WATERWATCH

PROTECTING NATURAL FLOWS IN OREGON RIVERS

HB 5042

Testimony of WaterWatch of Oregon
Submitted to the Joint Ways and Means Natural Resources Subcommittee

April 9, 2015

Founded in 1985, WaterWatch is a non-profit river conservation group dedicated to the protection and restoration of natural flows in Oregon's rivers. We work to ensure that enough water is protected in Oregon's rivers to sustain fish, wildlife, recreation and other public uses of Oregon's rivers, lakes and streams. We also work for balanced water laws and policies. WaterWatch has members across Oregon who care deeply about our rivers, their inhabitants and the effects of water laws and policies on these resources.

WaterWatch urges funding of the Water Resources Department's base budget, Packages that further water management and additional Groundwater Investigations.

Basic management of Oregon's water resources is one of the state's most critical environmental and economic challenges. Eighteen out of nineteen of Oregon's river basins are already over appropriated from the late spring to the early fall. At the same time, population growth and climate change are increasing the pressure on Oregon's waterways and aquifers. It is critical that Oregon make an adequate investment in water management if the state is to move forward towards addressing this challenge.

The WRD is understaffed for the essential jobs it must perform. And while there were some add backs in the 2013-1015 budget, the WRD continues to operate with reduced capacity in key areas and under the damaging effects of multiple budget cuts during the 1990s and earlier in this decade. To that end, WaterWatch strongly supports the WRD's base budget request and also agency requested funds above that for additional Packages that will further the water management services of the WRD.

That said, WaterWatch does not support the narrowing of the Agency Requested Budget (ARB) as recommended in the Governor's Recommended Budget (GRB). The GRB focuses new resources primarily on development of new water projects rather than the broader management and science positions needed for protection of the broader public interest. The GRB also revives old, defunct funding vehicles. Moreover, the GRB cuts ARB Packages that are essential the balanced implementation of the 2012 Integrated Water Resources Strategy. We would request that the Committee look at additional Packages beyond the base budget with a broader lens, and consider funding Packages recommended in the ARB.

Specifically, in addition to the Base Budget, WaterWatch respectfully requests that the Committee consider funding for the following WRD Packages (Pkg) some of which are add backs from the Agency Recommended Budget (ARB) and two of which are in the GRB. These are listed in order of priority. We would also like to respectfully request that the Committee consider additional funding for groundwater investigations.

Package 102 Rebuilding Water Management Field Capacity: Watermasters and assistant watermasters provide critical field presence needed for effective water management statewide. We cannot stress enough the importance of these positions to both water right holders and the broader public interest. However, despite increasing conflicts over water, complicated water management agreements/laws and an ever increasing load of water rights to manage (over 80,000 water rights statewide), the state's water master pool has dropped over the years. The Integrated Water Resources Strategy identifies the need to rebuild field capacity (Action #10). Investing in these positions should be a top priority for this state. This Pkg is not in the GRB. The narrative/amount from the ARB is attached.

Package 107 Addressing Data Gaps by Establishing the Northwest Region Hydrotech: Data collected by hydrologic technicians is critical to management of Oregon's water resources to protect instream and out-of-stream water rights, determine water availability, forecast floods and other management functions. The NW position was cut in past budget cuts. This is affecting on the ground water management of our water resources, and also planning tools such as water availability. Pkg 107 is precisely the type of work supported by the Integrated Water Resources Strategy (i.e. Actions #10, 1b). This Pkg is not in the GRB. The narrative/amount from the ARB is attached.

Package 103 Advancing Groundwater Data: As more and more people turn to groundwater to meet new water demands, it is critical that the state have available tools to make sound decisions. This Pkg will help to achieve that and is in direct response to action 1c and 1b of the Integrated Water Resources Strategy. This Pkg is not in the GRB. The narrative/amount from the ARB is attached.

Package 104 Hydrotech to Assist with Data and Water management in the Klamath Basin: As noted above, hydrotechs are critical to water management. Now that the Klamath has been adjudicated, this puts a greater water management workload on the WRD. This Pkg is consistent with the Integrated Water Resources Strategy. This Pkg is in the GRB.

Package 109 Advancing Water Right Mapping to Improve Service Delivery and Efficiency: Mapping of water rights provides a critical water management tool to the WRD, and is a currently unfulfilled data gap in many areas of the state. This Pkg addresses Actions 1c, 2b, 2c, 2d and 9a in the Integrated Water Resources Strategy. This Pkg is not in the GRB. The narrative/amount from the ARB is attached.

