Office of Rural Policy
No dedicated funding for water infrastructure	Increase funding for water infrastructure and storage
Lack of acknowledgement and funding for new technologies	Funding for and adoption of new technologies, e.g., Heinz water reuse and recycling

Potential Solutions

Solutions for water rights and examples included:

- Creating an easily-accessible database of existing water rights showing seniority and availability, e.g., Water distribution schedules used by water masters
- Education of water users, policy makers and the public, e.g., Umatilla Project - Umatilla 2050
- Dialog- what's the problem?, e.g., Jackson/Deschutes
- Strategic measurement. Keep track/use publicly funded.
- Storage supply augmentation: aquifer storage and recovery and artificial recharge, e.g., Current pilot project in Umatilla Basin
- Participate actively in adjudications, e.g., Idaho's Snake River adjudication
- Columbia River Compact and Canadian Treaty Renegotiation-quantify Oregon's needs and availability

Solutions for comprehensive planning:

- One size doesn't fit all; regional variation and flexibility are essential and local solutions are needed
- Comprehensive water supply assessment, especially for groundwater, e.g., Walla Walla
- Realistic evaluation of needs and opportunities
- Fund plan – leverage money, e.g., Water use fee to fund a local water trust fund
- Implementation - build partnerships, e.g., Umatilla Project

The following quote is noteworthy: *We need to do it ourselves. We need to start local and include those impacted physically and economically by water use, including peripheral industries linked to water use. Growth should pay its own way so we own a benefit down the road. We need to demonstrate an economic and ecological benefit to investors in the future through planning.*

Southern Oregon - Medford

Table 4. Issues/Opportunities/Threats and Outcomes/Expectations/Payoffs Identified at the Southern Oregon (Medford) Roundtable

Water Quantity	Outcome/ Expectation/ Payoff
Loss of base flow-water doesn't soak into aquifers	Effect urbanization impact of hydrologic function
Long term water supply for domestic use	50 to 100 yr. guaranteed supply
Surface and groundwater allocation	Find greater efficiency and measurement of use
Water conservation	
What is the ratio of drinking water consumption to manufacturing use?	
Water loss from canal seepage	Conservation of water
Floodplain stream connectivity	
Stream flow protection	Get in-stream rights in place where they don't exist
Protect/winter peak flows	
Water Quality	
Channel incision and erosion/flashy flows/sediment deposition	Stabilize riparian environments/flows
Water quality from health perspective	Access to clean, sufficient water
Hierarchy of water quality requirements for designated uses	Continue to revise regulations to reflect variety of water use/water reuse
Unknown chemicals introduced into water	More green chemistry and product controls at the source
Hierarchy of water quality requirements for designated uses	Develop and implement integrated water resource management plan/master plan
How to maintain high quality water for multiple uses with populations growth/changes in use	Decrease per capita impact of individuals/education and outreach/development in science
What happens to manufacturing effluent? Reclamation?	
Ecological	
Streamflow stabilization	Beaver reintroduction, (method) improve water quality and quantity, stabilize stream flow
Water temperature/amount of flow	Greater quantities of water at cooler temps
How to maintain native wild fish stocks	Social, recreation and aesthetic values
Decreased permeability with urbanization	Fully functioning watershed
Almost all water flow in streams and rivers in S. Oregon are over allocated. So the recent in-stream rights are never achieved.	Provide some in-stream water right on all streams in state
Ecologically appropriate peak flows	Less flooding, down cutting, better shade, etc.
Stream system simplification	Restored complexity
Floodplain stream connectivity	
Streamflow of sufficient quantity and quality to support fisheries/recreation	Healthy fisheries and recreational opportunities for future
Economic	
Economic ability of agricultural water providers to stay in business	Better understanding from public as agricultural land as green space
Charges for use of public water	Building a fund to finance conservation management and water supply
Social	
Lack of understanding of agricultural use of water	Understanding of relationship between food security and national security
Lack of public understanding	Broad public involvement in making water decisions, water education programs

