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ECOLOGY
State of Washington

2010 Report to the Legislature and Governor: Water Resources Program Functions and Funding Structure

Recommendations for a Sustainable and Efficient Program

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2010 Report to the Legislature and Governor: Review of Water Resources Program Functions and Funding Structure

Recommendations for a Sustainable and Efficient Program

Water Resources Program
Washington State Department of Ecology
Olympia, Washington

Program Mission

The mission of the Water Resources Program is to support sustainable water resources management to meet the present and future water needs of people and the natural environment, in partnership with Washington communities.

Authorizing Laws

- *RCW 18.104, Water Well Construction Act (1971)*
- *RCW 43.21A, Department of Ecology (1970)*
- *RCW 43.27A, Water Resources (1967)*
- *RCW 43.83B, Water Supply Facilities (1972)*
- *RCW 43.99E, Water Supply Facilities – 1980 Bond Issue (Referendum 38) (1979)*
- *RCW 86.16.035, Department of ecology control of dams and obstructions (1935)*
- *RCW 90.03, Water code (1917)*
- *RCW 90.08, Stream patrolmen (1925)*
- *RCW 90.14, Water rights claims registration and relinquishment (1967)*
- *RCW 90.16, Appropriation of water for public and industrial purposes (1869)*
- *RCW 90.22, Minimum water flows and levels (1969)*
- *RCW 90.24, Regulation of outflow of lakes (1939)*
- *RCW 90.28, Miscellaneous rights and duties (1927)*
- *RCW 90.36, Artesian wells (1890)*
- *RCW 90.38, Yakima river basin water rights (Trust Water) (1989)*
- *RCW 90.40, Water rights of United States (1905)*
- *RCW 90.42, Water resource management (Trust Water) (1991)*
- *RCW 90.44, Regulation of public groundwaters (1945)*
- *RCW 90.46, Reclaimed water use (1992)*
- *RCW 90.54, Water resources act of 1971 (1971)*
- *RCW 90.66, Family farm water act (1977)*
- *RCW 90.80, Water conservancy boards (1997)*
- *RCW 90.82, Watershed planning (1997)*
- *RCW 90.86, Joint legislative committee on water supply during drought (2005)*
- *RCW 90.90, Columbia River basin water supply (2006)*
- *RCW 90.92, Pilot local water management program (Walla Walla) (2009)*

Case law

Washington case law plays a vital role in providing determinations and rulings that also govern water resources management. The Water Resources Program's website on laws, rules, and case law can be found at http://www.ecy.wa.gov/programs/wr/rules/rul-home.html.

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Executive Summary

The Department of Ecology (Ecology) was directed by the Washington State Legislature to review current water resource functions and funding structures, and to report to the Legislature and the Governor by September 1, 2010, on improvements to make the program more self-sustaining and efficient. Engrossed Second Substitute Senate Bill (ESSSB) 6267, Sec. 2 states:

> *Sufficient resources to support the department of ecology's water resource program are essential for effective and sustainable water management that provides certainty to processed applications. The department of ecology shall review current water resource functions and fee structures, and report to the legislature and the governor by September 1, 2010, on improvements to make the program more self-sustaining and efficient.*

This report identifies a number of efficiency improvements and makes specific recommendations for making the program more self–sustaining and less dependent upon State General Fund dollars.

Water is a vital resource and it is essential to maintaining the quality of life in Washington State for current and future generations. Intense competition for this finite resource will impact the state's economy, environmental quality, public health, and the ability for communities to serve water in the coming years.

To balance the competing needs in our state and build a modern water management program, Ecology proposes a new approach involving six major components:

- Developing comprehensive, science-based water assessments to inform water management and water supply decision making and actions.
- Reforming the water rights and claims review process to reduce uncertainty about how much water has already been allocated.
- Enhancing watershed management to build and maintain partnerships necessary for locally developed water supply and demand solutions.
- Reforming the relinquishment standard to encourage water conservation and provide flexibility to water right holders.
- Improving water right processing to reduce the time it takes to make water right decisions.
- Establishing water management services fees to shift more of the costs of the program to those who benefit from the services provided by the state and away from general taxpayers.

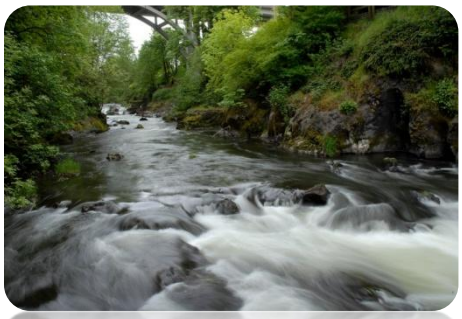
Such a program will meet the needs of people, farms, and fish by:

- Protecting senior water right holders who will be assured of their water supply.
- Increasing certainty in water and land transactions.
- Making water available for new residents, job creation, and economic activity.
- Protecting the natural resource base so that stream flows are restored for salmon and trout, benefitting Washington's citizens, environment, and economy.
- Ensuring public health and welfare through safe and reliable potable water supplies.
- Establishing information tools to make efficient, clear, and defensible water right permitting decisions.

This report serves as the foundation for a major water management reform proposal. It shares Washington's water management agency's best thinking on how we can manage water now and into the 21st century.

A Vision for Managing Water Rights in the 21st Century

Adequate water supplies are needed to support people, farms, and fish in our state, yet the growing demand for water threatens economic growth and environmental protection—two keys to our quality of life. To achieve greater efficiency, effectiveness, and sustainability, significant changes will need to be made in how the state operates and funds water resources management.



The Water Resources Program regulates surface and groundwater use in Washington – under state law these are a public resource and most new uses require a water right from the Department of Ecology.

A number of significant factors have created inefficiencies in water resource management, including outdated water laws, water rights applications lacking sufficient information to be processed, and inability to maintain adequate data. Together these factors make it very difficult, inefficient, and time-consuming for the state to take sensible water resource management actions. This causes uncertainty and delays for water right applicants and economically disadvantages Washington state.

Despite Ecology's ongoing efforts to make improvements in water rights administration, policy guidance, and record keeping, more work can and must be done. Ecology recommends that the state embark on a bold new approach to managing water resources by:

- Preparing comprehensive localized water inventories that address water supply and current and future demand for all uses; these assessments would be developed in cooperation with local governments, tribes, and stakeholders.
- Building a deliberate program to address both water supply and demand, including water supply for rural areas of the state.
- Providing comprehensive monitoring, protection, and management of streams and aquifers.
- Ensuring program capacity to support these activities.

Water availability for new development is becoming increasingly scarce, even in presumably wet Western Washington.

Even if we do not take bold steps, the citizens of Washington will continue to demand new water supplies. Issuing more water rights in already water-short basins will only further degrade stream flows, potentially impair existing water right holders, and result in more lawsuits.

We are seeing this story unfold throughout much of the state—from the Kittitas to the Dungeness watersheds. This has been the story of water throughout the West. For example, in the Klamath Basin in Oregon, a legacy of over-appropriation has led to serious economic, social, and environmental costs. Much needed reforms to the Washington Water Code can reduce resource intensive conflicts and protracted litigation.

To balance the competing needs in our state and build a modern water management program, Ecology proposes a new approach involving six major components:

- Developing comprehensive, science-based water assessments to inform water management and water supply decision making and actions.
- Reforming the water rights and claims review process to reduce uncertainty about how much water has already been allocated.
- Enhancing watershed management to build and maintain partnerships necessary for locally developed water supply and demand solutions.
- Reforming the relinquishment standard to encourage water conservation and provide flexibility to water right holders.
- Improving water right processing to reduce the time it takes to make water right decisions.
- Establishing water management services fees to shift more of the costs of the program to those who benefit from the services provided by the state and away from general taxpayers.

Active water management includes monitoring surface and groundwater to accurately measure water supplies.

The benefits of this approach would include:

- Protection of senior water right holders who will be assured of their water supply.
- Enhanced certainty in water and land transactions.
- Making water available for new residents, job creation, and economic activity.
- Collection of water supply and demand information to guide management and investment decisions.
- Protection of the natural resource base so that stream flows are restored for salmon and trout, benefitting Washington's citizens, environment, and economy.

- Effective land use decisions as they relate to water resource management.
- Ensuring public health and welfare through safe and reliable potable water supplies.
- Establishment of information tools to make efficient, clear, and defensible water right permitting decisions.
- Assigning equitable costs to the beneficiaries of water resources management services.

The Challenges That Face Water Management

Water is one of our state's most valuable economic resources. It is needed to fuel our state's economy. The following is an illustration of the economic benefit that water can have for just one economic sector:

Photo courtesy of the Washington Wine Commission

According to the Washington Wine Commission, Washington's wine industry generates more than $3 billion to the state economy. It employs more than 14,000 people—most of these jobs benefitting rural areas. In terms of tax revenues accrued to the state and federal government, wine grapes are among the highest tax generators of any agricultural crops. Furthermore, Washington wine tourism attracts nearly two million visitors annually, contributing to the positive growth of local and regional economies. It takes water to grow grapes and make wine.

Although the benefits of water supply are apparent, finding new supplies is much more problematic. Simply stated, Washington State is no longer in an era of cheap, abundant water supplies. The days of applying for a water right and getting to a certain "yes" quickly are long gone in most parts of our state. This is mainly due to the lack of water availability. Ample evidence is provided by the current water right permit backlog, which is approaching 7,000 applications and growing. The complexity and controversy over even relatively simple permitting decisions has grown, and many of Ecology's decisions are appealed.

Washington state faces major challenges to maintaining our quality of life due to limited water availability:

Population Growth – The population of Washington State is estimated to grow by 1.7 million people within the next 20 years - the equivalent of three cities the size of Seattle. Adequate, clean water is essential to public health for drinking water and sanitation. Irrigated agriculture, commercial, and industrial use also need adequate supplies of clean water. Both residents and tourists enjoy water-based recreation on the state's rivers and streams. Meeting this ever-growing demand is a huge challenge because water is a finite resource and much of the state's readily developed water has already been appropriated. Both supply strategies, to develop new water supplies, and demand-management strategies, to conserve the water resources we have, will be needed to meet the demand for water posed by population growth.

Washington's population is expected to grow by an additional 1.7 million people by 2030—the equivalent of three cities the size of Seattle. Where will the water come from to meet this dramatic increase in demand?

- **Economy** – The economic vitality of the state depends on water for job creation and housing. Each year the state loses millions of dollars in potential economic activity due to lack of water availability.
- **Ecosystem Health and Cultural Resources** – Washington State is home to some of the finest salmon and trout streams in the country, and salmon are widely considered a cultural icon throughout the region. Water is essential for fish migration, spawning, and rearing. Yet, five of Washington's salmon and trout species have been in serious decline and we now have Endangered Species Act listings in nearly every watershed in the state. Restoration of stream flows is needed to protect these resources for current and future generations.

Climate change is projected to impact water supply for agriculture and other economic uses in Washington State, and it will compound the already difficult challenges posed by additional growth and endangered fish.

Beyond these quality of life indicators, we are now facing water supply challenges due to climate change. Scientists at the University of Washington have studied the likely effects of climate change on watersheds in Washington State. Their research predicts that many areas of the state, such as the Yakima Basin, will experience a higher frequency of water shortages, especially during late summer months. Loss of snowpack, which provides natural storage of winter and spring precipitation, combined with increased irrigation demands because of longer, warmer growing seasons, will increase competition for available water supplies. The effects of climate change will compound the threats to our quality of life.

Water Resources Funding Situation

In the 1917 Water Code, the Legislature declared that unappropriated water belongs to the people of the State of Washington. Persons wishing to establish new water rights must request and receive a permit from the state. Since 1970, the agency processing these requests has been the Department of Ecology. A water right is established when the permit holder puts water to beneficial use. A water right is a special form of property right called a "usufructuary right," that is a right or privilege to use something that belongs to someone else (in this case, water owned by the people of the State of Washington).

Since 1917, applicants have been required to pay a modest one-time application-processing fee. However, the state has not previously required payment of fees from those who benefit from the state's water management services, with the exception of an annual hydropower license fee levied since 1929 (RCW 90.16.050).

The water management services provided by the state consist of ten activities, which protect public resources and existing water right holders. These activities include:

1. **Clarify Water Rights Through Court Adjudication**. Adjudications reduce water right conflicts and support sound water management by increasing certainty regarding the legitimacy of water rights, benefitting water right holders.
2. **Assess, Set, and Enhance Instream Flows.** Instream flows are used to determine how much water needs to remain in streams to meet environmental needs, how much can be allocated to out-of-stream uses, and when to regulate junior water users based on stream levels.
3. **Ensure Dam Safety.** This activity protects life, property, and the environment by overseeing the safety of Washington's dams.
4. **Manage Water Rights.** Ecology allocates surface and groundwater to meet the many needs for water around the state. Ecology makes decisions on applications for new water rights, and for reallocation of existing water rights. Ecology is responsible for managing a water right portfolio of approximately 170,000 claims, 50,000 certificates, 3,000 permits, and an estimated 400,000 permit-exempt groundwater wells.

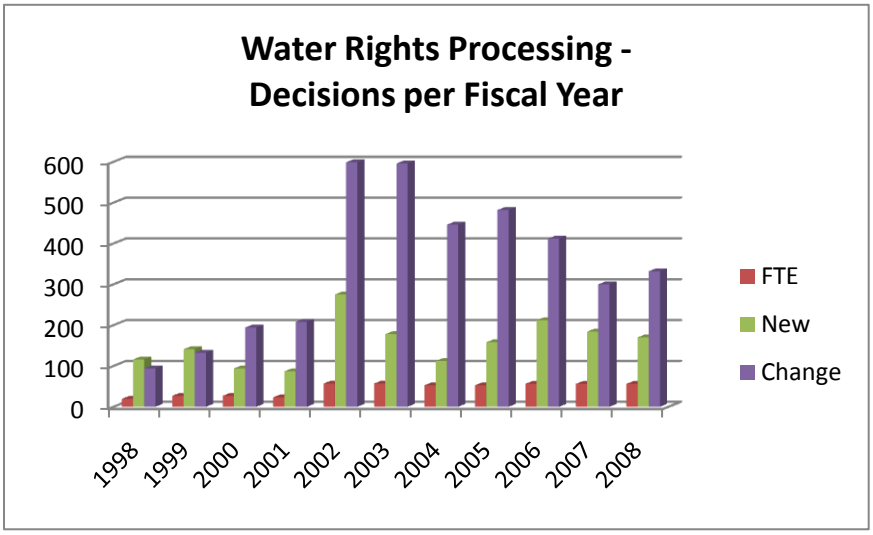
Five Species of salmon and trout are listed as threatened or endangered in Washington – healthy stream flows are needed for their recovery.

5. **Prepare and Respond to Drought.** Ecology provides services to reduce the impact of droughts and to prepare for future droughts and climate change. Ecology offers drought-related information and financial assistance, and coordinates drought response efforts.
6. **Ensure Compliance with Water Laws.** Ecology helps ensure water users comply with the state's water laws so that other legal water users are not impaired, water use remains sustainable over the long-term, and the environment is protected for the benefit of people and nature.
7. **Provide Water Resources Data and Information.** Ecology maintains an information system that contains records on water right certificates, permits, and claims. The agency also maintains records on approximately 260,000 water wells.
8. **Regulate Well Construction.** This activity protects consumers and the environment by licensing and regulating well drillers, investigating complaints, approving variances from construction standards, and providing continuing education to well drillers.
9. **Watershed Management.** Ecology works with local watershed planning groups, state and federal natural resources agencies, and tribes to develop watershed plans and strategies to improve stream flows.
10. **Support Water Use Efficiency**. Ecology provides information, planning, technical, engineering, and financial assistance to agricultural and commercial/industrial water users. Support is also provided for water reuse projects, and to the Department of Health for municipal water conservation.

These above-listed Water Resources Program activities heavily depend on State General Fund dollars. In the past few decades, budget appropriations for the program have fluctuated as tax revenues have increased and declined. Due to the budget cuts caused by the current recession, the Water Resources Program budget was reduced by about $5 million and approximately 20 staff positions in the current biennium. Water right processing alone received a directed cut of $2.8 million and 15 staff positions (about a one-quarter reduction). Additional State General Fund reductions of four to seven percent are likely to be required during fiscal year 2011 and more cuts highly likely again for the 2011-13 biennium.

The following table summarizes processing output as compared to FTE levels within the Water Resource Program. While there have always been applications awaiting action, data from the water rights

tracking system demonstrates that there is a direct correlation between FTE levels and the number of decisions (changes to existing water rights and new water right applications) processed.