Package 110 Monitoring Coordinator for Efficient Data Sharing and Management: This position would improve its monitoring data to make decisions about water right permitting, better manage the resource and meet legal requirements. This would allow for interagency

coordination and addresses Recommended Actions #1B and C of the Integrated Water Resources Strategy. This Pkg is in the GRB.

Increased funding for Groundwater Investigations: In addition to the base budget and the packages outlined above, we respectfully request that the Committee consider additional funding of Groundwater Investigations. The need for groundwater studies was highlighted in the 2012 Integrated Water Resources Strategy. Thus far only three WRD/USGS groundwater investigations have been completed in Oregon's 18 river basins (Deschutes, Upper Klamath and Willamette). The state has prioritized areas that need further study, but funding has been inadequate. In the mid-1990's, the legislature provided WRD with up to $1.2 million per biennium towards USGS/WRD groundwater investigations (USGS provided 50% match at that time), which allowed the completion of the Deschutes, Klamath and Willamette Groundwater Investigations. Funding fell in the early 2000's. Then, in the 2009-2011 and 2011-2013 biennniums the WRD received zero dollars for groundwater investigations. In 2013-2015 the WRD was given $375K in general funds towards groundwater investigations. This amount is now part of the WRD base budget and is included in the 2015-2017 Governor's Recommended Budget. WaterWatch supports the continued funding of groundwater investigations as part of the WRD base budget; however, while $375k per biennium is a great improvement over recent years, it is not adequate to fund studies of all the river basins of the state in any near term time frame. As more and more people are turning to groundwater to meet new demands, these studies are critical to understanding the impacts of water resource decisions.

Conclusion: In making the final decision as to what programs will be funded, we respectfully request that the Committee fund the WRD base budget and then prioritize key water management, science, field service Packages (and funds for groundwater studies) that will help serve the broader public interest in protecting and managing Oregon's Water Resources.

Additionally, while we understand decisions on bond funds will be made in capital construction and thus are not subject to approval by this Committee, we did want to note that we have significant concerns with the use of funding vehicles beyond SB 839 and HB 1069 (see GRB Packages #113 and #120). The Water Development Loan Fund and the Water Supply Fund are not subject to the public benefit requirements and/or seasonal varying flow protections for new storage that were the subject of intense negotiations in 2013. While we appreciate the state wants flexibility, revival of these funding pools were not part of past agreements by stakeholders. Moreover, it is our understanding that funding for water projects such as the Umatilla can be funded wholly under SB 839 so we see no reason to expand funding beyond the two vehicle currently in use.

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Oregon's Integrated Water Resources Strategy Framework

Goal 1: Improve Our Understanding of Oregon's Water Resources

OBJECTIVES

Understand Water Resources Today

CRITICAL ISSUES

- Further Understand Limited Water Supplies & Systems *(groundwater, surface water and their interaction)*
- Improve Water Quality & Water Quantity Information
- Further Understand Our Water Management Institutions

RECOMMENDED ACTIONS

Understanding Water Resources / Supplies / Institutions

- 1a. Conduct additional groundwater investigations
- 1b. Improve water resource data collection and monitoring
- 1c. Coordinate inter-agency data collection, processing, and use in decision-making

Goal 1 (continued)

OBJECTIVES

Understand Instream and Out-of-Stream Needs

CRITICAL ISSUES

- Further Define Out-of-Stream Needs / Demands *(i.e., diverted water)*
- Further Define Instream Needs / Demands *(i.e., left-in-place water)*

RECOMMENDED ACTIONS

Understanding Oregon's Out-of-Stream Needs/Demands

- 2a. Update long-term water demand forecasts
- 2b. Improve water-use measurement & reporting
- 2c. Determine pre-1909 water right claims
- 2d. Update water right records with contact information
- 2e. Update Oregon's water-related permitting guide

Understanding Oregon's Instream Needs/Demands

- 3a. Determine flows needed (quality & quantity) to support instream needs
- 3b. Determine needs of groundwater dependent ecosystems

Goal 1 (continued)

OBJECTIVES

Understand the Coming Pressures That Affect Our Needs and Supplies

CRITICAL ISSUES

- Economic Development
- Water & Energy Nexus
- Water & Land Use Nexus
- Population Growth
- Climate Change
- Infrastructure
- Education & Outreach

RECOMMENDED ACTIONS

The Water-Energy Nexus

- 4a. Analyze the effects on water from energy development projects & policies
- 4b. Take advantage of existing infrastructure to develop hydroelectric power
- 4c. Promote strategies that increase/integrate energy & water savings

Climate Change

- 5a. Support continued basin-scale climate change research efforts
- 5b. Assist with climate change adaptation and resiliency strategies

Economic Development & Population Growth

(See Actions 2.A. and 3.A.)