Water conservation	Public awareness and increase water supply; More efficient use of water resources we have
Recognition of common water goals	Development of acceptable water policy for multiple parties
Medford water provides public information on water issues	Broad public education
How to maintain viable agricultural future with proposed changes?	Families can make living in agriculture and products made in USA
Climate change/decreased snow pack/drought	Better understanding of public of tradeoffs needed for multiple uses; Find incentives, regulations and education to keep pace with climate change
Reduce water waste at homes for every family	Reducing the amount of water at each home; Reuse jerkwater & recharge of groundwater
Water Rights	
How the appropriation doctrine weathers the storm of the future	Change OR water law-doctrine
Loss of water rights	Continuation of Fort Vannoy doctrines
Protecting and preserving existing water rights/losing water rights	Not losing existing water rights
Threat-change of prior appropriation doctrine-need to keep it stable	Stabilize prior appropriation and look for other sources of water
Groundwater rights priority and subordination	Method of subordinating groundwater rights
Planning, Policy, & Management	
Water management	Measurement and proactive enforcement of water laws
Managing 21st century with 18th century laws	Develop appropriate regulations for today
	Provide adequate wetland habitat for aquatic birds
Utilizing natural mechanisms for water management instead of engineered/costly solutions	Saving public cost/offsetting cost of large publicly funded projects
What do arid countries do to preserve water? Are there middle eastern or European models?	
Opposing agencies	Agencies reach consensus
Better integration of regulations	
Exempt Groundwater	
Unreliability of local, private wells	Better assessment and regulation of well development
Groundwater rights priority and subordination	Method of subordinating groundwater rights

Potential Solutions

Potential solutions for Outreach and Education and examples included:

- Oregon water law contains a water plan, e.g., Water For Life has extracted a water plan from state laws and has document available
- Implement environmental education standards for K-12. This would establish environmental and water education as a state priority and create common goals throughout the state
- Create incentives for people to "do right", e.g., tax credits, tiered rate structure, rebates. Anything beneficial to the pocketbook.
- Create compendium of knowledge - "How To Guides", e.g., There are existing resources – INR, Sea Grant, University Library system of Explorer, Jackson County SWCD

Potential solutions for Water Quality Theme included:

- Drug take-back programs; education; water quality monitoring for micro-contaminants
- Defining appropriate background standards (taking into account natural conditions); jerkwater systems; education of the reuse rules; capturing water off impervious services for water supply
- Integrated water management planning and implementation; acknowledging unintended consequences

Western Oregon/Willamette Valley - Salem

The Salem Roundtable groups facilitated themselves in Facilitated Session 2. Specific themes were not identified at the time of facilitation but were assigned during the writing of this report.

Table 5. Issues/Opportunities/Threats and Outcomes/Expectations/Payoffs Identified at the Western Oregon/Willamette Valley (Salem) Roundtable

Water Quantity	Outcome/ Expectation/ Payoff
Inefficient water uses	More water available for everyone
Freeing up water for endangered species from ASR	Providing water for multiple uses
Develop cost-effective, small scale aquifer storage projects	
Regulate storm water runoff	Enforceable rules and permits for storm water runoff
Lack of funding to repair, maintain and replace aging irrigation infrastructure	Continued ability to deliver irrigation water
Deliver irrigation water efficiently	Efficient delivery of water
Lack of information about ground water resources	Better public and private decision making
Create more natural storage of water	Find willing buyers and sellers to connect flood plains and wetlands
Need for better data and models on water supply, precipitation, and runoff	Improved decision making
Rainwater harvesting	Look at rooftops as a source of water
The big pipe	No more short term solutions
Conservation should be first source of supply	Raise efficiency standards through tech. and pricing
Ecological	
Conflict between endangered species and water withdrawal	Integrated and equitable plan
Detrimental affects of dams on fish	Dams removed without new ones built, habitats restored
Lack of habitat and channel complexity	Better ecosystem function
Lack of understanding about links between groundwater and ecosystems, lack of institutional framework for protect groundwater and ecosystem resources	Identify and delineate groundwater dependent ecosystems and provide for environmental water allocations
Protection and restoration of in stream flows	Healthy river ecosystems and fish populations
Protect peak and ecological flows for important functions they serve	Allow rivers to create and maintain important habitat
Economic	
Study dollars for conservation and storage will not lead to project implementation	Focus on implementation
Lack of funding for municipal repair and restoration of sewer systems	Federal trust fund, grants or loans for municipalities
There needs to be money available for studies	Projects with funding-viable projects don't get funded to implementation step
Incentives for innovation for reuse and conservation	More opportunities for innovation
Accuracy of water demand projections in permitting processes	More rational water allocation
Social	
Lack of education about water quality and quantity issues as it relates to everyday use	No over fertilization, better educated public
Conflicting local conversations about water resource implementation	Support local organizations that can facilitate conversations