Water Right Decisions Per Year			
Year	**FTE**	**New**	**Change**
1998	19.5	116	94
1999	26.9	141	132
2000	26.9	94	194
2001	23.2	87	208
2002	56.9	275	599
2003	56.9	178	596
2004	52.7	112	446
2005	52.7	158	482
2006	56.2	212	412
2007	56.2	184	300
2008	56.1	170	332

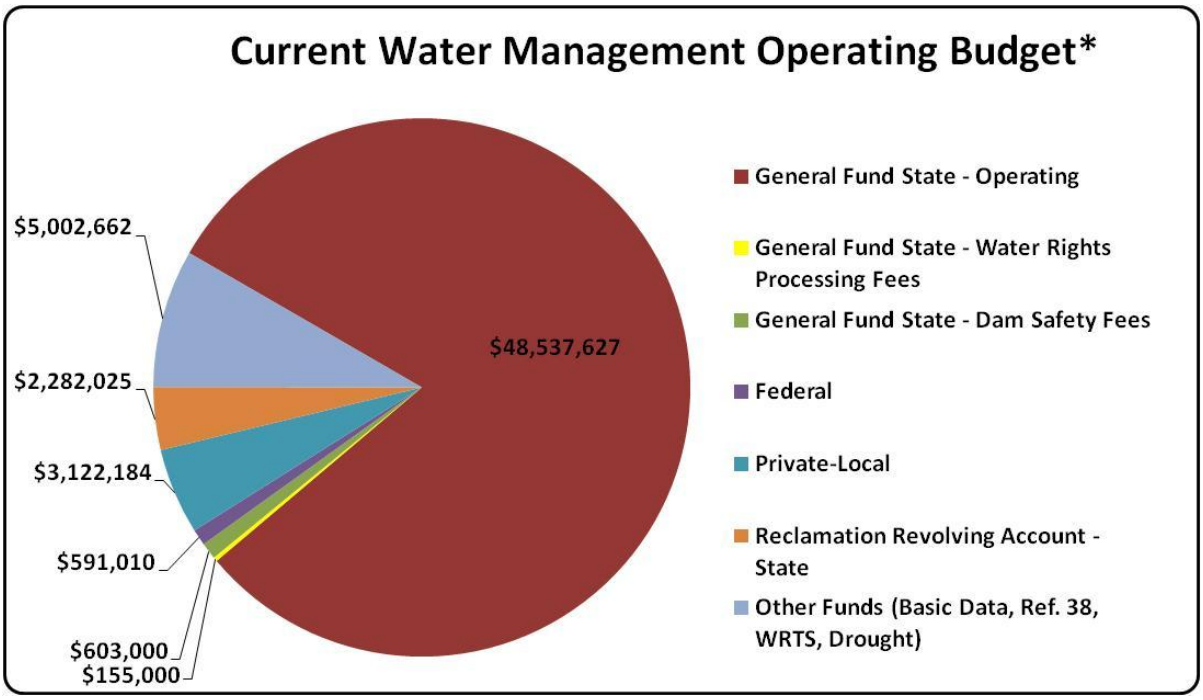
Stable long-term funding and better water laws will enable state and local governments to address water supply and water management needs in order to protect our quality of life into the future.

Currently, the cost for processing water right applications and many other water related services (except well drilling and dam safety) is borne almost entirely by general taxpayers. Through this report, Ecology presents the concept of shifting some of the costs of water management from general taxpayers to water right applicants and water right holders who directly benefit from the state's water services. The operating principle for this funding concept is that

the "beneficiary pays" an equitable share of the costs for managing the water rights system from which they receive benefits. Such a cost-share is fair and reasonable, as it requires beneficiaries to pay and off-sets water management's general fund reliance.

Expenditures from a fee based account would be used to support a broad range of water resources management services provided by Ecology, including but not limited to information collection and management, such as mapping water rights and maintaining and enhancing water data systems; compliance; public outreach and education; water rights processing; water rights adjudication; watershed planning and implementation of watershed plans; instream flow protection and restoration; ground and surface water availability assessment; water project studies; and water conservation.

With sustainable funding, fee-payers will benefit from the water right processing improvements and water management reforms that Ecology is proposing in this report. For example, Ecology will be able to sustain sufficient staffing levels and increase permit decision efficiency to reduce the current permit backlog. Investments in developing water budgets will give greater certainty about water supply and demand and help target areas for improvement. Local governments, builders, and homebuyers will benefit from these strategies to secure additional supply and to manage demand. Those who hold water right claims, permits, and certificates will benefit from monitoring and compliance activities aimed at protecting existing water rights. Perhaps the greatest benefit of these reforms will be in preventing crises that would have arisen from increasing competition and conflicts over water. Experience has shown that fixing problems before they become a firestorm is usually the best public policy because it reduces the costs of government in the long run and it reduces the likelihood of civil litigation.



**The above chart includes the entire Water Resources Program operating budget plus the watershed management portion of the Shorelands and Environmental Assistance Program's operating budget, the stream gaging and groundwater monitoring portion of the Environmental Assessment Program's operating budget, and Administrative costs for the Water Management operating budget.*

Ecology has developed and analyzed a number of fee options to make funding water management services more sustainable (*see* Appendix B). Relatively modest annual fees on water right permit holders, certificate holders, and claimants could raise a large proportion of the revenue required for ongoing water resources management activities from which water right holders benefit. Such a fee could replace a large proportion of State General fund dollars currently appropriated for this work and could also support expanding some critical areas of work such as adjudications, scientifically based information gathering, and water supply and demand forecasting.

The following is an example fee schedule and the estimated revenue that would be raised by such fees:

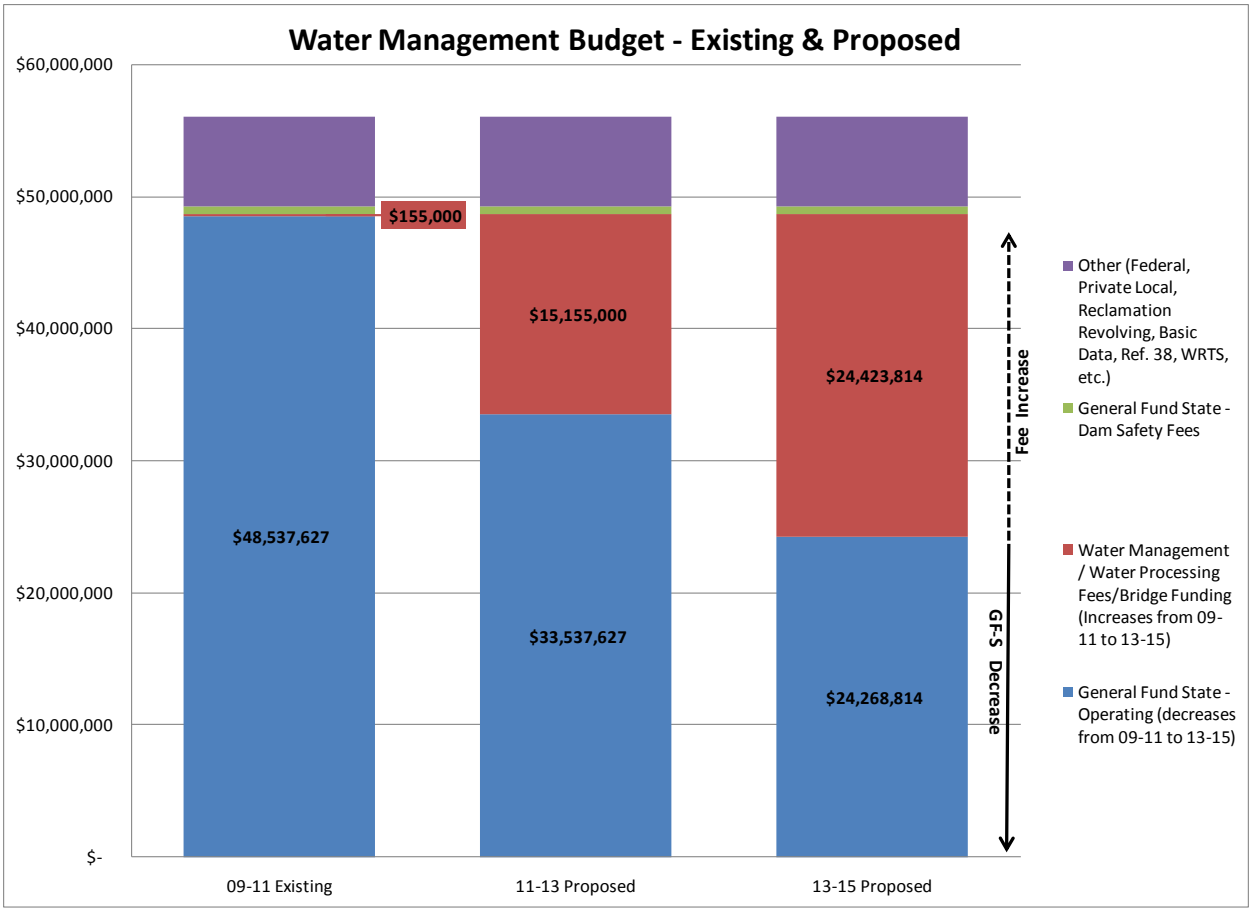
2013-2015 Biennium Example Fee Structure[1]			
Quantity of Water[2] (est. CFS)	**Number Paying Fee (est.)**	**Total Revenue**	**Amount of Annual Fee**
> 5	**664**	**1,328,000**	**1000**
5 to >1	**2,444**	**2,444,000**	**500**
1 to > 0.5	**2,653**	**1,326,500**	**250**
0.5 to > 0.1	**11,780**	**5,890,000**	
0.1 to > 0	**53,385**	**10,677,000**	**100**
Information Not Available[3]	**48,472**	**9,694,400**	
TOTAL	**119,398**	**31,359,900**	
	Average Fee	**262.65**	

1: This fee structure is one example of how fees could be set based on an approximate calculation of the amount of water used and inclusion of all users (at the same rate) except single domestic and power generation uses, which are excluded. This example is based on an estimation of the amount of water used instantaneously (Qi) but could also be based on acre-feet per year (Qa) and/or based on different rates for different uses, i.e. municipal, industrial, agriculture, etc.

2: The quantity of water is estimated based on the data available within the Water Resources Tracking System database. Note that the database containing water permit, certificate, and claim information is not complete and will require the data to be updated and amended. Depending on those results, the fee structure would change based on the amount of water used and the actual purposes of use included in the final fee structure. One cubic foot per second of water is enough water to irrigate approximately 50 acres of land or enough to supply at least 1,000 homes with domestic water, including moderate outdoor use.

3: It is estimated that approximately 48,472 records have insufficient information to estimate the amount of water used in relation to a specific document. For the purposes of this example, these documents would be billed at the lowest fee tier until additional information is collected.

Ecology is proposing a phased approach to implementing such a fee schedule. This would allow adequate time to update Ecology records and to develop a system to bill water right permit, certificate, and claim holders. Some bridge funding will be necessary in the interim to establish such a system. The initial goal is to shift 1/3 of the funding from the State General Fund in the 11-13 biennium. The goal for the 13-15 biennium is to support 1/2 of the program costs through a combination of increased permit related fees and new water management service fees. This report includes recommendations for new legislative reforms, as well as improvements through ongoing efficiencies. Once new program reforms and efficiencies are in place, Ecology will be able to shift some of the existing program resources to support additional activities that are called for in the report. The following chart illustrates the budget results of the recommended shift in funding:



The above chart includes the entire Water Resources Program operating budget plus the watershed management portion of the Shorelands and Environmental Assistance Program's operating budget, the stream gaging and groundwater monitoring portion of the Environmental Assessment Program's operating budget, and Administrative costs for the Water Management operating budget.

Improving and Reforming Washington's Water Management System

Ecology is proposing a variety of significant recommendations to meet the challenges of water management and the need for new water supply. The goal of these improvements is to meet the legislative directive to improve program efficiency, effectiveness, and to move toward sustainability. Equally important is the need to protect the quality of life that we all enjoy in Washington State due to water availability for both instream and out-of-stream uses. By making efficient and effective use of state resources, Ecology would like to ensure that citizens and water right applicants receive a high level of service while protecting public and private interests. Below is a list of (A) program efficiencies, (B) proposed legislative reforms, and (C) proposed water fees (for more detailed descriptions of these concepts, *see* Appendices A and B).

A. Program Efficiencies – Ecology is taking an aggressive approach to improving program performance and efficiency. These ongoing efforts and efficiencies include, but are not limited to:

- Undertaking a **comprehensive approach to further improve the water rights program**. Consistent with the concepts of continuous quality improvement and continuous process improvement, Ecology is committed to rigorously evaluating its current practices and developing additional cost-effective improvements across the board. Through this process Ecology will seek recommendations from stakeholders, local governments, and tribes.
- Changing the **water right application form** to require water right applicants to provide more information that is needed to make better and faster decisions.
- Implementing the C**ertified Water Right Examiner Program** that will create private sector expertise for conducting proof of appropriation examinations with costs borne by the water right permit holder.
- Implementing the 2010 legislative amendments to the **cost reimbursement** statutes that streamlines and allows flexibility in water right application processing.
- **Implementing 2009 legislative amendments to modernize the water rights general adjudication** process by allowing

mailing of summons, use of electronic notices and filings, and other procedural changes to reduce cost and time.

- Streamlining the **dam safety inspection report writing process**, saving time and resources.
- Enhancing the **Water Rights Database** to better support water management and move the database beyond just a permit-processing tool. The enhanced system will provide public access to water right information, better analysis options, and will be complete in 2011.
- Combining two existing systems that track well construction and licensing data into an integrated **Well Construction & Licensing System** that captures more detailed and accurate data being requested by stakeholders.
- The **well construction rules** were recently revised to incorporate changes in drilling technology and incorporate internet use to reduce paperwork burdens on drillers.

B. Proposed Legislative Reforms – In a number of instances, current water statutes contain provisions that limit Ecology's ability to be more effective and efficient. Statutory amendments are needed to add tools to the agency's toolbox for finding solutions to the growing list of water problems in the state. The following reforms will directly benefit water right holders, local government, builders, and homebuyers, as well as the environment:

- **Stream Gaging and Groundwater Monitoring -** Funding to comprehensively assess the current status and trends of our state's surface and groundwater supplies. This information is essential for understanding where there are problems that need to be addressed to prevent shortages of water for water right holders and fish.
- **Supply and Demand Forecasting -** Funding to apply stream gaging and groundwater monitoring assessments to determine water availability by season and source, and project future supply and demand. Supply and demand forecasting will enable the state to make more informed decisions about developing and acquiring water supply to meet the needs of growing population centers and to identify streams that need flow restoration. It will also help local governments make sound land use decisions. This will help Ecology pursue coordinated and cost-effective water supply solutions for streams, water users, and local economies in river basins across the state. This program

will also benefit builders and property owners who are having difficulty in finding water to support their developments, as well as environmental and fisheries interests who are concerned about restoring habitat for salmon and trout.

- **Mitigation** - The Water Code limits Ecology's ability to require mitigation in certain water right decisions. Amending the law to allow Ecology to establish up-front mitigation requirements for applications in water short basins would allow for clarity and faster decision-making for water right applicants.
- **Tentative Determinations** - Legislation to authorize Ecology to make determinations about whether water rights and claims are valid will assist in quenching hot-spot disputes, short of a long, costly adjudication process. Senior water right holders will have greater protection from impairment by other water users.
- **Relinquishment Reform** - The Water Code requires water users to "use it or lose it" when it comes to water rights. Specific changes in the current statute, such as expanding the relinquishment period or providing flexibility to those with efficient agricultural irrigation systems, would provide incentives for water conservation and flow restoration. Water right holders will have more flexibility in how they manage water and have less incentive to apply excess water in order to preserve their water rights.
- **Permit-Exempt Well Reform** - Legislation to provide Ecology authority to limit the quantities of groundwater available under the permit exemption where available waters are close to exhaustion to enable sensible stretching of limited supplies. This legislation will benefit more builders and home buyers who will be able to obtain building permits in some areas that have limited water availability. At the same time, there will be reduced impacts on aquifers and streams to the benefit of those who enjoy fishing and recreation.
- **Watershed Management** - Amend the Watershed Planning Act to provide a pathway for lead agencies to move from planning to implementation. Enable local watershed groups to develop water assessments and implement strategies for improving stream flows and developing new water supplies.

Stakeholders, local governments, and other interested parties will benefit by participating in water management decisions at the local level.

C. Proposed Water Fees – Ecology recommends that Washington adopt the *beneficiary pays* principle, because it is fair and reasonable. Such an approach would generate sufficient revenue to adequately fund water management services provided by the state, move away from excessive general fund dependence and vulnerability to budget cuts, and improve management under new approaches designed to meet the needs of a growing population and economy. This approach would protect the quality of life in Washington State for current and future generations. The agency is recommending the following:

- **Water Management Services Fee –**Ecology recommends an annual water management services fee so that those who benefit from the state's services pay a share of the costs of the program. The services provided by the state protect existing water right holders. Under the beneficiary pays principle, water right holders would pay for a portion of the costs of the services from which they benefit. A detailed analysis of other fee options and a proposed schedule for a management water services fee is contained in Appendix B.
- **Water Rights Processing Fee**—Ecology recommends that all applicants fully reimburse the state for the costs of processing their applications. This proposal requires beneficiaries to pay for the state costs of processing their water right applications. Ecology also recommends that applicants not ready to proceed with processing continue to have a bypass option, whereby they can maintain their place in line if they are not ready to proceed. Additional options for water rights processing fees and cost reimbursement models are described in Appendix B.

Appendix A

Water Resources Program Information

Historically, Washington residents have enjoyed an abundance of clean and inexpensive water. However, our citizens can no longer take water availability for granted. Washington increasingly lacks water where and when it is needed for communities and the environment. Increased demand for water is due mainly to population and economic growth. At the same time, available supply is needed to satisfy existing rights and stream flow. The late summer before fall rains arrive is an especially critical time for fish survival, some of which are threatened with extinction.