The Water and Land Use Nexus

- 6a. Improve integration of water information into land use planning (& vice versa)
- 6b. Update state agency coordination plans
- 6c. Encourage low-impact development practices

Infrastructure

- 7a. Develop and upgrade water & wastewater infrastructure
- 7b. Encourage regional (sub-basin) approaches to water and wastewater systems

Education and Outreach

- 8a. Support Oregon's K-12 environmental literacy plan
- 8b. Provide education and training for Oregon's next generation of water experts
- 8c. Promote community education and training opportunities
- 8d. Identify ongoing water-related research needs

Goal 2: Meet Oregon's Water Resource Needs

OBJECTIVES

Meet Oregon's Instream and Out-of-Stream Needs

CRITICAL ISSUES

- Place-Based Efforts
- Water Management & Development
- Healthy Ecosystems
- Public Health
- Funding

RECOMMENDED ACTIONS

Place-Based Efforts

- 9a. Undertake place-based integrated, water resources planning
- 9b. Coordinate implementation of existing natural resource plans
- 9c. Partner with federal agencies, tribes, and neighboring states in long-term water resources management

Water Management & Development

- 10a. Improve water-use efficiency and water conservation
- 10b. Improve access to built storage
- 10c. Encourage additional water reuse projects
- 10d. Reach environmental outcomes with non- regulatory alternatives
- 10e. Authorize and fund a water supply development program

Healthy Ecosystems

- 11a. Improve watershed health, resiliency, and capacity for natural storage
- 11b. Develop additional instream protections
- 11c. Prevent and eradicate invasive species
- 11d. Protect and restore instream habitat and habitat access for fish & wildlife

Public Health

- 12a. Ensure the safety of Oregon's drinking water
- 12b. Reduce the use of and exposure to toxics and other pollutants
- 12c. Implement water quality pollution control plans

Funding

- 13a. Fund development & implementation of Oregon's IWRS
- 13b. Fund water resources management at the state level
- 13c. Fund communities needing feasibility studies for water conservation, storage, and reuse projects

KEY: Ongoing need for applied research

BUDGET NARRATIVE

Package 102 – Rebuilding Water Management Field Capacity – Assistant Watermasters

Purpose

Watermasters and assistant watermasters provide the field presence needed for effective water management. Field personnel distribute available water to water right holders; ensure compliance with permit conditions; protect the resource; inspect for hazards; collect critical data; and educate water users and the public. County support in the form of assistant watermasters has waned in recent decades, dropping from 37 assistants to 15 full and part-time staff, even as the number of water rights has increased. The purpose of this package is to provide assistant watermaster resources to aid in water management in the Klamath Basin, and in the Eastern Region of the State (Harney, Malheur, Baker, Union and Wallowa counties).

The watermaster in the Klamath Basin currently has two assistant watermasters, one of which is temporarily supported by local funding through the Klamath Power and Water Agency. It is critical for the Klamath office to have stable funding for two assistants to fulfill water distribution activities in the basin. The completion of the administrative phase of the Klamath Adjudication in 2013, resolved over 700 claims to water. As a result, these "determined" claims have some of the oldest priority dates in the basin and are now enforceable, requiring greater field capacity.

The Department's East Region is comprised of five eastern counties and embodies a third of the state of Oregon. Chronic shortages of water and the vast distances to be covered to address water challenges necessitate the need for additional assistant watermaster support for those counties. For example, the watermaster that serves the district that includes Malheur County is responsible for managing water over an area exceeding 9,500 square miles (about the size of Vermont). Given the limited resources and the tremendous areal coverage necessary, it is difficult to be responsive to water management issues in a timely manner.

Oregon's 2012 Integrated Water Resources Strategy identifies the need to rebuild field capacity to meet water distribution and water supply demands. This package helps implement Recommended Action 13b, which calls for funding water resources management at the state level. This package also supports the strategy in the Governor's 10-Year Plan to balance ecological and economic interests to improve the health of watersheds, and fish and wildlife habitat, as field staff are responsible for distributing water for instream and out-of-stream needs.

How Achieved

The two new positions will provide additional staff resources to increase capacity to protect senior water rights, as well as conduct activities such as stream flow gaging and implementation of the Commission's 2000 water measurement strategy.

BUDGET NARRATIVE

Quantifying Results
A number of the Department's Key Performance Measures rely on having adequate field capacity. Progress on these KPMs is presented annually. The Department expects to see improvement in KPMs #2, #3, #8 and #12.

KPM #2 measures the protection of instream water rights by watermaster staff. KPM #3 monitors compliance with watermaster activities, which is supported by having field staff available to answer questions, educate the public, and work with water users. KPM #8 requires increases in the number of significant diversions that have water measurement devices. The watermaster staff are responsible for contacting owners of the significant diversions and working with them to identify appropriate measuring devices. Finally, KPM #12 measures the number of diversions per field staff, indicating the capacity for watermaster staff to distribute and manage the State's water resources.