Water Quality	
Toxics and pharmaceuticals in water	Safe drinking water
Non point water pollution sources with low control costs	More cost effective water quality protection
Definition of waste and enforcement against waste	More water for everyone
Water Rights	
Inability of measurement for water use/funding	Rationally deal with water we have
Threat of changing the doctrine of prior appropriation	Maintaining of prior appropriation
Perpetual water rights	More rational adjustment of water uses for societies priorities
Planning, Policy, & Management	
Climate change	Predict climate change impacts
Increasing population and politically based decisions at county level in relation to land use	Wise, factual and intelligent decisions in relation to land use and water
Lack of collaborative planning across county boundaries/lack of funding	Collaborative water planning across county boundaries
Lack of funding for long-term monitoring programs	Measure affects of water resources
Increasing number of rural homes (Measure 49) that use groundwater and private wells	A way to address increasing needs for limited groundwater
Lack of funding for OWRD	More effective, capable water resources dept.
Lack of funding for agency funding related to water	
Basins that are using integrated water management	Tap into those existing resources
Geothermal heat pumps and related issues	Protect groundwater resource, streams and water supply
Opportunity to use grey water and reclaimed water more liberally	Use less high quality, treated water for uses that don't need it
Access and reserve additional water supplies for continued growth	No moratoriums in cities in relation to water supply/enough water for economic development
Opportunity to provide more flexibility in water management for users	Change in structure to provide for collaborative water management
Water policy in dev (ORS 542)-water policy not being followed	Insure policy is being followed
Increasing low-impact development	Less urban runoff
Advocating and creating policies for sustainable development	Reduce consumption, preserve ecological function at same time
Public roads	Green streets and pervious pavements everywhere

Potential Solutions

Potential solutions and examples offered included:

- City/County review of water availability in land use planning and approvals.
- Prioritization of existing dams that includes a risk assessment (including geologic hazard), ecosystem impacts, functional purposes of dam, e.g., Oregon politics does have a record of prioritizing natural resource issues.
- Tax water and soda bottles; Legislature priority; Expand OWRD reimbursement and receipts authority for instream and consumptive use; Zero sum game - appropriate funding for appropriate state agencies (streamlined agency with appropriate personnel); Research to universities; Division 33 analysis (agency cost burdens), e.g., tax credits, tiered rate structure, rebates. Anything beneficial to the pocketbook.
- Encourage farmers to implement conservation measures; Address infrastructure issues; Lining or piping canals; Grants for irrigation districts, SWCD working with agriculture; Where is the money? Expensive to make changes; water rights system is very complex;

Collaboration and working towards solutions, e.g., Collaborative partnerships already exist between cities, SWCD, irrigation districts. Deschutes Basin is an example of what is working and level of effort. Is this applicable to other parts of state?

Written Comments

At each Roundtable, except for Bend, index cards were distributed for comments. These have been transcribed and categorized in Appendix 2. Several issues and outcomes raising new points are provided below:

- *Issue* - Difficulty for rural/small water/wastewater systems to upgrade/improve infrastructure to increase efficiency effectiveness of collection and distribution systems.
  Solution - Provide access to additional funding to repair/replace/expand small/rural system infrastructure.

- *Issue* – Groundwater dependent ecosystems.
  Solution – Identify and delineate groundwater dependent ecosystems and provide for environmental water allocations.

- *Threat* – Hanford Nuclear Reservation has leaking containers of radioactive material. Oregon has had minimal involvement.
  Outcome – Oregon steps up to the plate with Washington to hold the US DOE to its agreement to clean up the reservation and therefore protect the Columbia River.

- *Interstate/Federal Issue* - Are there examples of out of state parties with deep pockets who can purchase water rights and ship that water out of state? Be sure we educate our federal representatives that this example is real and could result in a lost of water in Oregon.

- *Competitive demands* for water, when represented by singular focus advocacy groups in segregated workshop discussions will never be met to the satisfaction of any of the groups. In a time and place like Eastern Oregon in which there is not enough water for farmers, fish or municipalities, it is imperative that these uses are represented by those who prefer consensus to competition. Oregon has lacked leadership in creating supplemental collaborative decision making if all the needs of any one group are met while that others are left feeling deprived, a solution has not been reached.

- *Opportunities* - Counties are in the best position to convene and coordinate what are the most conflictive issues of surface water/groundwater planning for all uses and users.
  O*utcome* - This requires at least 2-5 years and would be a stakeholder association of cities, counties, state/Feds that work towards a collective technical, political, and social water demands. This requires little funding, e.g., Benton County Water Project during the 2008 OWSCI. The State moves faster than a collaborative process; aligning the two is required or we will all lose out in future planning.