Many factors have combined to build an increased awareness of the imbalance between water needs and water availability:

- Rapid population growth, including growth in rural areas that lack water supply utilities.
- Threat of extinction to once abundant fish stocks and federal Endangered Species Act requirements.
- Frequent droughts resulting in dry streams, withered crops, curtailed water supplies, dead fish, wildfire hazards, and reduced hydropower production.
- Record low stream flows and declining snow pack and groundwater levels in some areas of the state.
- Lack of water for further allocation without impairing senior water rights, instream flows, or depleting groundwater in many areas of the state.
- Legal uncertainty related to the validity and extent of water rights and claims, including federal reserved water rights.
- Lack of adopted instream flow levels for many rivers and streams.
- Inadequate information on water availability, stream flows, and groundwater.
- Predicted hydrologic impacts to water supply resulting from climate change.

Program Activities

The Water Resources Program has ten distinct activities that encompass the current approach to water resource management in Washington State:

1. Clarify Water Rights (Water Right Adjudication).
2. Assess, Set, and Enhance Instream Flows.
3. Ensure Dam Safety.
4. Manage Water Rights.
5. Prepare and Respond to Drought.
6. Ensure Compliance with Water Laws.

7. Provide Water Resources Data and Information.
8. Regulate Well Construction.
9. Watershed Management.
10. Support Water Use Efficiency.

This appendix provides a description of these ten activities, including current funding and fee structures, as well as potential funding and fee options. In addition, this appendix discusses the range of options for achieving efficiencies in program implementation, as well as the Water Resources Program's current thinking regarding preferred efficiencies and reforms.

1. Clarify Water Rights (Water Rights Adjudication)

Description

Water rights adjudication is a legal process conducted in a county superior court to determine who has valid water rights, how much water can be used under each right, and who has priority during shortages. Eighty-six water areas have been adjudicated since the adoption of the Washington Water Code in 1917. Ecology is completing the Yakima River Basin surface water adjudication and preparing for a proposed Spokane River Basin adjudication.

Why it is important

To protect water rights and manage water, we need to know how much water has been legally committed, to whom, and for what purposes. An adjudication is essentially a final determination and cataloguing of water rights, much like establishing a clear title for real estate. In many areas of the state there is vast uncertainty regarding who has a legal right to use water, the amounts, when, where, for what purpose, and the order of priority during shortages. We have 170,000 claims and substantial federal and tribal water rights that have not been determined, along with uncertainty around many of the approximately 50,000 water right certificates issued since 1917. Ecology, and others, cannot manage and protect what we cannot define, including water shared with neighboring states and provinces.

Current funding structure

In the 09-11 biennium, water rights adjudication work is supported by:

- 4.85 FTEs – Admin/other
  7.85 FTEs – Adjudication
  12.7 FTEs total authorized

- $2,416,635 of General Fund – State

Water right claimants do not pay fees to cover Ecology's or court-related costs. Claimants are required to pay a one-time $25 filing fee to the county clerk. If the court upholds their claim, they are required to pay a $50 fee to Ecology (the State General Fund) for their adjudicated water rights certificate and a recording fee of at least $60 to the county auditor. Water right claimants may also incur substantial personal legal and consultant costs to support their claims before the court.

Are there ways to achieve additional self-sustainability?

Proceeds of a water management services fee could be applied to adjudication costs because adjudications are essential to defining, protecting, and managing the portfolio of water rights. Alternatively, filing fees and/or adjudication certificate fees could be raised and dedicated to cover some or all of Ecology's and court-related costs. Claimants could be required to pay a special annual fee during an adjudication proceeding to defray half of the extraordinary court costs incurred in a general adjudication (e.g. for court commissioners and other court staff, county clerk capacity, and court reporters). Such a fee might help expedite the proceedings. During the Yakima Basin adjudication, those costs have been entirely borne by the taxpayers through Ecology's water resources budget (State General Fund appropriation).

Existing reform measures

In 2009, the Legislature enacted Ecology-requested legislation to incrementally modernize the water rights general adjudication process. Legislation included authority to make a number of significant administrative improvements to the process. Provisions included allowing mailing of summons, the authority and encouragement to use electronic notices and filings, and a number of procedural changes to reduce cost and time compared to earlier law.

Range of new efficiencies and reform options

A number of information management and technology improvements could make future water rights adjudications more efficient including use of electronic documents management, notices, filings, and use of digital mapping. Because adjudication is a court process dealing with water rights, administrative changes must meet due process and judicial requirements.

Additional reform options could include one or more of the following:

- Periodic water use registration and metering.
- Mechanisms to clarify water rights short of a costly and lengthy general adjudication, including authority for Ecology to make tentative administrative determinations of water rights and to file limited adjudications to resolve smaller water right disputes.
- In making a tentative determination, limit the Ecology "look back" period to the most recent 30 years.
- Provide protective measures for federal reserved tribal rights to engage in tentative determinations of interest (e.g. adequate notice and opportunities for involvement at tribe's own volition).
- Allow water masters and stream patrollers to use Ecology's tentative record and final court determination (if any) to regulate the subject rights.

Preferred Options

- Allow Ecology or another entity to administratively make tentative determinations of water rights and claims separately or in conjunction with a subsequent "limited" (smaller) adjudication or general adjudication of claims and water rights. In making a tentative determination, limit the Ecology "look back" period to the most recent 30 years and provide protective measures for affected tribes and water users.

- Allow water masters and stream patrollers to use Ecology's tentative record and final court determination (if any) to regulate the subject rights.
- Recover some portion of Ecology's costs through a fee based on volume of water used or authorized under the water right or claim.
- Require claimants in an adjudication to pay a special annual fee to defray half of the extraordinary court costs involved in carrying out an adjudication.

2. Assess, Set, and Enhance Instream Flows

Description

Ecology adopts instream flows through rule making to create water rights for streams. Such rights are junior to water rights existing at the time of rule adoption. Currently there are instream flows set in only 25 of the state's 62 Water Resource Inventory Areas (WRIAs). These rules often also establish a regulatory framework for future water management in the watershed and provide reservations for new uses of water. Rulemaking for instream flows is often contentious and requires extensive and lengthy consultation with local governments, tribes, and stakeholders.

Why it is important

Instream flows are fundamental to water resources management. Instream flows are used to determine how much water needs to remain in streams to meet environmental needs, how much can be allocated to out-of-stream uses, and when to regulate junior water users based on flow levels. Ecology also acquires senior water rights, funds water conservation, and uses other management techniques to restore and protect flows, while meeting out-of-stream water supply needs.

Current funding structure

In the 09-11 biennium, instream flow work is supported by:

- 15.53 FTEs – Instream Flow
  2.97 FTEs – Admin/Other
  18.50 FTEs total authorized
- $3,868,984 of General Fund - State
  $129,500 of General Fund - Private/Local
  $152,223 of Reclamation Revolving Account
  $4,150,707 total funding

Are there ways to achieve additional self-sustainability?

Setting instream flows primarily protects the public resource, with a secondary benefit of protecting existing water rights. Although taxpayers currently fully fund instream flow work, supporting this activity at least partially through revenue from an annual management services fee paid by existing water right holders could provide a more stable source of funding for this important activity.

Existing reform measures

Ecology is engaged in the following reforms:

- Development of new guidance for use by watershed planning units and rule writers.

- Exploration of ways to "scope" local concerns and preferences earlier in the process.

Range of new efficiencies and reform options

Development of instream flow rules has typically involved lengthy negotiations with the local watershed planning unit (if any), local jurisdictions, Indian tribes, and private stakeholders. Extensive public outreach is also involved. The process typically can take several years and the outcome may still be litigated after a rule is adopted. Ecology has been considering ways to streamline the rule development process and to reduce the associated controversy. Ecology is looking to better capitalize on existing relationships and improve "rule readiness" wherever watershed planning units are in place, by elevating the role of the state-liaison watershed leads in rule development.

Gaining clearer authority to regulate permit-exempt groundwater wells, including ratcheting down allowed quantities of groundwater use to stretch existing supplies in water-short basins would benefit local communities, the environment, and reduce litigation potential.

Stream gaging and groundwater monitoring is essential for Ecology instream flow work. Ecology must continue to maintain and expand the existing stream gaging and groundwater monitoring network, which provides accurate and timely information on how much water is flowing in rivers, streams, and aquifers so Washington stream flows can be effectively managed for instream and out-of-stream users. (Groundwater monitoring is discussed more thoroughly in the Manage Water Rights, Section 4 below.)

Specific reform options could include one or more of the following:

- Propose legislation to direct Ecology to publish a long-term work plan to complete the setting of instream flows for all waters of the state, including proposing where and when Ecology would amend or adopt instream flow rules. The goal of the program would be to establish flows statewide within 15 years.
- Adopt a statewide rule that sets default instream flow levels for all watersheds currently without instream flows. These could later be refined or replaced by watershed specific instream flow rules.
- Adopt a statewide rule addressing permit-exempt groundwater well uses.
- Add a flow achievement component to the instream flow statute.
- Adding stream gaging locations statewide.
- Creating a statewide groundwater assessment program.
- Conduct synoptic flow studies in key basins (synoptic flow studies encompass collecting stream flow measurements at multiple locations within a watershed over a short period to get a "snapshot" of overall stream flow conditions).
- Enhance water system modeling capacity.

Preferred options

- Propose legislation to direct Ecology to publish a long-term work plan to complete the setting of instream flows for all waters of the state, including proposing where and when Ecology would amend or adopt instream flow rules.
- Firm up staff support for our existing stream gaging and groundwater monitoring program, by converting 1.5 FTEs from project funding to a permanent funding source.
- Add 15 additional gaging locations statewide and two new grants to locals per biennium for the next three budget cycles (totaling 45 new gaging locations and six new grants).

3. Ensure Dam Safety

Description

The primary responsibility for ensuring the safety of non-federal dams in Washington is vested in Ecology. There are over 1,000 dams in Washington where Ecology is the sole regulatory agency for safety. Of those dams, 383 are located above populated areas. Under the state Water Code, Ecology is responsible for ensuring dams are properly designed, constructed, operated, and maintained. Ecology inspects the structural integrity, flood, and earthquake safety of existing state dams not managed or licensed by the federal government; approves and inspects new dam construction and repairs; and takes compliance and emergency actions to remediate unsafe dams.

Why it is important

Dam failures can be devastating for the dam owners, to the dam's intended purpose, downstream fish and wildlife habitat, and especially for downstream persons and property. Property damage resulting from a dam failure can range from thousands to many millions of dollars if a large dam failed and flooded a densely populated area. No price can be put on the lives that have been lost or could be lost in the future due to dam failures. Nor is this a static situation, as a dam that has no residences and other buildings located below it today could have development occur in the potential inundation zone in the future. Ecology's mission is to protect citizens, property, and the environment located downstream from dams by ensuring that dams are constructed, operated, and maintained in a safe manner.

Current funding structure

In the 09-11 biennium, dam safety is supported by:

- 9.54 FTEs – Dam Safety
  3.36 FTEs – Admin/Other
  12.90 FTEs (total authorized)
- $2,767,583 of General Fund - State
  $64,753 of General Fund – Federal
  $2,832,336 total funding

Current fees recoup about $255,000 each fiscal year, roughly 23 percent of the State General Fund costs. If the proposed revision of the dam safety fee rule (WAC 173-175) is completed as planned in 2010, fees will then recoup $362,000 per year, roughly 32 percent of total costs.

RCW 90.03.470 authorizes Ecology to collect fees only for the cost of inspections and plan review. However, the current level of these fees does not fully cover the actual cost of inspections and plan review. Thus, Ecology is proposing to increase these fees through a rule amendment this year. Fees for inspection of High Hazard dams will be $1,076 per year, and Significant Hazard Dams will be $676 per year. Plan review and construction fees are based on the size of the dam being built, and will vary from a minimum of $6,344 to a maximum of $74,364.

Pursuant to RCW 90.03.470(15) 80 percent of dam safety fee revenue goes to the State General Fund. The remaining 20 percent of fee revenue goes to the water rights tracking system account established in RCW 90.14.240.

Are there ways to achieve additional self-sustainability?

Starting in 2011, Ecology anticipates collecting 32 percent of the Dam Safety Program's total costs. This is about the maximum that the state can collect under the current statute that allows Ecology to recoup actual costs for specific dam safety activities. Any further increase in fees would require a statutory change by the Legislature. The public generally benefits from the dam safety program in that it protects public resources such as stream habitat for fish and wildlife, public roads, public utilities, and other public facilities. Some ongoing level of general taxpayer support is warranted even if dam owners are required to pay more of the cost.

At the request of the Office of Financial Management, Ecology analyzed what it would take to be 100 percent fee-supported for its dam safety activities. This would result in new annual operating fees of $3,900 for high hazard dams and $2,140 for significant hazard dams. Low hazard dams would begin paying an operating fee of $150 per year. These large increases in fees would create a hardship for many smaller dam owners with limited resources. Also, it may not be fair to make dam owners pay the full costs, when the dam safety program also benefits the general public by protecting downstream public resources, residences, and other facilities.

Ecology also looked at contracting out some of the work done by state dam safety engineers to private engineering consultants. However, due to the private sector's liability insurance needs and profit margins, contracting out would not be cost-effective. The work can be done more cheaply with state-employed engineers than with private consulting firms.

Reform options could include:
Option A: Increase annual fees to recoup 50 percent of the costs of running the dam safety activity. Create a new annual operating fee in statute. High hazard dams would pay an annual fee of $1,950 per dam, significant hazard dams would pay $1,070 per dam, and low hazard dams would pay $75 per dam. The advantage of this option is that the fees will be simple to calculate and implement. The disadvantages are that owners of 10-foot high dams would pay the same as owners of 200-foot high dams. The fee fails to capture the size or complexity of a project, and could be difficult for some private individuals and farmers to pay.

Option B: Annual fee based on hazard and dam height. This proposal would also generate 50 percent of the costs of the dam safety activity, but would create a "base fee" and add a cost per foot of dam height. This is the approach used by the State of California's dam safety program.

High hazard dams would pay a $525 base fee and $50 per foot of height, significant hazard dams would pay $325 plus $38 per foot, and low hazard dams would pay a $40 base fee and $5 per foot. This option would be fairer to owners of smaller dams, as the fee structure captures some of the size and complexity of the project. The disadvantages to this approach would be that fees must be calculated for each individual dam and, thus, would be more difficult to track. Also, owners of large dams would pay substantial fees and would be partially subsidizing the owners of small dams.

Existing reform measures

Ecology is currently in the process of revising the dam safety rule to increase fees to fully recoup the actual costs of plan reviews and inspections. This would increase fee revenue to 32 percent of our State General Fund costs.

The dam safety section has recently streamlined its inspection report writing process, no longer requiring the reports to be official agency publications. Instead, inspection reports are written as memos to the file, which can save a significant amount of time by not having to go through the formal publication review process. These inspection reports have a relatively limited audience; therefore, full publication is not necessary.

Ecology has also been involved in a proactive effort to deal with unpermitted dams. Many owners were skirting the law and building dams and storage ponds without first obtaining dam safety approval. Ecology first did outreach to the regulated community to inform them of the need for permits and asked them to voluntarily bring their dams up to current standards. Ecology then performed inspections on dams where the owners did not voluntarily come into compliance. As a result, Ecology discovered 27 unapproved High Hazard dams and 25 unapproved Significant Hazard dams with deficiencies. The dam safety section is now in the process of working with the owners to get these dams repaired to protect the public living downstream.

Range of new efficiencies and reform options

Some state dam safety programs and the Federal Energy Regulatory Commission (which licenses larger hydroelectric power dams) require dam owners to hire an engineer at their own cost to perform periodic inspections of their dams and provide a report to the state. This could theoretically reduce the staffing in the dam safety program by about 2 FTEs. However, this would not result in a net change in the State General Fund costs of running the dam safety program, as any savings in FTE costs for performing inspections would be offset by the loss of inspection fee revenue. The net cost to the State General Fund for the activity would remain the same. In addition, there would be the added expense of assessing and certifying that the engineers hired are adequately qualified to do dam safety work, and Ecology would still need engineering staff to review the reports and do follow-up work. Owners would be interested in minimizing their out of pocket costs and they, therefore, would perhaps not always secure the most competent engineering services. Under the current model, Ecology's engineers are specialists in dam safety and are likely better positioned to identify emergent safety issues of inspected dams.

Preferred options

If the Legislature chooses to make the dam safety activity more self-supporting, our preferred option would be going to a more equitable fee structure that splits the costs 50/50 between owner

fees and State General Fund support. This would require legislation to revise RCW 90.03.470 to create a new annual "operating" or "permit" fee for existing dams regulated by Ecology, in place of the existing "actual cost" statutory wording. Every dam would be charged this fee, even multiple dams on the same reservoir. Also, the fee exemption for dams less than 10 years old would need to be eliminated. Finally, the statute should be modified so that 100 percent of the dam safety fee revenue goes into the State General Fund to offset the costs of the program, rather than dedicating 20 percent to the water rights tracking system account. Water right holders, including those holding water rights for dams, should be responsible for funding a portion of the water rights tracking system as described below in Section 7 of this appendix.

4. Manage Water Rights

Description

Ecology allocates surface and groundwater to meet the state's many water supply needs. Ecology is responsible for making decisions on applications for new water rights and for changes to existing water rights. Ecology is also responsible for managing an existing water right portfolio of approximately 50,000 certificates, 3,000 permits, and 170,000 claims, and an estimated 400,000 permit-exempt groundwater withdrawals. This is the largest activity of the Water Resources Program, employing about one third of total program FTEs. This activity also received a directed budget reduction in the current biennium of 25 percent and about 15 FTEs.

Why is it important?

Water is necessary to support nearly all human health and socio-economic needs. From the water we drink, wash with, and bathe in, to the water used for irrigating crops or in food-processing and manufacturing, water is as vital to our lives as the air we breathe. Our society cannot thrive without clean, safe, reliable water supplies.