Staffing Impact

9915102	C8502	Natural Resource Specialist 2	Assistant Watermaster – East Region	Permanent	1.00
9915103	C8502	Natural Resource Specialist 2	Assistant Watermaster – SC Region	Permanent	1.00

Revenue Source
General Fund $356,082

ESSENTIAL AND POLICY PACKAGE FISCAL IMPACT SUMMARY

Water Resources Dept
Pkg: 102 - Assistant Watermasters

Cross Reference Name: Field Services
Cross Reference Number: 69000-010-03-00-00000

Description	General Fund	Lottery Funds	Other Funds	Federal Funds	Nonlimited Other Funds	Nonlimited Federal Funds	All Funds
Revenues							
General Fund Appropriation	356,082	-	-	-	-	-	356,082
Total Revenues	**$356,082**	-	-	-	-	-	**$356,082**
Personal Services							
Class/Unclass Sal. and Per Diem	173,136	-	-	-	-	-	173,136
Empl. Rel. Bd. Assessments	88	-	-	-	-	-	88
Public Employees' Retire Cont	27,338	-	-	-	-	-	27,338
Social Security Taxes	13,246	-	-	-	-	-	13,246
Worker's Comp. Assess. (WCD)	138	-	-	-	-	-	138
Flexible Benefits	61,056	-	-	-	-	-	61,056
Total Personal Services	**$275,002**	-	-	-	-	-	**$275,002**
Services & Supplies							
Instate Travel	42,240	-	-	-	-	-	42,240
Out of State Travel	3,000	-	-	-	-	-	3,000
Employee Training	700	-	-	-	-	-	700
Office Expenses	3,080	-	-	-	-	-	3,080
Telecommunications	5,360	-	-	-	-	-	5,360
Publicity and Publications	200	-	-	-	-	-	200
Dues and Subscriptions	600	-	-	-	-	-	600
Other Services and Supplies	8,700	-	-	-	-	-	8,700
Expendable Prop 250 - 5000	10,200	-	-	-	-	-	10,200

_____ Agency Request
2015-17 Biennium

_____ Governor's Budget
Page _____

_____ Legislatively Adopted
Essential and Policy Package Fiscal Impact Summary - BPR013

Package 103 – Advancing Groundwater Data Management and Processing

Purpose

Reviews of groundwater applications must be processed in a consistent manner throughout the state, include an analysis of all relevant hydrogeological data, be scientifically defensible, and be consistent with Department rules and statutes. One of the Department's Key Performance Measures is to complete initial reviews of applications for new water rights within 45 days. The Department's performance on this KPM has suffered due to the significant time it takes for Groundwater Section staff to complete science-based application reviews. Such reviews require the compilation and analysis of complex hydrogeological data in order to properly assess groundwater supplies, potential injury to senior users, and potential impacts to surface water supplies.

The time necessary to review groundwater applications in a fair and consistent manner is directly related to staff's ability to access data that are currently stored in a variety of paper and digital formats. A significant backlog of groundwater level, recorder well, aquifer test, groundwater use, and water well data exists. Sources of data include Department staff, other state agencies, other states (California, Washington, Idaho), the US Geological Survey, and private consultants. Most of this data is currently processed in a piecemeal manner, which makes it unavailable in a consistent and readily accessible format.

Standardized procedures for obtaining and storing groundwater data would make it readily available to all groundwater staff members, leading to more efficient analysis and less time spent on ad-hoc organization of miscellaneous datasets. This data would also be available to water users, consultants, and other agencies. In addition, the Groundwater Section must update its data collection and management system, so staff can retrieve and enter data directly into mobile devices while in the field, saving time and improving data accuracy.

This budget request is a direct response to Recommended Actions # 1b and #1c in Oregon's 2012 Integrated Water Resources Strategy. These Recommended Actions are: 1b - Improve water resource data collection and monitoring, and 1c - Coordinate inter-agency data collection, processing and use in decision-making. This package also supports strategies in the Governor's 10-Year Plan to improve the regulatory environment for large and small businesses, and to balance ecological and economic interests to improve the health of watersheds, and fish and wildlife habitat.