Water is also critical to sustain our natural environment, not just for Endangered Species Act-listed species, but all native fish and wildlife, and recreational activities that are a significant part of the economy across the state. Additionally, sustaining healthy aquatic ecosystems has economic benefits related to clean water, and flood and erosion control.

Ecology's stream monitoring program (managed by the Environmental Assessment Program) supports a variety of water rights management activities:

- Setting and protecting instream flows.
- Developing water cleanup plans (TMDLs).
- Monitoring water acquisitions.
- Watershed planning.
- Managing irrigation withdrawals.
- Supporting groundwater and surface water interaction studies.

At its peak, Ecology maintained 195 stream gages (2007-2009 Biennium). Budget reductions this biennium have resulted in decommissioning 65 gages and reducing the amounts of local grants. Ecology's current stream gaging network currently consists of 130 total gages in 24 watersheds around the state, including 11 salmon critical basins. With the projected budget for

the 2011-13 biennium, it appears Ecology would need to reduce its stream gaging network by at least another 15 to 20 gages and may have to eliminate the grant program altogether. Although there has never been a dedicated funding source, Ecology also monitors groundwater levels in hundreds of wells statewide. This program needs to be expanded and enhanced in order to protect existing rights and support future management of the resource.

With Ecology's responsibility to adopt instream flows and restore flows by acquiring and then managing trust water rights, timely and accurate stream flow information is essential. Stream flow gaging, combined with groundwater assessment and modeling, allows basin planning and implementation to look at a basin's water supplies cohesively, supporting sound and transparent decision-making.

Ecology can issue a permit to appropriate public water if it can affirmatively answer each part of the four-part test identified in RCW 90.03.290:

(1) Water is proposed to be put to a beneficial use.
(2) Water is available for the proposed use.
(3) Proposed use of water will not impair existing water rights.
(4) The proposed water use will not be detrimental to the public welfare.

Similarly, courts have held that Ecology must address the four-part test to deny an application. Insufficient information in applications, such as information regarding the impact of proposed water use on existing water rights, streams, and the public welfare, prevents Ecology from rendering a decision. Coupled with decades of highly variable funding, this is a central reason that the backlog of water right applications has grown to thousands. Once a permit is issued, the permittee is on a schedule to develop the proposed water use. If requested, Ecology may issue extensions. Once the permit holder puts water to beneficial use, and the amounts and other facts are verified, a final water right certificate is issued.

Water rights are also transferred or changed at the holder's request and with Ecology's approval. Typical changes involve the place of use, purpose of use, or the point of diversion or withdrawal. Wells may also be replaced or additional wells installed to enable exercise of a groundwater right. Temporary changes can be approved. The principle test applied is whether the change will impair any other water right, whether senior or junior to the right proposed for change. Since 2001, the number of change applications filed and approved has increased dramatically to the point that they outnumber new applications received or approved. This reflects the facts that much of the developable water in the state has been developed and that changes to existing water rights to more valuable uses is occurring regularly.

The backlog of applications grew rapidly by about 4,000 pending applications from the mid-1990s until 2001. In 1994, the program's water rights processing budget was reduced by two-thirds and staffing fell from about 60 to 20 FTEs. The reason for this budget cut was a dispute in the Legislature over whether to increase water right fees to recoup one-half of the cost of processing water rights. When the fee bill failed, a severe reduction of State General Fund automatically occurred and required the program to lay-off large numbers of experienced workers.

The current water right application backlog includes roughly 6,856 pending applications made up of 5,534 applications for new water rights, 1,268 for changes to existing water rights, and 54 for new reservoir permits. Ecology also receives approximately 500 additional applications each year. Between 2001, when Ecology received additional funds to grow this activity, until the budget reduction in the current biennium, the program had sufficient capacity to keep up with the number of incoming applications, but not enough to reduce the backlog of about 7,000 applications since 2001. The new staff resources received in 2001 were required to be devoted solely to processing change applications. The number of pending changes was reduced from about 2,000 to just over 1,000. Due to the loss of water right permit processing staff, Ecology expects the backlog to grow again once the economy begins to recover.

Current funding structure

In the 09-11 biennium, managing water rights is supported by:

- 40.58 FTEs - Water Rights
  7.42 FTEs - Admin/Other
  48 FTEs (total authorized)

- $10,193,892 of General Fund – State
  $2,792,684 of General Fund - Private /Local
  $53,923 of Water Rights Processing Account
  $13,040,499 total funding

Of the amount funded by the State General Fund, fees recoup about $77,500 each fiscal year, less than 1.5 percent of the total State General Fund appropriation. Eighty percent of the fee revenue goes to the general fund and twenty percent goes to the water rights information account.

Ecology currently has authority to collect the following fees for water management actions:

- Applications for new water rights are charged a $50 filing fee plus $100 per cubic foot per second (cfs) for withdrawals or diversions over 0.5 cfs, up to $25,000.
- Applications for change or transfer of a water right are charged a $50 filing fee, plus $50 per cfs, up to $12,500. (Fees are assessed based on the amount of water proposed for the change, not the total in the water right.)
- Storage application fees are $50 plus $2 per acre-foot of storage proposed over 25 acre-feet, to a maximum of $25,000. (Changes to storage water rights are assessed a total of $1 per acre-foot.)
- Additionally, the state charges a $50 fee for an extension to the development schedule of a water right permit (both new water rights and changes), and a fee of $50 for a final water right certificate.
- A formal protest of a water right decision requires a $50 fee.
- Applicants must pay a $50 fee to amend a water right claim.
- Recording an assignment of a water right application or permit also requires a $50 fee.

The vast majority of water right and change applicants only pay the $50 minimum filing fee and the $50 certificate fee. On final certification, the water right holder is also charged a county recording fee of about $60.

Are there ways to achieve additional self-sustainability?

Achieving greater self-sustainability is possible, but it would require applicants to spend more money to have their applications processed in the form of either increased application fees, providing more up-front information on their applications, participating in a cost reimbursement contract, or fully reimbursing Ecology for the costs to carry out expedited permitting. Persons with applications in the backlog would have to pay additional fees or enter into cost reimbursement agreements or expedited permitting agreements. Provision could be made for those applicants who are not really ready to receive a decision yet to keep their applications inactive, but an annual fee could be assessed for that privilege. In addition, stable funding would enable the program to acquire and maintain the basic data necessary to determine water availability, water supply, and mitigation options, as well as enhancing instream flow and watershed management.

Self-sustainability options include the following:

- **Build on the existing Cost Reimbursement model.** Cost Reimbursement was first authorized as an alternate means of application processing in 2000. Significant cost recovery amendments were passed during 2009 and 2010. (*See* RCW 43.21A.690 and RCW 90.03.265). Additional cost reimbursement reform options could include:
  - Recover the full cost of processing an application from each applicant. Cost recovery does not presently recover all of Ecology's costs, such as the costs to negotiate and establish a cost recovery contract. In addition, it is sometimes difficult to recover so called staff "backfill" costs (the cost of Ecology staff time devoted to providing technical assistance and reviewing contractor products) after the decision has been rendered. Backfill needs to be estimated up-front and such costs included as part of the cost recovery contract.
  - Use applicant resources to evaluate the four tests as applied to their particular proposal. Provide applicants with a variety of ways to process their application – allow them to use their own consultant with Ecology oversight or pay Ecology to obtain a contractor from the contractor pool (the current cost recovery model).
  - Require all applicants to use the cost reimbursement process. Ecology's staff work would change from carrying out research and documenting the four tests to reviewing the work of cost recovery contractors and making the final decision on issuing, denying, or conditioning a permit. With proper guidance and oversight by Ecology, considerable efficiencies could occur by pooling applicant resources in areas with multiple applications from the same source. Some means of bypassing applications not ready to proceed would need to be provided.
  - Require applicants to select either cost reimbursement or to enter an expedited permitting agreement with Ecology, requiring full reimbursement for the cost to carry out a traditional application review. Expedited permitting is a new option provided in 2010

legislation. Ecology is just now gaining some experience in applying the expedited permit process.

- Include Ecology's costs to review contractor work and to establish and manage consultant contracts. The current system does not fully recover all of these costs.
- Prioritize the use of state funds to:
    - Develop and provide basic information on water supply and availability at a basin-scale level;
    - Adopt rules that clarify water availability, identify limitations on use, and define mitigation requirements; and
    - Defend permitting decisions when appealed.

- **Increase application fees to recover the costs attributed to specific applications.** This would be an enhancement of the traditional model in which Ecology staff investigate applications and document the responses to the four tests. Applicants would pay considerably higher fees than they pay today, but these increased fees would reflect actual costs. The fee schedule could be set to fully recover Ecology's costs or to recover something less than the full cost such as one-half or one-third of the full cost. Fees that would recover approximately $2.8 million per biennium (about one-quarter of the pre-2010 budget for processing) would enable the program to restore its pre-2010 staffing level.

  Implementing a new fee structure on both existing backlogged applications as well as future applications received would reduce reliance on the State General Fund for this work. The revenue would support existing staff levels, as well as provide for hiring sufficient staff to eliminate the backlog. This would require establishing a new dedicated account for revenue and appropriations and establishing fee levels based on the estimated cost to process that type of application. Fees should include Office of the Attorney General costs, potential interagency costs (such as Washington Departments of Fish and Wildlife, Health, and the Environmental Hearings Office), and agency administration costs. A tiered fee approach would ideally take into account the amount of water required, the general complexity of the application, and the value of the water requested in the proposed use.

  It might be possible to move to a "billable hours" system in which each applicant would have to pay for the actual cost to produce a decision on their application. However it could be difficult to collect after the fact fees from some applicants. It would also require considerably more detailed time accounting than currently exists.

  Generally, the more information that is provided by applicants in their application or in associated studies, the less research that must be done by Ecology staff and less staff resources are required to render a decision. Some combination of higher fees, tempered by a requirement that applicants provide more information may be a good option.

- **Establish an annual water management services fee for those who benefit from managing the state's water**. Establishing a water management services fee with appropriate rates that adhere to both the *beneficiary pays* principle and the *ability to pay* principle could generate sufficient revenue to adequately fund the Water Resources Program, move away

from general fund dependence and vulnerability, and improve management under new approaches designed to meet the needs of a growing population and economy. A stable revenue source would enable the Water Resources Program to fully implement the law and have a modern and comprehensive water management system.

Fee options considered (*see* Appendix B for a detailed analysis of these various fee options listed below):

- Establish an annual water fee on households and businesses administered through the property tax system.
- Dedicate a portion of the state utility tax to water management programs.
- Levy a water fee through electric utility bills.
- Establish a new water management services fee on existing water rights (permits and certificate holders) and water right claims.
- Put a new water management services fee on only the largest water rights and claims.
- Base a water management services fee on actual use rather than the certificated or claimed paper quantities.
- Apply a water management services fee to permit-exempt wells as well as to permits, certificates, and water right claims.

Existing reform measures

Report of Examination and Water Right Investigations: In 2005, Ecology chartered a permit quality team to review processes used to investigate water right applications and document the investigations in Reports of Examination. In addition to standardizing forms and formats, Ecology has developed a tool similar to the interview used by tax preparation packages. The new tool provides a structure that guides the investigation and identifies the legal tests that must be evaluated to make lawful decisions, and provides a consistent format to present our investigations, conclusions, and recommendations. The template is used by staff as well as consultants developing Reports of Examination under cost reimbursement agreements. Ecology maintains an electronic library, accessible through the interview tool, containing applicable legal interpretations from statute, case law, rules, and narrative explanations of the technical considerations associated with water right permitting and transfers. This saves considerable effort by avoiding unnecessary rekeying of information common to various forms.

Rooftop Rainwater Capture Policy: After considerable thought and research, Ecology adopted a policy and interpretive statement (POL-1017) in 2009 that allows the use of rainwater captured from rooftops without the need to secure a water right for the use.

Advancing the Office of Columbia River (OCR) from project funding and feasibility, through design and permitting, to delivering water supply: In 2006, the Washington State Legislature responded to the need for developing new water supplies in the Columbia River Basin. RCW 90.90 directs Ecology to aggressively pursue the development of water supplies to meet the economic and community development needs of people and the instream flow needs of fish. To implement this legislation, Ecology established the OCR. By working with tribes,

environmentalists, growers, municipalities, and other interested parties, OCR provides support for storage and conservation projects and voluntary regional water management agreements.

OCR's model of identifying and funding water supply expansion could be expanded to other parts of the state. Many of the opportunities in the Columbia Basin appear to involve optimization of the use of existing facilities, although new reservoirs may also be proposed in the future. Western Washington has similar optimization opportunities that need to be explored.

Certified Water Right Examiner Program: Passed by the 2010 Legislature, this program will add capacity to issue water right certificates for completed projects. Permittees would hire a private water right examiner to carry out a proof examination to determine the extent a permit has been developed and is eligible for a certificate. Last session Ecology requested funding from the legislature to run this program and no funding was provided. However, Ecology is expected to conduct rulemaking to implement this program, and could include a fee structure similar to well driller licensing.

Cost Reimbursement Processing Amendments: The 2010 legislative amendments to the cost reimbursement statutes both streamline the process and allow flexibility in processing water right applications. The changes allow Ecology to process select applications without having to first process other senior applications (therefore less cost) where the use would not diminish the water available from the source. Coordinated and expedited cost reimbursement processes allow multiple applicants to have Ecology staff or consultants process all water right applications from a water source. Each of these reforms will allow more water right applications to be processed for less cost to the program.

Front-Loaded Applications: Ecology is currently reviewing and updating the water right application form to require water right applicants to provide more of the information (i.e. front-loaded applications) that is needed to make better and faster decisions. Front-loaded applications will result in more efficient water right decisions and reduce the state's processing costs.

Range of new efficiencies and reform options

An applicant is currently required to submit an application that briefly summarizes the intent and location of their proposed withdrawal and diversion. The burden of conducting the actual investigation and determining water availability and impacts on other water rights falls upon Ecology. Applications are currently evaluated one at a time rather than on a watershed basis. Providing information up-front that tells the story of water availability and criteria to be met for new applications to be approved would reduce uncertainty and increase efficiency.

Lacking the information necessary to confidently answer the four-part test requires Ecology either to perform much investigatory work or to spend substantial amounts of time working with applicants. Asking applicants to produce information and analysis not required at the time of application prolongs the process – often by months and even years – and causes additional expense and frustration. Nevertheless, new requirements that would uniformly shift some of the burden for gathering information to the applicants would result in increased efficiency, timeliness of decisions, and cost savings to the state.

Mitigated water rights are becoming more common—especially in water-short basins. However, statute prohibits Ecology from requiring mitigation as part of a permit unless offered by the applicant. Ecology must then review mitigation proposals for adequacy. Allowing Ecology to determine mitigation and describe the mitigation requirements for a particular basin or water source would reduce uncertainty, improve the timeliness of application processing, and may reduce the number of insufficient applications submitted to Ecology. Clarity in mitigation requirements would result in better-informed applicants, a more predictable process, and applications being more likely to get to "yes."

Specific efficiency and reform options could include one or more of the following:

- **Issue preliminary permits to existing applicants in the backlog.** RCW 90.03.290(2) authorizes issuing preliminary permits to applicants that require them to collect and supply additional information and perform studies needed. Ecology has used this authority with some success in the past. Some changes in the statute could make it even more useful. For example, the current law only allows three years, whereas some groundwater studies may require more time. Any extension of the timeline can only be approved by the Governor. The main challenge in applying this tool is to get applicants from the same source to cooperate in funding the studies necessary to act on their applications.

- **Provide statutory authority to fully implement front-loaded water right applications.** Providing clear guidance to applicants and requiring more information to be provided with applications could benefit from legislation, although Ecology believes that it currently has statutory authority to request more thorough information on applications. However, other legislative reforms would make this process more efficient, including the establishment of a process for prospective water right applicants to drill a test well related to pre-application investigation, rather than requirement that Ecology issue a preliminary permit under such circumstance pursuant to RCW 90.03.290(2).

- **Provide Ecology with authority to require or request mitigation from water right applicants when appropriate.**
    - Authorize Ecology to require mitigation during the water right application process as necessary.
    - Establish statutory and/or agency guidance of what constitutes acceptable mitigation (seasonal use criteria, etc.).
    - Establish statutory and/or agency guidance of when mitigation may be required (related to withdrawal authority under RCW 90.54).
    - Include more flexibility with regard to acceptability of mitigation where it is not intended to resolve impairment issues.
    - Clearly communicate to water right applicants about the needs for mitigation before collecting the application fee.

- **Promote and assist development of water banks to provide efficient mitigation solutions for communities.**

- **Utilize Water Conservancy Boards to accomplish additional processing.** Water conservancy boards were authorized in 1997 to assist Ecology in working down the backlog of change applications. Conservancy boards are established by counties with the approval of Ecology. They have authority to review change applications and to recommend a decision to issue, deny, or condition the change, with Ecology retaining the final decision authority and the responsibility to defend the final decision. The county-appointed board commissioners are volunteers who must take a thirty-two hour training course and pass an examination on basic water law and practice. Applicants have a choice of having their application reviewed by a conservancy board if one exists in their county or they can opt for Ecology alone to process the application.

  Seventeen conservancy boards have been established. Some are very active and some are essentially inactive. Because these are unpaid positions, some counties have had difficulty in keeping board commissioner positions filled. Additional boards might be established if supported by state funding. Most receive only nominal support from the counties and no funding is currently provided by the state. The boards can also charge fees for processing change applications.

  Some stakeholders have suggested that conservancy boards should also be given authority to process applications for new water rights. Some have also suggested that conservancy boards be freed from Ecology oversight and be allowed to act independently from Ecology. One major difficulty with this suggestion is that under current law the Attorney General's Office can only defend Ecology's decisions. If boards had independent authority, they would need to be able to defend their own decisions.

  Many of the water right appeals filed in recent years on water right changes have come from conservancy board decisions. A typical situation arises where applicants, represented by an attorney or consultant, draft a Report of Examination for their own application and pressure the board to approve it, even if it has legal flaws or omissions. The board forwards the decision to Ecology who is required to reverse the decision or modify the decision so that it passes legal muster. The applicant then appeals in order to get the earliest possible review by the Pollution Control Hearings Board. Ecology has successfully defended most of these appeals. This process takes an extraordinary amount of time and resources.

  In addition, conflict of interest concerns have arisen from some conservancy boards. Some board members have represented applicant clients in front of their own boards creating an appearance of fairness problem, although they have recused themselves from involvement in the decision making. Ecology proposed remedial legislation for these problems last year but retracted it at the request of the boards in order to provide boards and counties an opportunity to come up with solutions among themselves. Unfortunately, this issue does not appear to have been resolved to date.

- **Provide the science-based data and analysis necessary to determine water availability, water supply limitations, and mitigation options in each WRIA.** Data and analysis provides water resource managers with better information about the status and trends in water supply–both surface and groundwater. Making informed decisions

about pending water right applications requires stream gaging and groundwater assessment data. In many cases, the lack of data makes it difficult to determine if a water diversion or withdrawal will impair stream flows or other senior water rights. Uncertain availability also makes it difficult for local governments to plan under the Growth Management Act. This should include:

  - **Supply and Demand Forecasting**. Supply and demand forecasting is lacking in many areas of Washington State. Water supply utilities commonly use this tool to determine how much water is needed for projected population growth. OFM estimates that the state's population will grow by about 1.7 million people over the next 20 years. The state needs to determine where this growth will occur and how much water will be needed to accommodate it in those locations. Forecasting is a necessary precursor to considering what types of conservation and development projects will be needed.
  - **Ecology's Stream Flow Monitoring Program.** Presently the state helps fund local partners to help maintain stream gages. This reduces the need for Ecology staff to travel from long distances to the gage sites. Local partners should fund their own participation. To ensure that the stream gaging network is as cost effective as possible, models would be developed and evaluated for each critical stream reach. These models will be used to determine if these critical reaches need to be permanently gaged, or if they can be modeled using information from other gages within the system.
- **Streamline Extent and Validity Determinations**: One of the most challenging issues related to processing water right applications is applying the current relinquishment law and determining the extent and validity of water rights. Simplifying the 21 exemptions and sufficient causes for non-use and defining reasonable periods for quantifying the water right could yield significant savings.

Preferred options

Stream Gaging: Continue the existing stream gaging network to provide accurate and timely information on how much water is flowing in rivers and streams so Ecology can effectively manage Washington stream flows for instream and out-of-stream users. Add 15 gaging locations statewide and 2 new grants to locals per biennium for the next three budget cycles (totaling 45 new gaging locations and 6 new grants).

Groundwater Monitoring: Create a comprehensive groundwater management program designed to provide groundwater monitoring, characterization, and support modeling efforts in priority areas statewide. Ecology proposes a program using a basin-by-basin approach, starting in priority basins. Two assessment teams could complete monitoring and characterization work and move on to the next basin, while modeling and long-term management can be set up with contractors and local stakeholders. In this way, a comprehensive statewide program is pieced together basin by basin. The groundwater assessment for each basin would be done in three steps:

1. Conduct field measurement and characterization of groundwater systems, including how water moves through a basin, how much is used, and how aquifers interact with surface water.

2. Develop quantitative tools for predicting hydrologic changes resulting from alternative management and mitigation scenarios.
3. Monitor groundwater conditions over time to assess current conditions, long-term trends, and develop basin groundwater management plans and mitigation opportunities.

Synoptic Flow Studies: Conduct synoptic flow studies on two watersheds. Synoptic flow studies help determine the unique flow characteristics within a specific river system. These studies typically try to establish a water balance for the system by measuring all input from major tributaries combined with measurements on various mainstem river reaches to determine if they are gaining or losing water. This critical information helps us understand the groundwater/surface water interactions within the specific river systems and can be very useful in determining where to place future groundwater monitoring wells for groundwater and surface water interaction studies, that inform water resources decisions in the future.

Modeling Stream Flows: Compile flow data from key flow monitoring locations and develop hydrologic or statistical models to predict flows in those locations. This meets multiple objectives by providing:

- Alternatives to direct monitoring for assessing flows.
- Cost-effective reallocation of flow monitoring resources.
- Data to support water management where direct measurements are unavailable.
- Additional tools for assessment of surface and ground water resources.
- Support for hydrologic studies such as surface/ground water interactions studies.

Science-Based Analysis/Supply and Demand Forecasting: Comprehensively characterize the state's water resources, examining current quantity and changes in supply due to climate change. In addition, conduct demand-forecasting to determine how much water is being used now and how much water will be needed in the future given predicted climate change effects and development trends. This information will:

- Identify water supply limitations.
- Help prioritize agency work (e.g., claims review, instream flow rules).
- Support water supply development, conservation, and storage solutions.
- Provide the scientific data needed to make sound land use and water use decisions that protect the economic and environmental water needs of future generations.

State Water Supply Program: Develop a comprehensive water supply program, similar to the Office of Columbia River, for the remainder of the state. Two-thirds of the active storage would be available for out-of-stream uses and one-third to augment stream flows. The program would:

- Assess, plan, and develop new water storage.
- Improve or alter operations of existing storage facilities.
- Implement conservation projects.
- Take any other actions that would provide access to new water supplies for both instream and out-of-stream uses.

Streamline Extent and Validity Determinations: Amend the relinquishment statute in order to allow for more effective in water right processing, including extending the relinquishment

period, streamlining the exceptions to relinquishment, and reducing the "look-back" period for extent and validity review to a 30 year period.

Establish an annual water management services fee for those who benefit from managing the state's water. Establishing a water management services fee with appropriate rates that adhere to both the *beneficiary pays* principle and the *ability to pay* principle could generate sufficient revenue to adequately fund the Water Resources Program, move away from general fund dependence and vulnerability, and improve management under new approaches designed to meet the needs of a growing population and economy. A stable revenue source would enable the Water Resources Program to fully implement the law and have a modern and comprehensive water management system.

5. Prepare and Respond to Drought

Description

Ecology provides services to reduce the impact of droughts and to prepare for future droughts and climate change.

Why it is important

When droughts are declared, services include providing water through emergency transfers, water right changes and temporary wells. Ecology also provides drought information, technical assistance, financial assistance, and coordinates drought response efforts. Ecology continually monitors emerging information on climate change for future water supply implications.

Current funding structure

In the 09-11 biennium, prepare and respond to drought is supported by:

- $200,000 for General Fund Private/Local
  $240,000 for State Emergency Water Projects
  $4,000,000 for State Drought Preparedness
  $4,440,000 total funding was added in the 2010 supplemental budget. Subsequently, a drought was not declared and none of the dollars were needed or used.

When a drought is declared, a significant amount of additional state funding is expended if it is available. For example, in 2005, approximately $8.5M was spent on drought response and in 2001 approximately $7.9M was expended. Unlike in the past, there is no current stand-by source of funds or bonding authority for drought relief

Are there ways to achieve additional self-sustainability?

In 2001, there were no loans issued for capital projects, but Ecology issued $3M in grants. In 2005, Ecology's drought expenditures were approximately $1.5M (hiring temporary staff, leasing water for instream flows, other fish passage projects, and contracts to other agencies for drought response). The remaining drought balance applied to grants with the exception of a single $350,000 loan.

While Ecology's drought expenditures need to be General Fund driven, drought response capital projects need not be grant funded. Most of the money spent on capital projects in 2001 and 2005 permanently increased the adaptability of recipient water right holders. As such, because of the 2001 and 2005 droughts, most water users should be adequately prepared for the next drought. In addition, drought is a normal part of the hydrologic cycle and should not be unexpected, especially in a climate changed future with projected declining snowpack and earlier snow melt-off. Given that, future funding for drought response capital projects could, with few exceptions, be via loans not grants.

Existing reform measures

Ecology has not initiated any recent drought reforms other than to anticipate the effect of climate change on the frequency of possible drought conditions. During the past year when it appeared that a drought declaration could become necessary, Ecology hosted joint telephonic meetings of the Executive Emergency Water Committee (policy group) and the Water Supply Availability Committee (technical group) to save time and travel money.

Range of new efficiencies and reform options

- As Ecology develops more experience with water banking throughout the state, such activities, when done in a drought response setting, will naturally become more efficient.
- During a drought response, the $5M or so spent on grants could instead be predominantly loans.
- An Ecology policy interpretive statement that defines "normal" as a running 30-year average would mean less frequent drought declarations in areas where supply is not snowpack.
- Modify Ecology's authority to expend general water supply bonds to fund capital drought relief projects.

Preferred options

Future drought response should favor loans over grants with few exceptions and the definition of "normal," as it pertains to the drought statute, should refer to a running 30-year average. If general water supply bonds are made available, the expenditure authority should include the ability to commit such bond funds to emergency water supply projects during a declared drought.

6. Ensure Compliance with Water Laws

Description

Ecology is responsible for compliance and enforcement of Washington's water laws. Compliance staff (both program compliance officers and watermasters) provide technical assistance to the public, government officials, and tribes. Compliance staff also responds to and investigates complaints received to ensure that water is being applied within the limits of the water right, permit, or claim. Compliance staff has authority to issue notices of violation and regulation, and recommend other enforcement actions such as administrative orders and penalties. Compliance activities include managing the metering and reporting of 80 percent of

water use in 16 fish critical basins, along with providing education, technical assistance, and strategic enforcement when appropriate.

Why it is important

Ecology helps ensure water users comply with the state's water laws so other legal water users and stream flows are not impaired, water use remains sustainable over the long term, and the environment is protected for the benefit of people and nature.

Current funding structure

In the 09-11 biennium, water right and metering compliance is supported by:

- 4.12 FTEs - Metering Compliance
  4.84 FTEs - Water Rights Compliance
  1.10 FTEs - Columbia River Metering Compliance
  1.00 FTEs - Columbia River Water Rights Compliance
  1.95 FTEs – Admin/Other
  13.1 FTEs (total authorized)

- $2,294,453 of General Fund - State

Are there ways to achieve additional self-sustainability?

Ecology could achieve self-sustainability if provided a separate funding source based on water services or water application fees.

Existing reform measures

The $5,000 per day maximum penalty capacity for violation of the Water Code, which the Legislature approved in 2003, was a needed and welcome reform. This has provided Ecology the regulatory tool needed to implement an effective water right compliance program—if sufficient staff were available. In reality, although many illegal uses are known, Ecology enforces against very few water right violations. Ecology also recently adopted a penalty matrix for assessing the level of penalty to impose depending on a number of factors.

Range of new efficiencies and reform options

- A majority of a watermaster's time is spent educating people on the workings of Washington water law. The public is generally uninformed regarding conservancy boards, the groundwater permit exemption, and water right claims. Finding new ways to spread information on basic water law to the public would reduce time spent in the field, as well as violations due to unfamiliarity of the law. This could include expanding our website to dedicate a new page to inform the public on water law.
- People often resolve compliance issues through a water right transfer or change. Ecology, due to permitting staff reductions, no longer processes changes in a portion of the state. This leaves conservancy boards, made up of volunteers typically without a robust knowledge of Washington water law, as the only option. Their decisions are then subject to Ecology review and sometimes end up in lengthy appeals. Additional funding for permitting staff would alleviate the permitting backlog of changes, reduce the dependence on conservancy boards, and help water users obtain compliance in a timely way.
- Unauthorized users are often referred to other entities in search of a transferrable right to legalize their water use. This includes the Farm Bureau, Conservation Districts, Water Trust

organizations, private lawyers, and even private realtors. Ecology has an online water right exchange board that could be improved to consolidate such searches.

- Watermasters sometimes author temporary change authorizations. These can be lengthy documents that take up a lot of staff time, including for internal review. A closer look at the potential to streamline the process for temporary changes may be appropriate.
- Reforming relinquishment (by expanding the "use it or lose it" period beyond 5 years and/or reducing the extent and validity look-back period to 30 years rather than the entire life of the water right) would reduce costs and staff time. In addition, eliminating partial relinquishment for commercial agricultural irrigation would reduce compliance problems.
- The current stream patrol statute limits its use to adjudicated stream systems where the water right holders have petitioned Ecology for an ongoing presence to assure compliance with adjudicated water rights. Broader use of this tool would be possible if Ecology had more discretion to establish stream patrollers and to require water users to fund the activity. In addition, stream patrollers need the authority to monitor and enforce groundwater rights and unadjudicated water rights.
- Establish watermasters in areas of intensive water use and conflicts. The Puget Sound Partnership has requested the state to hire and assign watermasters to all areas draining to Puget Sound. This is to improve compliance with state water laws and protection of streams from dewatering by illegal water uses. Several watershed planning units have also asked for Ecology to establish new watermaster positions in their watersheds. Ecology would like to be able to accommodate these requests but does not have sufficient resources. A new expanded source of funding through a water services fee or water permit fee would allow Ecology to meet this need.
- Clarify Ecology's authority to regulate water rights and claims in accordance with their priority. The 1993 Supreme Court Decision in *Rettkowski v. Ecology* (aka the *Sinking Creek* case) limited Ecology's ability to resolve disputes among water users unless water right claims involved in the dispute have been adjudicated. This has prevented Ecology from regulating water rights based on priority date. Ecology needs authority to make a tentative determination of extent and validity of rights and claims in order to protect senior water rights from impairment by junior rights in order to effectively manage water resources.
- Create and build incentives for water users to move toward compliance.

Preferred options

Adequate funding is necessary to more fully implement a compliance program. Enforcement actions are time consuming and expensive because of the amount of documentation required and the legal proceedings that often follow. Ecology does not currently have sufficient staff to investigate complaints, expand the metering program, or ensure adequate quality assurance of metering data. A new source of funding from an annual water management services fee could help alleviate the capacity problem and enable Ecology to move forward with many the proposed efficiencies listed above. In addition, Ecology would prefer a statutory amendment to the Water Code allowing it to protect senior water right holders from impairment based on priority.

7. Provide Water Resources Data and Information

Description

Ecology collects, manages, and shares data and information that is critical to modern water management in several data base and geographic information system applications.

Why it is important

Reliable water data is essential to local watershed groups, conservancy boards, businesses, local governments, nonprofit groups, the Legislature, other agencies, and the media. Data supports daily agency operations, including making water allocation decisions; setting and achieving instream flows; identifying the location and characteristics of groundwater wells, dams, and surface water diversions; supporting compliance actions; metering; tracking progress; communicating with constituents; and serving most of the other water resource functions.

Current funding structure

In the 09-11 biennium, providing water resource data and information is supported by:

- 26.98 FTEs – Data & Information
  1.42 FTEs – Admin/Other
  28.4 FTEs (total authorized)

- $6,723,781 of General Fund – State
  $27,552 of General Fund – Federal
  $386,930 of Reclamation Revolving Account
  $310,000 Basic Data – Non Appropriated
  $97,528 of Water Right Tracking System funds
  $7,545,791 Total funding

Twenty percent of the fees collected by Ecology for water right processing and dam safety inspections are deposited into the Water Right Tracking System Account. This account can be used for the development, implementation, and management of a water rights tracking system, including a water rights mapping system and a water rights data base. The two year 2009-2011 revenue estimate for this account is $150,000.

Are there ways to achieve additional self-sustainability?

Because water resources data collection and management system development and maintenance are heavily dependent on the State General fund, shifting some of these costs to a fee supported structure would achieve greater self-sustainability. *See* the Appendix, Section 4 and Appendix B regarding potential fee support of water resources data and information.

Existing reform measures

Ecology is currently enhancing the **Water Rights Database** to better support water management in Washington State and move the database beyond just a permit-processing tool. Data are updated as new applications are filed, and water right changes and permits are issued. The Water Rights Database tracks the status of more than 200,000 water rights and claims. Ecology uses this database as its primary research tool to support its water right investigations. It holds information on who has claims, permits, or certificates of water right and how much, where, and for what

purposes. The current version of the Water Right Database allows staff to retrieve historical documents associated with each water right and view the imaged records if available. The enhanced system, when complete in 2011, will provide internet access to water right information, as well as better analysis options. Public access will reduce the number of water right information requests data requests that have to be answered by program staff.

Ecology is also combining two existing systems that track well construction and licensing data into one integrated **Well Construction & Licensing System** that captures more detailed and accurate data being requested by stakeholders. The new system will greatly increase customer service and program efficiency by providing well-driller licensing data over the internet, allowing applicants to submit well construction applications and reports through the internet, by integrating a continuing education module. The submission of data through the Internet will be more convenient and faster for the customers and eventually reduce data entry for Ecology staff. This system will be complete in 2010.