How Achieved

A chief groundwater technology scientist, Natural Resource Specialist (NRS 5), would be responsible for establishing procedures and methods to capture and process data using rigorous scientific standards, including a major overhaul of data organization and formatting. This position would serve as the liaison between the Groundwater Section and other sections within the Department that collect and archive groundwater-related data (Enforcement, Information Services, Water Use Reporting, and Water Rights), and other

agencies (DEQ, OHA, US Geological Survey, etc.). The chief scientist would evaluate groundwater data sets, and create more efficient processes for capturing, formatting, sharing, analyzing, and archiving data. Improvements in the Department's groundwater data capabilities will improve how staff process, use, and share groundwater data with the public and other state agencies.

Both stakeholders and staff assisted in the development of this budget request, and see the immediate value such a position would have in meeting deadlines for groundwater permit reviews and data analysis that go into such reviews.

Quantifying Results

This budget package will lead to improved performance on the Department's Key Performance Measure #10, Complete Initial Review of Applications within 45 Days. The ability to timely complete groundwater reviews continues to be a challenge in meeting this performance metric.

Groundwater applications require a technical review from the Groundwater Section and typically represent the most complex applications evaluated by the Department. The purpose of a groundwater review is to protect existing water right holders—both surface water and groundwater. Any difficulty in obtaining the hydrogeological review that must occur before groundwater applications can be processed makes the 45-day requirement for issuance of an initial review very difficult to meet.

In 2012-13, only three percent of groundwater applications received an initial review within 45 days. During 2015-17, the Groundwater Section will work to move from three percent to 40 percent of initial reviews completed within 45 days. During 2017-19, the Groundwater Section will aim for 50-60 percent.

Staffing Impact

9915104	C8505	Natural Resources Spec 5	*Chief Groundwater Technology Scientist*	Permanent	1.00

Revenue Source

General Fund $215,261

BUDGET NARRATIVE

Package 104 –Hydrotech to Assist with Data and Water Management in the Klamath Basin

Purpose

The Final Order of Determination in the Klamath Basin Adjudication was delivered to the Klamath Circuit Court in March of 2013. In that final order, 491 water rights were determined and can now be enforced. These determined rights represent the most senior of water rights in the basin and it is the Department's responsibility to distribute the water resources to meet the needs of senior water rights. To monitor and manage water for these hundreds of newly determined senior rights in the basin, there has been a significant increase in hydrographic measurement duties to provide timely water supply data. Furthermore, an additional 13-15 stream gauges will be installed to meet measurement needs to manage water in the basin.

It is the hydrographic technician's responsibility to keep the stream gaging equipment operating properly, conduct regular measurements at various water elevations, and input the collected information into a central database. The Department is currently unable to meet the water measurement demands necessary to manage the 491 new water rights in the basin. To address this, staff have been pulled in from other basins to assist, resulting in a delay of duties in those basins. Management of the Klamath water rights is not feasible without additional support in the basin.

This request is consistent with recommended actions #10, #2a, and #12b in the 2012 Integrated Water Resources Strategy. Recommended Action #10 identifies a need for rebuilding field capacity to manage and distribute water. In addition, data collection helps improve water forecasting (Recommended Action #2a), and the monitoring of waters (Recommended Action #12b). This package also supports the strategy in the Governor's 10-Year Plan to balance ecological and economic interests to improve the health of watersheds, and fish and wildlife habitat, as field staff are responsible for distributing water for instream and out-of-stream needs.

How Achieved

This package proposes to add one hydrologic technician to conduct hydrographic duties in the basin for the management of senior water rights. The position will be responsible for the existing network of 12 stream gages in the Klamath basin, plus an additional 13-15 gages that are required for water management under the Klamath Adjudication and the settlement agreements.

Quantifying Results

The goal for the Department is to increase its capacity to collect quality stream flow data. To track progress on this goal and compliance with measurement protocols, a quarterly report is generated for each region. Additionally, the Department's Key Performance Measure #4 requires the number of stream flow gages operated and maintained through the Department to increase. With the addition of the Klamath Basin hydrologic technician and the installation of the new gaging stations, the Department will be better able to meet data needs in the Klamath Basin.

BUDGET NARRATIVE

Staffing Impact

9915105	C8502	Natural Resource Spec 2	Hydrologic Technician	Permanent	1.00

Revenue Source

General Fund $191,822

BUDGET NARRATIVE

Package 107 – Addressing Data Gaps by Establishing the Northwest Region Hydrotech

Purpose

Data collected by hydrologic technicians is used to distribute and manage water on a daily basis to protect instream and out-of-stream water rights, forecast floods, plan for recreational activities, determine water availability, and plan for future water needs. Historically, there has been one hydrologic technician for each region in the State. The hydrologic technician position in the Northwest Region, responsible for maintaining 26 gaging stations, measuring streamflow and providing quality data assurance, was eliminated during a previous budget reduction.

Since then, workloads, data, and data users have been impacted. The duties have been shared by Watermasters, Assistant Watermasters, and the Hydrographics Section; however, there are still not sufficient staff resources to properly undertake this work. As a result, while surface water gaging stations are routinely serviced every 4-6 weeks in other parts of the state, some stations in the Northwest Region may go 15 to 20 weeks. Without the hydrologic technician, the Northwest Region has suffered from the loss of data that cannot be retrieved and an inability to consistently perform quality control measures to insure data is accurate. This has resulted in a degradation of overall station value for purposes such as flood forecasting and water management.

This request is consistent with recommended actions #10 and #1b in the 2012 Integrated Water Resources Strategy. Recommended Action #10 identifies a need for rebuilding field capacity to meet water distribution and water supply demands, while Recommended Action #1b calls for improving water resource data collection and monitoring. This package also supports the strategy in the Governor's 10-Year Plan to balance ecological and economic interests to improve the health of watersheds, and fish and wildlife habitat, as data is essential for distributing water for instream and out-of-stream needs, and identifying water supply solutions.

How Achieved

Re-establishing the hydrologic technician in the Northwest Region will lead to regular maintenance of gaging stations for data continuity and quality control, as well as result in regular surface water measurements. The Department's data collection program is based on standardized scientific protocols outlined by the U.S. Geological Survey in Water Supply Paper 2175. Surface water gaging across the state follows these standards for data quality control. This proposal is consistent with Recommended Action #1b of the Integrated Water Resources Strategy, which calls for improved water resources data collection and monitoring.

Quantifying Results

The Department generates a quarterly report for each region to track progress and compliance with measurement protocols. These reports show the Northwest Region is not meeting standard measurement protocols. With the re-establishment of the Northwest Region hydrologic technician, stream data collection in this region will be brought back into compliance with standard data protocols.

The Department also reports annually on Key Performance Measure #4, which sets targets for the Department to increase the number of streamflow gages it operates and maintains. Re-establishment of this position will prevent the loss of existing stations.

Finally, the Department uses internal performance measures to track field work, including the number of streamflow measurements made each year. This position will result in an increase in streamflow measurement.

Staffing Impact

9915110	C8502	Natural Resource Spec 2	Hydrologic Technician	Permanent	1.00

Revenue Source

General Fund $188,822

BUDGET NARRATIVE

Package 109 –Advancing Water Right Mapping to Improve Service Delivery and Efficiency

Purpose

Until recently, maps of water rights were generally not used as a primary resource for regulation purposes or individual right-by-right analysis. Recent projects have demonstrated the value of water right mapping as a tool for water management, pushing the need for increased accuracy and completeness. For example, as a result of recent activities in the Klamath Basin, both internal and external customers needed to be able to closely review maps of water rights in the basin to perform analyses, look for overlapping rights, and compare maps to evapo-transpiration data. To facilitate this, the Department had to quickly task several staff members to go through and map areas that were identified as problems.

In addition, as the Department continues to focus on improving water right processing efficiencies and service, there is a need to advance the Department's ability to effectively identify the location of water rights. The Department reviews maps to analyze the potential for injury on new water right applications, transfers, and other transactions, as well as to distribute water to senior users. This analysis is challenging in areas where water rights' point of diversion and place of use are unmapped, have been mapped using less accurate methods (prior to 2004), or where the place of use is not fully delineated (only represented by a single point). Updated water right maps will improve the ability of the Department, public, consultants, and water users to identify if there is a water right on the property and determine the location of diversions and lands where the water can be used.

This budget request addresses Recommended Actions # 1c, 2b, 2c, 2d, and 9a in Oregon's 2012 Integrated Water Resources Strategy. These Recommended Actions are: 1c - Coordinate inter-agency data collection, processing and use in decision-making; 2b - Improve water-use measurement and reporting; 2d - Update water right records with contact information; and 9a - Undertake place-based integrated, water resources planning.

How Achieved

Funding and filling the currently unfunded Data Technician 1 position would allow WRD to begin addressing the backlog of maps that need to be completed for more recent certificates, and reviewing unmapped water rights. Longer-term, this position would work on mapping rights where the place of use is not fully delineated and bringing older, less accurate mapping up to standard.