Range of new efficiencies and reform options

- **Advancing Office of Columbia River System to implementation:** RCW 90.90.050 requires the Office of Columbia River (OCR) to establish and maintain a water resources information system for the Columbia River mainstem to provide the information necessary for effective water resource planning and management. The system will track water rights, water acquisitions, and water use (metering) information needed to have a complete water budget by reservoir pool for the Columbia-Snake river system. The system will also provide access to information regarding water supply (conservation, storage, etc.) projects throughout the Columbia River Basin.
- **New OCR data management system:** The current Water Right Database and other systems function as independent silos for water right, metering, trust water, and other related data, but are not connected. Currently, water budgets for the Columbia River system are being calculated in an inefficient Excel spreadsheet. The new OCR System will connect all of the individual databases allowing the data to be added or subtracted in real time to create water budgets for specific geographical areas.
- **Water right mapping effort statewide:** For more than a decade, the program has been mapping 220,000 water rights and claims using available resources. Currently about 40 percent of this long term project is complete. Mapped water rights have a number of uses including pre-adjudication research, public access to water rights information, and the ability to research the current holders of rights and claims. A requirement that property sales and subdivisions of land with a water right or claim be reported to Ecology would help keep this information up to date. This would require legislation that could impose some new costs on local government or on real estate transactions.

Preferred options

The primary needs in this area are to continue modernizing and integrating water resources information systems, and to complete the statewide water rights mapping project. We must continue to collect and enter information for those systems to be useful to state and local

agencies and to the public. This requires an ongoing investment. Furthermore, the software and hardware platforms that house this information must be periodically updated.

Information systems benefit both the general public and the holders of water rights, therefore a mix of funding sources including some State General Fund and some dedicated fee revenue would be justified to maintain these vital information systems.

To support development of a billing system for an annual water management services fee, the statewide mapping project needs to be accelerated and completed within two years. To do this some form of "bridge funding" is necessary until the new fee can be collected. Ecology estimates it will require $2.5M and 14.0 project FTEs for two years to complete this project.

8. Regulate Well Construction

Description

Ecology protects consumers, well drillers (mostly small business operators), and the environment by licensing drillers and regulating and inspecting well construction and decommissioning of wells. A portion of the work is accomplished in partnership with 17 delegated counties who inspect certain well drilling activities. Ecology also updates rules; investigates complaints; reviews requests for variances from the minimum construction standards; provides continuing education to well drillers; and delivers technical assistance to homeowners, well drillers, tribes, other state agencies, and local governments.

Why it is important

Proper well construction and decommissioning protects public health and the water resources of the state from contamination and improper use or waste of water.

Current fee structure

In the 09-11 biennium, regulating well construction is supported by:

- 7.58 FTEs – Regulate Well Construction
  0.82 FTEs – Admin/Other
  8.4 FTEs (total authorized)

- $1,724,539 of Reclamation Revolving Account

The well construction activity does not rely on any State General Fund dollars. It is 100 percent supported by well drilling and licensing fees, which are deposited into the Reclamation Account. The current fee structure is as follows:

- Drillers pay a fee of $75 per license (groundwater well and resource protection well drillers are licensed separately) every two years.
- One-time fees for well construction and decommissioning are due before any work may be started. Water well construction fees are based on well diameter, up to 12-inches in diameter, the fee is $200 per well. For well diameters equal to or greater than 12-inches, the fee is $300. Dewatering wells (generally for below grade construction work in areas

with shallow groundwater) are based on lineal feet of area to be dewatered, $40 for every 200 lineal feet.

- Fees for resource protection wells are based on the intent and permanence of the well. The fee for a permanent water level monitoring well is $40 per well. For temporary wells constructed only to sample soil or vapor, no fee is charged. Fees for wells used to exchange heat between the ground and the heat exchanger for heating and cooling structures is $10 per well. The fee for an electrical grounding well greater than 25-feet deep is $10 per well.
- The fees for decommissioning groundwater wells ranges from no fee for decommissioning temporary soil and vapor sampling wells to a maximum of $50 for decommissioning a water well.

Are there ways to achieve additional self-sustainability?

Currently fees cover the cost of this Water Resources Program activity; however, only about 50 percent of new wells are now inspected by Ecology or delegated counties. Inspecting a higher proportion of new wells and well decommissioning activities would help provide comprehensive public health and water resource protection. Conducting additional inspections would require more personnel at Ecology, delegated counties, or both, requiring an increase to well drilling fees.

Existing reform measures

The well construction rules were recently revised to incorporate changes in drilling technology and to include use of the Internet to reduce paperwork burdens on well drillers. Ecology uses a technical advisory group to assist it in periodically updating rules.

Range of new efficiencies and reform options

Currently Ecology and delegated counties do not have enough available personnel to inspect more than about 5 percent of new resource protection wells and about 50 percent of water wells throughout the state. Unlicensed drilling and inadequate construction is likely occurring; more inspections would improve this low inspection rate and raise the level of compliance with well construction regulations.

- Increasing fees for water well construction would allow Ecology to expand the program and include more county government representatives in water well inspection. Currently, only seventeen counties have delegation agreements. Although it is a local option, it is also constrained by the availability of well drilling revenue.
- Doubling the fees for water wells (from $200 to $400 for the most common well size) could possibly allow Ecology and delegated counties to double the inspection rate for water wells under construction and decommissioning, and enhance protection of the public and the resource. Within delegated counties the amount of revenue transferred to the county limits the number of inspections that can occur (currently about 16 percent). Additional revenue would allow those counties to increase the number of inspections.
- Propose legislation to change licensing and reporting requirements for certain activities that are now considered well construction but are not a good fit under water resources management (such as shallow well construction activities common in the septic design industry, wetland investigation, and soil sampling around contaminated sites). These would be best given to other agencies with related missions.

- Similar to Ecology's new Certified Water Rights Examiner program, Ecology could create a Certified Well Construction Examiner program. These certified private individuals could inspect water well construction in counties without delegated inspection authority and resource protection wells throughout the state. Increasing the inspection rate for wells under construction would increase compliance, and well owners would pay the increased costs of the program directly. The examiners would submit inspection reports to Ecology for our review, much like the current relationship with delegated counties. Ecology would need to establish the certification program, track examiner qualifications, and assure that they are technically competent.

Preferred options

- Establish a new Certified Well Construction Examiner program through legislation and rulemaking.
- Change licensing and reporting requirements for certain activities that are now considered well construction but would better fit other agencies with related missions.
- Provide additional resources to conduct more inspections and increase county delegation to follow-up on reports of unlicensed and improper well construction and decommissioning.

9. Watershed Management

Two Ecology programs, the Shorelands and Environmental Assistance (SEA) Program and the Water Resources Program, are involved in administering and supporting watershed management. SEA administers watershed grants from the operating budget and provides watershed leads who work directly with watershed planning units on plan development and implementation. The Water Resources Program also provides technical assistance and information to planning units and manages capital grants used by watershed groups to carry out water supply project studies and implementation. The Water Resources Program also takes the results of watershed plans and translates them into water management rules (i.e. instream flow rules) and decision-making relating to water rights management in the watershed. These roles and responsibilities are discussed in more detail below.

Shorelands and Environmental Assistance Program Focus

Description

The 1998 Legislature passed the Watershed Planning Act (RCW 90.82) creating a process for developing local solutions to water resource issues on a watershed basis. The Act states: "The legislature finds that the local development of watershed plans for managing water resources and for protecting existing water rights is vital to both state and local interests." Since its adoption in 1998, implementing the Watershed Planning Act has resulted in the production of 29 distinct watershed plans that cover all or parts of 37of the state's 62 WRIAs. The creation of these plans brought diverse interests together to agree on basin-level water management strategies. Watershed planning units were required to address local water supply issues, and could choose to include water quality, instream flow, and habitat issues.

Once the county boards of commissioners with jurisdiction in the basins formally adopt a local watershed plan, the implementation phase begins. The Watershed Planning Act provides five years of implementation funding support for the planning unit's lead agency (counties, cities, public utility districts, conservation districts, tribes). This five-year timeframe and limited budget appropriation funding has proven to be insufficient to effectively implement plans. The absence of a long term, sustainable funding source threatens to erase progress made addressing complex and contentious water issues.

Why it is important

Since 1998, the state has invested approximately $76 million from the operating budget in grant money and staff efforts to develop, adopt, and implement 29 watershed plans and 3 more expected in the next six years. Additionally, capital budget expenditures to implement plans from 2003 to 2009 were approximately $74 million. Due to the current statutory construct, ten watershed planning units have lost or are losing core operating funding during the 2009-11 biennium. An additional 13 will lose their core funding eligibility in the next biennium. Another eight will lose basic operating grant support in the 2013-15 biennium. Discontinuing this investment threatens progress made on addressing difficult water management issues and the excellent partnerships formed among diverse interests.

An important outcome from watershed management has been a significant improvement in communication and understanding about water supply management issues among state and local governments, tribal entities, and various interest groups. The state has created and sustained valuable partnerships in basins where prior models of state driven, top-down water management initiatives were simply not working. The benefits of these new relationships could easily be lost if funding dries up. Ecology believes these relationships should be supported and maintained in order to move forward with comprehensive water management.

Current funding structure

To implement the Watershed Planning Act, state funding fully supports or supplements most local costs. Specifically, the SEA Program administers grants for planning unit/lead agency operations and plan implementation, and for flow achievement projects.

Local grants from the State General Fund for the current biennium:

- $4,867,042 (FY10)
- $3,916,367 (FY11)

Additionally, Ecology provides technical and professional assistance to planning units and managing the local grants program, all currently appropriated from the State General Fund:

- 13.1 FTEs Total
- $1,195,233 (FY10)
- $1,168,371 (FY11)

Are there ways to achieve additional self-sustainability?

Ecology recommends continued funding for watershed implementation projects, including a local cost-share provision (cash or in-kind services). Revenue from a new annual water management services fee could supplant some of the State General fund appropriation. This is

justified by the fact that not only do the general public and the environment benefit from watershed management but water right holders and claimants do as well.

Existing reform measures

- Facilitate communication exchanges between watershed planning units across the state to share successful strategies on implementing projects and policy initiatives.
- Technical assistance to watershed planning groups on scoping technical work to ensure projects meet agency data collection standards.

Range of new efficiencies and reform options

Watershed planning looks different in each watershed due to the diversity of physical and political characteristics of each watershed. Ecology has tried to balance its responsibility to manage the state's investment with being flexible to meet the needs of each watershed.

Despite these challenges, there are many opportunities to increase efficiencies by providing more structure and guidance to watershed planning units on water management options and conducting technical studies. This would ensure that watershed funded projects meet the needs of the agency for adopting instream flow rules or reviewing water right decisions.

If funding becomes more limited, Ecology will have to make hard and careful decisions about which watersheds are the highest priority for ongoing investment to address the state's most pressing water management needs. This does not mean that disinvesting in lower priority basins is acceptable for long term watershed management needs and general statewide economic productivity.

Most areas that chose to plan under the Watershed Planning Act are now in the implementation phase. It would be more accurate and realistic to rename RCW 90.82 as the "Watershed Management Act," or something similar, in order to convey the current nature of the program since it has evolved into the implementation phase.

In addition, extend Phase 4 funding eligibility by four more years of local implementation support. For these additional four years, Watershed Councils/Lead Agencies could be eligible for up to $50,000 per year with required fifty percent local cash/in-kind services match. Specified expectations and deliverables attached to such funding could include: (1) assist and advise on development of scientifically based water budgets and flow restoration priorities and strategies, and (2) check and revise local implementation plans for alignment with statewide natural resource mission and goals such as those of Salmon Recovery, the Growth Management Act, Office of Columbia River, Puget Sound Action Plan, outer coast salmon strongholds, water quality management, Shoreline Management Act, floodplain, and wetland programs.

Funding the operational costs of implementing watershed plans is challenging, and divides into major areas; funding local government plan implementation needs as well as funding state level (primarily Ecology) plan implementation obligations. For example, local governments (counties, cities, public utility districts, and conservation districts) act as lead agencies for watershed plan implementation groups. They need to cover local group facilitation and administrative costs, as well as to fund projects for which local governments with jurisdiction in the watershed are responsible to carry out. These are typically not infrastructure projects, but instead are local

regulatory, land use planning, or physical studies and analyses of local water resources, supply and demand studies and deliberation on instream flow setting.

Ecology has encouraged local governments to use their authorizing statutes to raise revenues through locally assessed and managed water management fees or taxes, akin to currently used conservation district fees or the common use of noxious weed control fees or taxes. While this is clearly a tool available to them, some local government representatives have expressed reluctance to this strategy, due to the current economic climate.

Capital budget funding under the Watershed Planning Act has fluctuated in recent years due to budget constraints. The following is a summary of the investment for the past six years:

Biennium	Amount
FY 05-07	$12 million
FY 07-09	$14 million
FY 09-11	$6 million

For the 2009-11 period, Ecology requested $16 million in capital budget funds to fund watershed plan implementation projects that address high priority instream flow achievement goals. The 2009 Legislature also included a $600,000 proviso to provide additional financial support for eligible watershed planning unit lead agency basic operating needs. For the same period (2009-11), Ecology requested $15M to finish development of two watershed plans and to implement local and state actions in 29 watershed plans adopted by county boards that cover all or parts of 36 state WRIAs.

Last year, Ecology requested $16M to principally fund watershed plan implementation with some funding dedicated to plan development, and only received $6M forthese needs.

Preferred options

- Amend the Watershed Planning Act to the Watershed Management Act in order to focus on implementation.
- Extend Phase 4 implementation funding eligibility by four more years to enable continuation of local efforts to implement their plans.
- Restore capital appropriation (in the amount of $16M) for watershed plan implementation and flow achievement and potentially expand the capital budget (e.g., through a dedicated bond fund) in future years depending on need and the state's financial capability.

Water Resources Program Focus

Description

The Water Resources Program works with local watershed planning groups, state and federal natural resources agencies, and tribes to address water resource issues under the Watershed Planning Act (RCW 90.82) and the Water Resources Act (RCW 90.54). Ecology relies on these management plans to propose and adopt instream flow rules for river basins and address water needs for future growth.

The Water Resources Program supports local watershed planning units in developing instream flow recommendations through:

- Technical presentations on water law as related to instream flows, the hydrologic cycle, groundwater/surface water interactions, historical seasonal flows, and modeling to determine the flow versus fish habitat relationship.
- Technical assessment on the scope of work plans for consultants, monitoring field work, and reviewing final fish habitat and flow reports for quality assurance.
- Field work, such as conducting fish habitat/flow studies and collecting streamflow data.
- Technical assistance to ensure that proposed instream flow levels will be legally and scientifically defensible.
- Technical assistance to identify and implement water supply options to meet future out-of-stream needs.
- Technical assistance for of the scoping and review of groundwater studies and models.
- Data on water rights and claims and estimates of the effects of diversions and withdrawals on water availability.
- A local grant program to support Ecology's stream gaging activities within six WRIAs. The grants enable Ecology and local cooperators to work together as partners to collect streamflow data.

Where watershed planning groups have not chosen to work on instream flows, the Water Resources Program takes the lead role in developing, conducting, and analyzing fish habitat and hydrologic studies to support the development of instream flow and water management rules for these river basins.

The Water Resource Program also works with watershed planning groups to implement recommendations on meeting future water supplies. This is accomplished by using technical information generated from watershed planning to process water rights, by processing water rights in high priority areas identified by watershed planning groups, and by managing a capital grant program to implement projects that meet water needs and benefit watershed health.

Why it is important

State law requires Ecology to set instream flows by rule throughout the state on rivers and streams. Instream flows have only been set in about one-third of Washington's 62 WRIAs. Instream flows set by rule protect streamflows from further diminishment by use of water rights issued after the instream flow rule is adopted. Setting the flows then allows Ecology to make decisions on pending water right applications. Watershed management plans can assist rule-making by producing instream flow recommendations and water supply strategies to include in the rule.

Water law, stream hydrology, and fish biology are complex fields and a large amount of technical assistance is needed to help local watershed planning groups develop and implement local water management plans. The Water Resource Program also plays a critical role in implementing watershed management plans. Watershed plans may recommend specific

implementation actions for Ecology, such as water right permit processing, compliance and enforcement of the water code (some plans request establishment of new watermaster positions), groundwater modeling, water rights adjudication, stream gaging and adopting and implementing instream flow and water allocation rules. Some of these expectations have been difficult or impossible for Ecology to meet due to budgetary limitations.

Developing instream flow rules and other water management tools helps the Water Resources Program meet its mission of managing the water resource to protect streamflows while attempting to meet current water needs and ensure future water availability for people and the natural environment.

Current funding structure

In the 09-11 biennium, Watershed Planning in the Water Resources Program is supported by:

- 7.12 FTEs – Watershed Planning
  1.98 FTEs – Admin/Other
  9.1 FTEs (total authorized)

- $2,694,396 of General Fund - State

Are there ways to achieve additional self-sustainability?

Many of the benefits from watershed management are general in nature and are better funded through the State General Fund. However, some benefits provide greater value to individuals or identifiable groups who should provide a proportion of the cost. For example, the beneficial function of protecting senior water rights through compliance monitoring could be funded in part through a yearly water management services fee. Developing future water supplies could also be partially funded through a yearly water management services fee. Although cost-share is required for some watershed grants, expanding the requirement for matching of cash or in-kind services to more watershed grants could help spread existing watershed funding to more watershed projects.

Existing reform measures

Ecology staff are currently updating our "Toe-Width" method to improve instream flow assessments, which is an extensive scientific and technical effort.

Range of new efficiencies and reform options

There is always a conflict between the level of technical expertise and oversight the public wants and the level we can provide with existing state dollars. Watershed groups want detailed groundwater models covering their entire watershed and state of the art instream flow studies and stream gages on every stream and river. Because planning units are generally comprised of members who do not have a technical background, these groups frequently rely on private consultants to propose and scope technical studies. Although some good projects have been completed, increased Ecology leadership and oversight could help better focus watershed work.