Poly-points. Water Right mapping has gone through many changes since it began in 1989. Up until 2000, it was loosely coupled with the water right database system (WRIS). During the conversion to the new WRIS system, water right maps were linked; however, there were a number of rights that were not able to be linked and/or were not mapped. Due to limited resources, the Department created a "poly-point" symbol in each 40-acre section of the map to designate that there may be a water right associated with land somewhere in

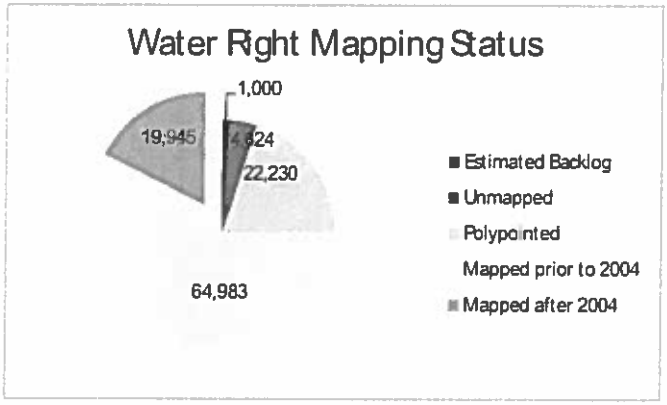
the 40 acres. This, however, does not provide accurate information to perform more detailed analysis. Therefore, staff needs to review these poly-points, determine their validity, and identify whether they can be mapped.

Mapped prior to 2004. Prior to 2004, mapping was done using lower resolution base data, with limited control points, and without benefit of aerial photography. After 2004, the standards and processes changed to a higher resolution scale and included tax lots and aerial photography to provide control points. Since mapping done prior to 2004 is inherently less accurate than the current process, staff would review these rights and adjust them accordingly.

Backlog. There has been a push to reduce the backlog of pending water right certificates in the Water Rights Services Division. This increase in the processing of water rights creates a backlog of work for the Data Tech group to input and digitize maps into the Department's database.

Quantifying Results

This project would be broken into three phases: Phase 1 – Backlog/Unmapped Rights, Phase 2 – Poly-pointed Rights, Phase 3 – Pre-2004 Mapped Rights. The chart below shows the number of water rights in each category that require mapping. The Department expects this to be a long-term project, with the initial Phase 1 taking approximately 4-6 years to complete.



BUDGET NARRATIVE

Staffing Impact

9915112	C85010	Water Right Data Tech	Water Right Mapping Specialist	Permanent	1.00

Revenue Source

General Fund $126,651

BUDGET NARRATIVE

Package 110 –Monitoring Coordinator for Efficient Data Sharing and Management

Purpose
The Water Resources Department seeks to improve its monitoring data to make decisions about water right permitting, wisely manage the resource, comply with legal mandates, support economic development, and achieve public and private interest outcomes.

Enterprise monitoring is part of Governor Kitzhaber's 10-year plan for a healthy environment that sustains communities, our economy, and the places we all treasure. The Enterprise Monitoring System builds on existing collaborative monitoring efforts, maximizing the use of state resources to achieve environmental outcomes more efficiently, cost effectively, and with better results. A significant part of the Governor's investment in water quantity and quality builds upon a cross-agency enterprise approach to monitoring stream and watershed health; this information helps the state identify and prioritize problems, measure and reward successes, focus limited resources in places where they will have the most benefit, and ensure that programs produce the desired results.

In addition, many other groups outside of state agencies are collecting water quantity related data, but may not have the expertise to ensure that the information collected will be usable and collected in a manner that provides quality assurance. The Department often receives requests to assist in analyzing data that has been collected and finds that it cannot be used. There is a need to provide technical assistance to entities that collect data, such as cities, counties, watershed groups, and nongovernmental organizations, to ensure that data collected will maximize data collection capabilities, and minimize the amount of data that is collected but cannot be used.

This budget request is a direct response to Recommended Actions #1B and 1C in Oregon's Integrated Water Resources Strategy, adopted in 2012. These Recommended Actions are: 1b - Improve water resource data collection and monitoring; and 1c - Coordinate inter-agency data collection, processing and use in decision-making. This package also supports strategies in the Governor's 10-Year Plan to: balance ecological and economic interests to improve the health of watersheds, and fish and wildlife habitat; and partner with local landowners to protect drinking water sources.

How Achieved
Adding a full-time Natural Resources Specialist 4 will allow the Department to coordinate inter-agency collaborative monitoring efforts, fill data gaps, and make improvements to how we gather, process and share water resources data and information. This in turn, will provide leadership, guidance and expertise in water resource data needs assessment and quality assurance.

BUDGET NARRATIVE

This budget proposal will assist with the following:

1. Identify, make recommendations, and begin solving individual Natural Resource Agency data management gaps. For example, this would include identifying where there is a need for gaging stations, working across sections within the Department to integrate groundwater and surface water needs, and determining what surface water information is needed to make decisions on water supply projects.
2. Participate in an interagency task force to plan for the creation of an environmental monitoring and information clearinghouse, ensuring that water quantity is considered alongside water quality in recognition of the direct relationship between quantity and quality.
3. Help manage labor-intensive data processes. For example, it takes one staff member all morning to process the previous day's stream gage data, quality assure it, and post it to the internet. Using this process, we can say that 85 percent of the Department's existing gages are "near real time." The Department does not have the capacity to extend this process to the remaining gages or any new gages that come on-line.
4. Regularly communicate progress to the inter-agency STREAM Team on meeting these objectives.
5. Interface with other agencies, tribes, cities, counties, watershed groups and others to ensure that data collected outside of the Department is done so in a manner that provides high-quality, usable data. This position would act as a liaison to identify monitoring on restoration grants, as well as partner with other entities at the technical level to coordinate data collection efforts.

Quantifying Results

In the first biennium, accomplish tasks 1-2. Tasks 3-5 will be ongoing. The Department expects to increase the number of gauges that provide near-real time data. In addition, the Department expects that this position will help facilitate improvements in KPM #1 and KPM #4. KPM #1 measures the percent of watersheds that need flow restoration for fish that had a significant quantity of water put instream through WRD administered programs, and KPM #4 measures the percent change from 2001 in the number of WRD operated or assisted gaging stations.

Staffing Impact

9915113	C8504	Natural Resources Spec 4	Monitoring Coordinator	Permanent	1.00

Revenue Source

General Fund $211,067

Package 112 – Upgrading Well Inspectors and Hydrotechs

Purpose
Position responsibilities and Department expectations for both well inspectors and hydrologic technicians have changed over the years that these positions have been in place and it is a challenge for the Department to recruit and retain individuals that can effectively perform the job requirements.

The Well Inspection Program places inspectors in the field to work with well drillers to ensure that water supply wells are constructed in a manner that is protective of public health and the groundwater resource. Well inspectors visit wells being constructed to observe practices and see that the well construction meets standards, given the geologic and hydrologic conditions encountered. Well inspectors must have training in geology and hydrology, and the knowledge to understand and recognize both proper well construction and improper construction practices. Inspectors must have the presence and tact to make decisions in the field with authority, without antagonizing the well driller or landowner. Well inspectors interface with the public and the well drilling community and need to be able to make decisions in the field on behalf of the Department.

The Surface Water Measurement Program is designed to measure surface water flows and maintain surface water gaging stations around the state to track flow conditions in near-real time. It is used by a variety of agencies and other entities for making daily decisions, protecting and monitoring instream flows, forecasting floods, designing infrastructure such as bridges and culverts, planning for recreational activities, better understanding how much water is available for new uses, and tracking long-term trends such as climate change and drought. The equipment necessary to collect and operate gaging stations has become increasing complicated. Hydrologic technician's responsibilities have changed from maintaining simple measurement gear and paper-chart recorders, to operating and programming telemetry communications equipment, acoustic Doppler measuring devices, and sophisticated digital recording equipment.

This budget request is a direct response to Recommended Action #12a of Oregon's 2012 Integrated Water Resources Strategy, which calls for ensuring the safety of Oregon's drinking water. This package also supports strategies in the Governor's 10-Year Plan to partner with local landowners to protect drinking water sources.

How Achieved
The Department is revamping the technical training and skill requirements for these positions for protection of the resource, high-quality data collection, and to meet customer service needs. Upgrading these positions from NRS1 to NRS2 will enable the Department to recruit individuals with the aptitude and skills necessary to perform the duties of the position.

In addition, the Department has identified a need for well inspectors to not only inspect wells, but also review all well logs, as this is an effective way to initially identify problems with well construction. As a result, while technical knowledge and skills will increase, so will workloads; therefore, the Department is seeking to add one additional well inspector.

This proposal is consistent with recommended actions in the 2012 Integrated Water Resources Strategy, including: improving water resources data collection (action item #1b); training for water professionals (#8b); rebuilding field staff (#10); and protection of Oregon's drinking water (#12a).

Quantifying Results

The Department tracks the number of wells annually inspected around the state and presents that information to the Water Resources Commission and the Commission's Groundwater Advisory Committee. The Department will also begin tracking the number of well logs reviewed and the number of well logs that require follow-up. The goal is to maintain or increase the number of wells inspected, while also increasing the number of well logs reviewed.

The Department currently tracks the number of gaging stations operated on streams around the state for KPM #4. These hydro-tech positions are responsible for maintaining the count of stations and increasing the measurement locations as needs are identified. Other internal Department reports on the number of streamflow measurements made annually and the quality of the data collected (data protocols) by these positions should improve.

Staffing Impact

9915109	C8502	Natural Resource Spec 2	Well Inspector	Permanent	1.00
11 positions	C8502	Natural Resource Spec 2	Various	Permanent	N/A

Revenue Source

General Fund	$228,553
Other Funds	$1,860