With only nine FTEs, the Water Resources Program provides a high level of expertise and support with the limited resources available. As a result of the resource limitations, we need to use less resource-intensive assessment methods that substitute conservative assumptions about on-the-ground conditions rather than extensive field studies. Examples include the shortcut

"Toe-Width" fish habitat model and developing instream flows using infrequent stream flow measurements or estimates. Most river basins do not have groundwater models. The only way to be more efficient with technical support would be to prioritize and ration it in the face of more demand. It is difficult to tell some groups that we cannot help them because their needs are not as important as other groups' needs.

Watershed planning is maturing with fewer plans in the development stage, and most focused on implementation. This means that the nature of the support provided by the Water Resources Program is changing too from up-front technical support to adoption of rules, assessment of projects, establishment of water banks, and processing water rights.

The Watershed Planning Act has few prescriptive technical requirements for watershed plans. The Act also requires consensus approval of the final plan. As a result of these features, the technical studies produced under watershed planning vary considerably from watershed to watershed and do not meet all data needs for purposes such as processing water rights or adopting instream flows. More standardized outcomes could be achieved by providing Ecology greater technical oversight of the technical studies conducted under watershed planning.

At its peak, Ecology maintained 195 stream gages (2007-2009 Biennium). Budget reductions this biennium have resulted in decommissioning 65 gages and reducing the amounts of local grants. Ecology's current stream gaging network currently consists of 130 total gages in 24 watersheds around the state, including 11 salmon critical basins. With the projected budget for the 2011-13 biennium, it appears Ecology would need to reduce its stream gaging network by at least another 15 to 20 gages, and may have to eliminate the grant to local governments altogether. Currently this work is entirely supported by the State General Fund and has been subject to budget reductions in recent years. This is an activity that could be at least partially supported by an annual water right services fee collected from existing water right holders and claimants.

New reform options include:

- Provide the Water Resources Program with more oversight authority for the development of watershed planning funded technical studies.
- Adopt legislation to streamline the instream flow rulemaking process.
- Encourage watershed planning efficiencies by requiring a match of cash or in-kind services for watershed grants.

Preferred options

- Provide the Water Resources Program with leadership and oversight authority of watershed planning funded technical studies.
- Require watershed planning groups to address instream flows and provide a match of cash or in-kind services for capital grants.
- Establish a yearly water management services fee for water right holders in order to cover a portion of the water resource activity costs.

10. Support Water Use Efficiency

Description

Water use efficiency applies to three types of water uses: industrial/commercial uses, agricultural uses, and municipal uses. The conservation methods, agency staff expertise, and other partners interested in water efficiency are specific to each sector of water use. Ecology provides agricultural, commercial/industrial, and nonprofit water use sectors with expertise and services that facilitate more efficient water use. The expertise and services include technical information, planning, engineering, on-site inventories and assessments, and financial assistance. Water resources staff supports the Water Quality Program's review of municipal and industrial reclaimed water projects and Department of Health's review of municipal water service plans. Water use efficiency opportunities are the greatest in the agricultural sector where many very old water delivery systems are still in use and modern technology can easily make substantial gains in water use efficiency.

Why it is important

More efficient water use increases any water system manager's ability to meet the water requirements of the uses and customers on any system. If the same volume of water can be stretched to meet additional demands, new diversions or withdrawals and investments in new infrastructure can be avoided or deferred. Any system that pumps water will also benefit by reduced power consumption. Finally, automated control systems not only save water by more precisely matching supply and demand, they can also reduce labor costs.

For those areas experiencing very low stream flows, improving water use efficiency can benefit instream flows while retaining the historic water uses upon which a local economy depends. At the most fundamental level, modern water conveyance and application technology, storage capability, automated control systems, and other management tools help water users and the state stretch the water supply.

For many situations, water use efficiency is the least expensive option for additional supply. Reclaimed water, storage, importing water, and other methods are typically more expensive options.

Current funding structure

In the 09-11 biennium, water use efficiency is supported by:

- 4 FTEs (total authorized)
- $552,338 in General Fund – State
  $73,387 in General Fund – Federal
  $354,190 in Referendum 38 – Water Supply Facilities
  $979,915 (total funding)

Other than water right application fees, there are no fees collected for this activity.

Are there ways to achieve additional self-sustainability?

- Add a small mandatory surcharge to any water use fee, water services fee, water right application fee, or wastewater fee to fund Water Resources Program water efficiency activities. (Water and electric utilities often use this approach.)
- Establish an OCR type program for the remainder of the state that would include a major focus on water conservation as a source of supply for new uses and flow restoration. Create a Local Improvement District for one or two pilot areas needing increased water supply as a way to raise funds for that area. Use a watershed or sub-watershed scale approach with specific, concrete goals and an Ecology staff person overseeing work.
- Request voluntary public donations similar to Bonneville Power "Green Power" program or State Parks donation request on car license tabs.
- Leverage existing funds or share a staff person with another state agency having the same goal (e.g. Commerce, or Health).
- Supplement or replace State General Fund using new fee revenue.
- Establish a new bonding authority for water conservation projects for both the municipal and agricultural use sectors.
- Within the municipal and industrial water use sectors, redirect some staff funding to contribute to national organizations that provide expertise, research, and recommend standards. Leverage state funding with other funding sources.
- Partner with existing grant and/or loan programs to decrease administrative costs (Commerce, a water utility, NIST manufacturing extension program, etc.).
- Agricultural water supply conservation efforts will require a restocking of funds for financial incentives. Cost share programs such as the Yakima River Basin Water Enhancement Program, which provides federal, state, and local funding for agriculture water conservation projects, need to be pursued statewide.
- Agriculture conservation requires financial incentives and/or economic incentives to convert existing irrigation methods to more efficient methods. Economic incentives have worked to a limited degree. Because these are funded through private investments, water right holders maintain the water right and prefer to use the net water savings to spread to non irrigated lands. Currently this is not allowable under existing water law. A change to water law should be proposed to allow spreading of a portion of net water savings.
- Department of Health has adopted rules that require municipal water systems to adopt water conservation measures. These measures will allow municipal systems to meet growth projections for the service delivery area without needing additional water rights.

Existing reform measures

- The Water Resources Program continues to provide technical assistance for water reuse projects and coordinates with the Water Quality Program on permit issues for both water quantity and quality permitting issues.

- Incentives have been established through the green building initiative for new infrastructure projects.
- Ecology provides financial assistance program though the Irrigation Efficiency Grant Program and Watershed Plan Implementation of Flow Achievement program to improve agricultural efficiency and use the net water savings for instream flow use. These programs are limited to fish critical water basins or specific river reaches where fish stocks would benefit from increased instream flows. Ecology coordinates with the Washington Department of Fish and Wildlife in determining the fish benefits for these programs. In addition, the Office of Columbia River has bond funds of $200 million of which one third is for non-storage and water conservation.
- Ecology continues to advance Office of Columbia River to implementation.

Range of new efficiencies and reform options

In the past decade, the funding for agricultural conservation projects has been directed toward projects based on the need for instream flow improvement and unit cost of the net water savings. Funding has been targeted to watersheds that the state designated "fish critical." A more sustainable and effective way to direct funding would be to identify candidate stream reaches where the value of the conserved water as instream flow is the highest within these basins. The state can gain the most benefit by applying funding where it would most benefit streams and coordinating the conservation projects with other efforts, such as water acquisitions, conservation easements, negotiated leases, or purchases.

Ecology should continue to refine more consistent policies for water reuse and to resolve water quantity and quality issues in permitting reuse projects.

Municipal water conservation requires continued coordination with Department of Health. It would be more efficient to turn municipal water use efficiency completely over to the Department of Health. They have recently adopted rules that require municipal water systems to adopt water conservation measures. These measures will allow municipal systems to meet growth projections for the service delivery area without needing additional water rights.

Additional options for reform include:

- Address metering policy
    - Clarify ambiguities ("fish critical" basins versus depressed salmonid stocks) between court metering ruling, statute, and rule.
    - Resolve tension for highly efficient water users related to required metering reports and the risk of partial relinquishment for commercial agricultural uses.
- Reclaimed water reforms
    - Add appealable decision authority for impairment determinations.
    - Expand impairment standard (not just downstream).
    - Allow indirect use of reclaimed water.
    - Integrate efficiency reforms with mitigation reforms.
    - Create a financial program to provide incentives to convert existing water supply systems to reclaimed water use.

- Completely turn-over municipal water use efficiency to the Department of Health.
- Move from statewide criteria-driven project selection to selection of water efficiency activities and projects in localized stream reaches that provide the highest benefit from additional supply for environmental purposes.
- Complete strategic planning for the Water Resources Program water use efficiency work.
- Require a portion of conserved water go into trust.
- Temporarily shift all water efficiency activities to metering work until the state budget improves.
- Enhance Ecology Internet presence with more information on water conservation and efficiency.

Preferred options

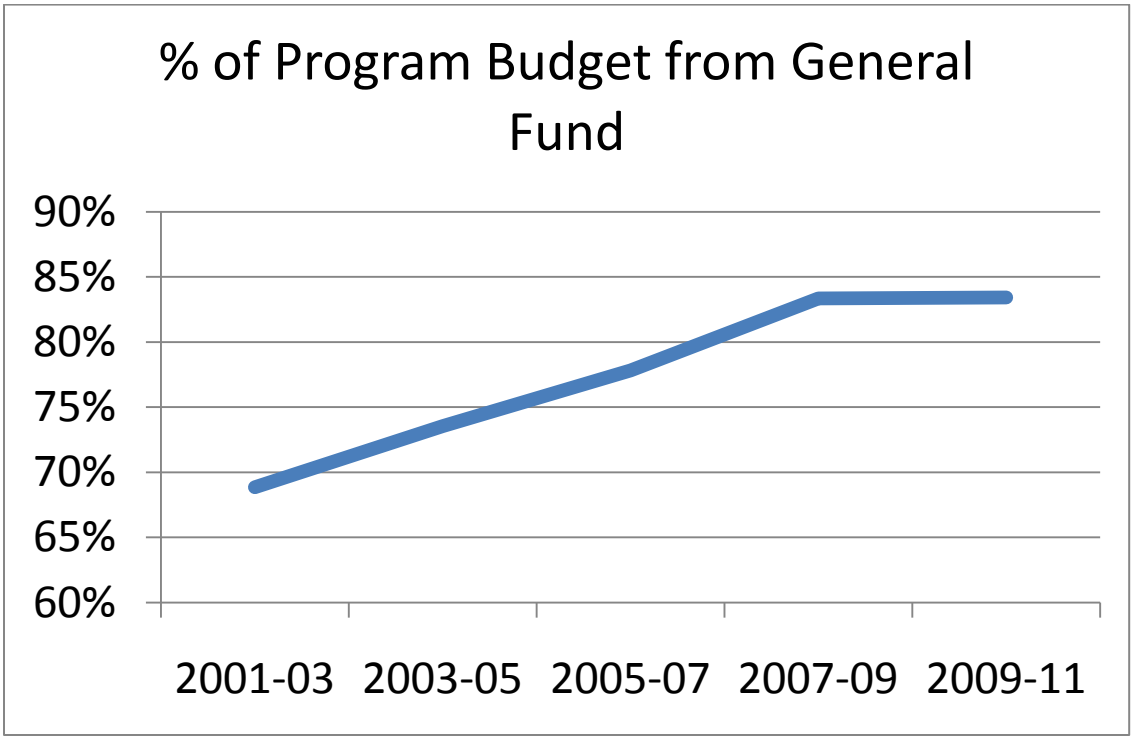
- Further refine water reuse policy and guidelines.
- Amend water statutes to encourage more agricultural water conservation.
- Establish a new revolving account that is supported by dedicated revenue to allow a grant and loan program that can be sustained for water conservation projects for the long term.

Appendix B: Water Resources Program Funding Status and Existing Fee Structure

- Current Funding Status
- Existing Fees
- Background Information
- Comparison of Washington with Other States' and British Columbia's Water Fee Structures
- Options for Self-Sustainable Funding
- Ecology's Fee and Funding Recommendations

Current Funding Status

The Water Resources Program (the Program) is approximately 85 percent General Fund-State (GF-S) dependent, the highest among all of Ecology's programs. This dependency is growing every biennium, while water users' reliance on the Program grows at an even greater rate.



The Program could transition from heavy reliance on GF-S to one that is less dependent on GF-S and augmented by an equitable fee based support system. Although such a switch would be complicated, there would be a multitude of benefits across the board. Any fee system based on water right records would drive a dramatic improvement in the quality of the records. Updating records on water rights would enable Ecology to make better-informed decisions. Water right

holder fees would allow the Program to meet the current and future water management needs of water users in Washington State.

Conflicts surrounding water resources have dramatically increased over the last few decades due to growth and limited supply. Such conflicts reduce the efficiency of the Program and have led to higher legal costs for defending decisions and a very inefficient water allocation system. This situation worsens when one considers that climate change will exacerbate most of the water problems we have today. Nearly all identified strategies to adapt to climate change have a fiscal impact and cannot be implemented under the current funding framework. Cumulatively, Ecology expects this impact to be significant and that it will continue to grow over time.

A combination of new annual water right holder fees (a water management services fee) and increases in existing annual and one-time user fees (permit application fees, dam safety fees, well drilling fees, etc.) would provide the most direct link between fees and services provided. The Federal Government recently produced a guidance document on designing user fees that describes some of the concepts we are exploring. The May 2008 United States Government Accountability Office report titled *Federal User Fees: A Design Guide* stated, in part:

> The federal government will need to make the most of its resources to meet the emerging challenges of the 21st century…User fees can be designed to reduce the burden on taxpayers to finance the portions of activities that provide benefits to identifiable users above and beyond what is normally provided to the public. By charging the costs of those programs or activities to beneficiaries, user fees can also promote economic efficiency and equity.[1]

Washington State faces many similar economic challenges, and we are looking at shifting to a model where the beneficiaries pay more of the costs associated with their use of our natural resources. For decades, beneficiaries of our other natural resources have paid for their mining rights, timber, uplands, tidelands, beds and banks of rivers and lakes, minerals, oil and natural gas, and fish and wildlife. .

Existing Fees

Dam Safety

The Dam Safety statute authorizes fees for inspecting hydraulic works to assure dam safety. The Program charges to review plans and specifications for constructing, modifying, or repairing water storage dams. This work results in an irregular fee interval. The Program charges fees for periodic inspections of 383 high and significant hazard dams in the state. Dam owners must pay a portion of the inspection fee annually, although inspections are on a five-year cycle. Both types of fees (construction and inspection) vary by a dam's height and crest length. Ecology deposits 80 percent of the revenue in GF-S, and 20 percent goes into the Water Rights Tracking System Account.

[1] United States Government Accountability Office Report to Congressional Requesters, GAO-08-386SP, Federal User Fees: A Design Guide (2008).

Well Drilling

The Well Drilling statute provides for Ecology's collection of fees for well driller licenses and for water wells that are constructed. Counties with delegated well inspection authority receive a portion of the fee revenue. Licensed water well drillers pay annual fees to cover the cost of administering tests and operating the licensing program. These fees cover 100 percent of the well drilling program's work including delegation agreements with 17 counties for carrying out construction inspections. The fees are currently $200 for a new well of less than 12 inches diameter and $300 for larger wells. A fee increase would allow for more counties to be brought into delegation agreements and would lead to a higher percentage of new wells and decommissioned wells to be inspected in the interest of public health and protection of aquifers.

Hydropower Licensing

The annual hydropower licensing fee is based upon a statutory fee formula established in 1929, and updated in 2007, which requires calculating the theoretical horsepower of the project. The revenue from these fees supports stream gaging and state participation in the hydropower licensing activities of the Federal Energy Regulatory Commission.

Water Right Processing

The Program collects three basic fees for: 1) filing and examination of an application, 2) recording a permit, and 3) recording a certificate. The Program also charge fees for extensions of development periods, changing an existing water right, construction of a reservoir, and other minor actions.

Existing Water Resources Program Fees and Revenue

Fee Type	FY 2009	Est. FY 2010	Est. FY 2011	Quantity
Dam Construction and Inspection Fees	$211,367	$301,500	$301,500	Program reviews plans for an average of 20 projects per year. Program charges 241 dams an annual fee for periodic inspections.
Water Right Applications, Permits & Certificates & Related Misc Fee	$90,855	$77,496	$77,504	Approx. 1,000
Water Well Operator's License Fee	$34,790			30 new licenses and 650 two-year renewals per year.
Well Construction & Inspection Fee	$818,429	$683,500	$683,500	Estimated at 21,500 wells installed per year.
Hydropower License Fee	$789,707	$768,000	$764,000	96 licenses

Background Information

Washington State has recognized the necessity of a fee for the use of the state's water as far back as the early 1970's. State resource managers recognized without having a water use fee, there was no way to balance supply with demand, or manage the resource equitably. In 1975, then Governor Dan Evans proposed legislation to resolve this problem, prescribing a use fee, water use term limits, and recreational requirements on all pumping permits of state controlled waters. This legislation did not pass. Unable to get any traction on management of the state's water resource, Evans stated, "The issue isn't going to go away. If we fail to deal with it in this session, it will still be in front of us." Decades later in 1993 and again in 2004, the Washington Legislature directed task forces to review water resources funding and fee structures. A summary of these two task force exercises and conclusions is as follows:

1993 Water Right Fees Task Force Summary

In the early 1990s, Washington State had a similar revenue problem as is faced today – declining revenue projections and intense competition for a share of that revenue to maintain ongoing programs.

The Washington Legislature directed a 1993 Task Force to recommend a water right processing fee schedule that would recover 50 percent of Ecology's cost to process water right and change applications. The task force was comprised of representatives from Cities and Counties, Utilities and Hydropower, Business and Agriculture, Environment and Recreation, House and Senate Democratic and Republican Caucuses, and others. The task force recommended twenty-one separate items to improve water right administration. While all of the recommendations were related to improving water resources management, one recommendation specifically addressed fees, as summarized below:

- Fees should be established in statute.
- There should be a one-time $75 registration fee for new permit-exempt wells.
- A permanent base fee level should be established.
- There should be a temporary (three-year) fee surcharge dedicated to data management development and backlog reduction.
- Fee levels for the base fee and the surcharge should be shown on the recommended fee schedules.

The recommended fee structure varied depending on the amount of water used (measured in cubic feet per second or CFS), the type of water used (ground or surface), the type of activity conducted (application, examination, or certification, change or transfer), and whether it was a base fee or temporary surcharge. Within these parameters, fees for water right processing would have ranged from $320 to $5,580.

The other recommendations in the report addressed other aspects of water resources management and administration including education, rulemaking, dam safety, conservation incentives, consolidation of public water systems, growth management, applications, and other workload standards.

Legislation incorporating the recommended fee increases was considered by the Legislature in 1994, but it was not passed. The Legislature did not amend the FY1993-1995 budget to restore state general funds that would have been offset by the recommended fees. Consequently, Ecology was forced to reduce its general fund expenditures for water rights processing in 1994 by two-thirds. Staffing was reduced from about 55 FTEs to 20 FTEs and remained at that level until 2001 when the Legislature passed the "two lines" bill and appropriated additional general fund and water quality account funds, which effectively restored the prior cut seven years later. The backlog of applications had soared from about 3,500 applications in 1994 to nearly 7,000 by 2000. When the new funding was provided, it was provisioned to be used only for processing water right changes and transfers. Since 2001, Ecology has focused about two-thirds of its processing of applications on changes and transfers and the remainder on applications for new water rights.

2004 Water Resources Administration and Funding Task Force Summary

In 2004, the Legislature created the Water Resources Administration and Funding Task Force through a proviso in the 2004 Supplemental Operating Budget. The task force was comprised of representatives from Federal, State, Local, and Tribal Governments; environmental organizations, utilities, and other stakeholder groups. The proviso directed the task force to develop proposals for and recommend several options for funding the state's water resource programs, including both operating programs and capital costs for water program implementation. The task force developed a set of findings and conclusions designed to guide policy makers in developing a funding package for both operating and capital support. *The report did not present specific options and recommendations for future funding.*

Key issues that the 2004 task force considered in developing a fee proposal included:

- Water resource management is a critical element for the social, economic, environmental, public health, and cultural benefits contributing to the quality of life in Washington State.
- Water resources are managed in the context of increasing complexity, competing interests, and growing and changing demands. These include the Endangered Species Act, unresolved historic water rights claims, hydropower relicensing, actual and potential costs and impacts of litigation, economic development, tribal rights, population growth, land use changes, climate change, changing social values, impacts of adjudication and a complex policy, legal, and management system.
- The operating and capital costs of managing and allocating water resources are unlikely to decrease.
- A large percentage of the Water Resources Program is not, and has not historically been fee-supported.
- Management of water resources resides primarily with Ecology but also includes programs in other agencies such as the Washington Departments of Fish & Wildlife, and Health.
- Watershed Plans were expected to result in widespread and substantial requests for operating and capital funds.

The general conclusions the 2004 Task Force found were as follows:

- Some level of General Fund - State revenues will continue to be required and appropriate to fund the state's water resources programs.
- Despite the small amount of revenue that increased water right permit processing fees would generate relative to program costs, updating fees may be appropriate.
- Clarification of water policy and strategic planning for implementation will help create a more successful water management system for Washington State.
- Unless capital needs can be identified more precisely and quantified in the near and medium term future (10 years), it is difficult to identify appropriate funding sources and evaluate their economic impact.

In addition to the factors identified in the findings:

- The size of capital needs will depend, in part, on legislative policy choices.
- Response to federal and state mandates, compliance with existing laws, and the threat of litigation will also drive capital costs.
- Developing a long-term state capital funding strategic plan for water projects and activities would be beneficial to successful water management within Washington State.
- For economic efficiency and taxpayer value, it is important that capital funds be capable of leveraging additional funds through cost-share and matching programs and payment by primary beneficiaries. Smaller systems may require different matching requirements.
- For adjudications of limited duration and complexity, the legislature may wish to consider the possibility of partly funding such adjudications through claimant fees.

The following year, Ecology proposed and the Legislature approved a modest increase in the statutory water right fees for the first time since the early 1950s. All fees that included the base fee for filing a water right application (previously $10) were increased to at least $50. The percentage of water rights processing costs supported by fees was increased from under one-half of one percent to about 1.5 percent.

Comparison of Washington with Other States' and British Columbia's Water Fee Structures

Washington State lags behind all other Pacific Coast states (Oregon and California) and British Columbia in both the breadth and the level of fees collected for the many water management services provided to water users. A short summary of the types and amounts of fees charged by other states and British Columbia for water resources and water services is shown below:

Arizona	• Annual groundwater withdrawal fee in "Active Management Areas", one-time application and hourly application fees, industrial, groundwater, authority to irrigate in an irrigation non-expansion area, new service area, extension of service area, physical availability determination, analysis of assured or adequate water supply, reservoir permit, change, transfer, dam safety, copying, mapping, various well drilling and many other fees (total of 80+ different water resources related fees)
California	• Annual permit & license, annual pending application, annual FERC oversight, one-time application, groundwater recordation, change, time

	extension, lease, small domestic registration, livestock stockpond registration, proof of claim, 401 cert not subject to FERC, petition, dam safety
Idaho	• Site specific adjudication, domestic well, monitoring well, application, transfer, exchange, proof of beneficial use, extension of time to prove beneficial use, dam safety
Minnesota	• Annual water use fee based on mandatory reporting with summer surcharge, annual minimum agriculture irrigation fee for permittees that did not appropriate any water, annual once through heating & cooling (HVAC) fees, application, transfer, general permit, dam safety
Oregon	• Permit exempt well recording, well substitution, groundwater specific fee, permit recording, application, additional use, additional storage, additional point of diversion, change, limited license, transfer, registration, mitigation, leases, protest, basin program exemption, dam safety
Washington	• Water right permit application, dam safety, well drilling, hydropower licensing
British Columbia	• Annual use fee based on quantity of water used and sector of use (different fees for agriculture, aquiculture, domestic, industrial/commercial, water supply storage, waterworks), dam safety, flooding, one-time application and change fees

State Annual Water Fee Examples			
	Small Domestic Water Right Example (5,000 gpd)	Municipal Water Right Example (50 cfs)	Irrigation Example[1] (400 AF)
Arizona[2]	0	≤$108,700	≤$1,200
California	$100	$1,200	$209
Minnesota	0	~$94,400[3, 4]	≥$521[4]
British Columbia	$25	$49,100	$296
Washington	0	0	0

[1] Irrigation example was for the volume of water that may be used to irrigate 100 acres of apple orchard in Yakima County. Soil type and area climate would dramatically influence the quantity needed for irrigating 100 acres of orchard in another state or province.

[2] Fees vary and are only charged in specific Active Management Areas (AMAs) for groundwater withdrawals. Fees vary across the AMAs. Fees are authorized up to $5/acre foot (AF) - the current maximum AMA fee is $3/AF. For this table, $3/AF was used.

[3] Fee caps exist based on the number of permits an entity has, maximum cap is $300,000.

[4] Minnesota charges an additional $30 per million gallons used during June, July, and August that exceeds the volume of water used in January of each year. The $521 does not include this summer surcharge.

Options for Self Sustainable Funding

User Fees

The extent to which a program activity is funded by a user fee should be guided generally by the ratio of how much users benefit from the program's services versus how much the public at large benefits (the *beneficiary pays* principle). That is, if a program primarily benefits the general public (e.g., Washington National Guard), it should be supported by the General Fund, not user fees. If a program or part of a program primarily benefits identifiable users (e.g., Water right holders), it should be funded by user fees.

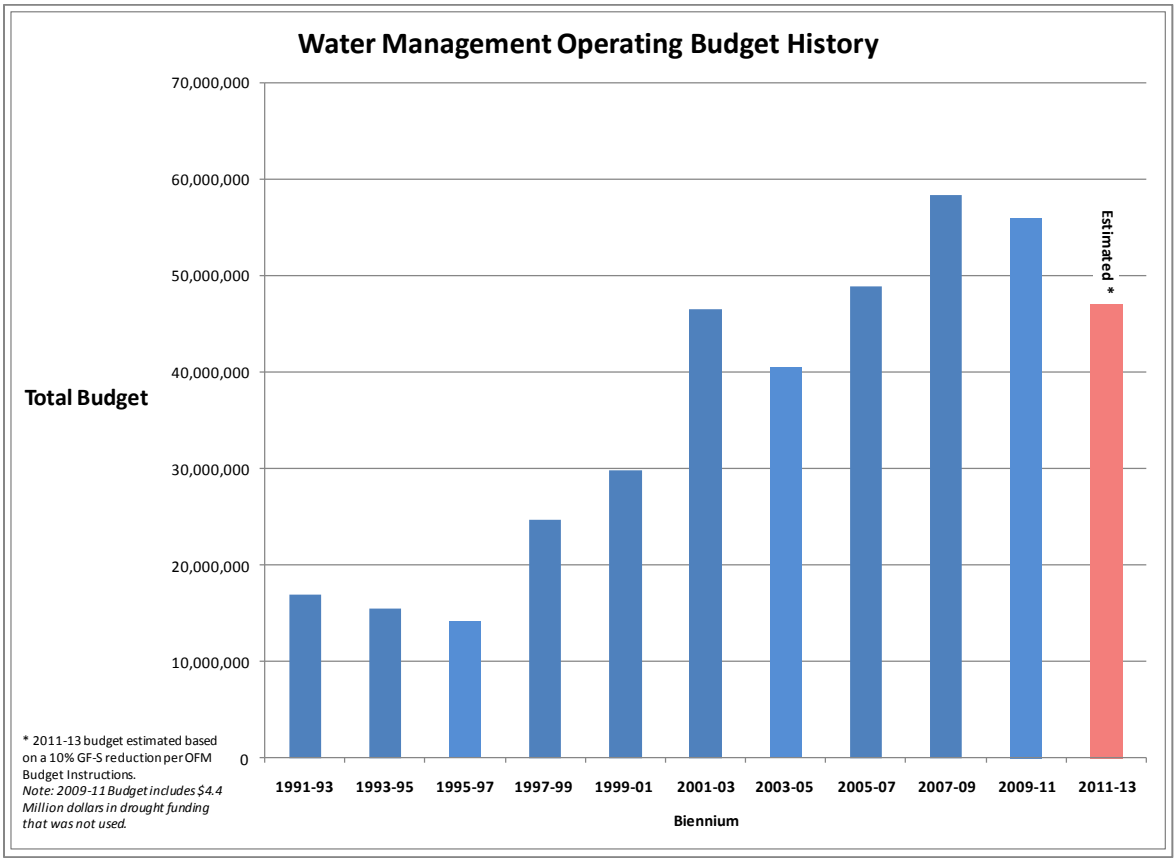
Funding of the Program's operating budget currently follows the inverse of the *beneficiary pays* principle: the program overwhelmingly provides benefits to specific identifiable users, however, the Program is primarily (85 percent) funded by General Fund - State.

A significant portion of the Program, water rights permitting, is a logical candidate for user fees. Currently, only 1.5 percent of the cost of processing a water right permit is recovered through application fees.

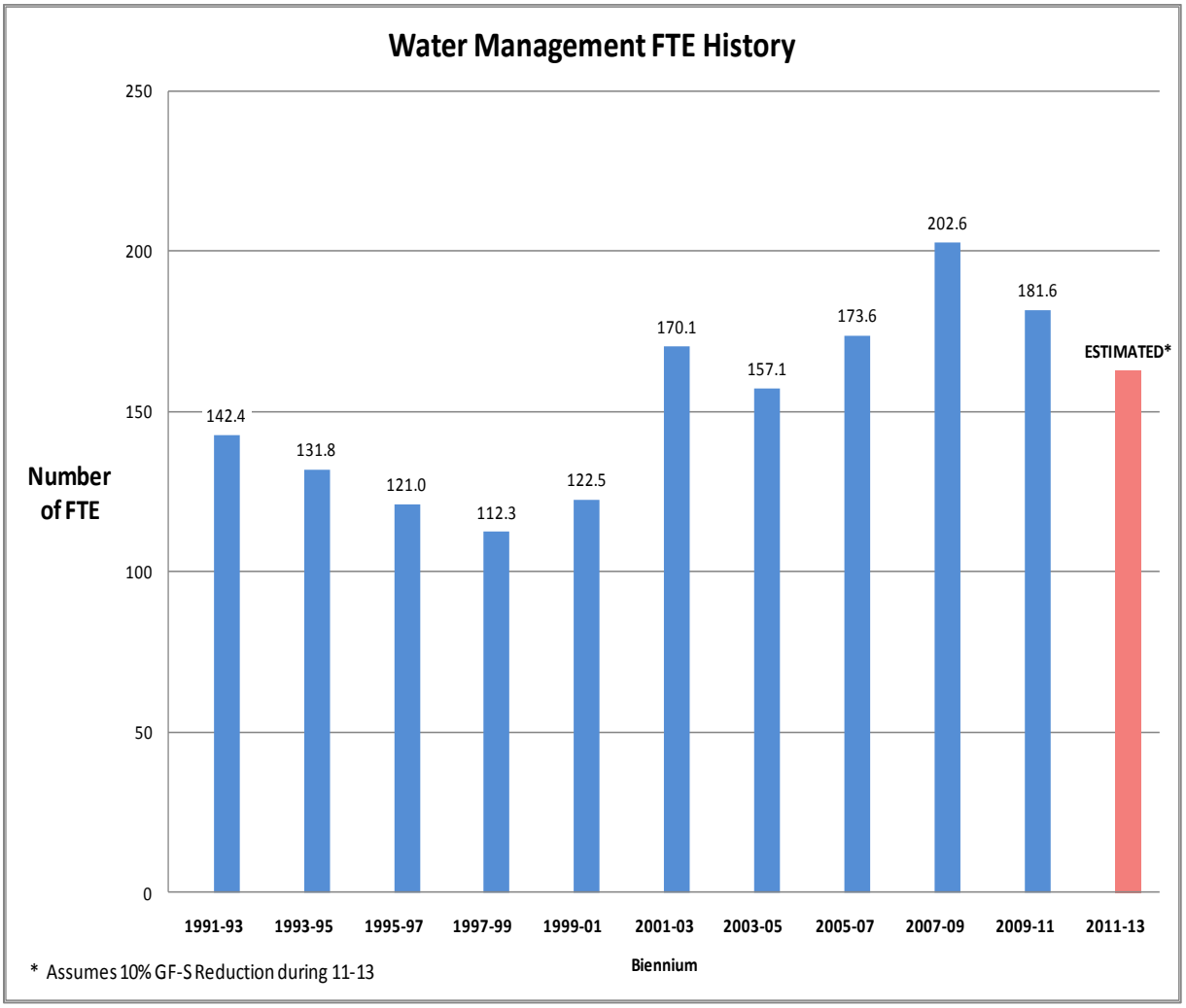
Fee Options

Ecology recommends establishment of an annual water management services fee to reduce General Fund - State dependence . Since 1917, applicants have paid one-time application processing fees. However, the state has not previously required the payment of a fee for the ongoing use of its water resources with the exception of the annual hydropower license fee, which has been levied since 1929 (RCW 90.16.050). A water right is a special form of property right called a *usufructuary right*. A *usufructuary right* is a right or privilege to use something that belongs to someone else, in this case, water owned by the people of the State of Washington (*see* RCW 90.03.010). Ongoing activities that have been traditionally funded entirely by the GF-S include, but are not limited to, adjudicating water rights; assuring compliance with laws and rules; collecting, storing, and making available vital water related information; providing technical assistance, watershed support and grants; and establishing rules, policies, procedures and guidance for the public.

There is a high probability that the water resources program budget will continue to decline significantly under the current funding system over the next few years.



The above chart includes the entire Water Resources Program operating budget plus the operating budget for both the watershed management portion of the Shorelands and Environmental Assistance Program and the Environmental Assessment Program stream gaging and groundwater monitoring work.



The above chart includes the entire Water Resources Program operating FTE history plus the FTE history for both the watershed management portion of the Shorelands and Environmental Assistance Program and the stream gaging and groundwater monitoring portion of the Environmental Assessment Program.

Due to the current recession, the Water Resources Program budget was reduced by about $5 million and approximately 20 staff positions in the current biennium. This situation is expected to continue for the foreseeable future as state revenues are projected to decline. For instance, additional GF-S reductions are likely to be required during fiscal year 2011 and another round of State General Fund cuts is highly likely for the 2011-13 biennium (when revenues are expected to fall short of overall needs by about ten percent). Governor Gregoire has warned agencies to prepare for an average general fund cut of four to seven percent in the current fiscal year (FY 11) and to prepare for average general fund reductions of ten percent next biennium. Without new sources of revenue, the Water Resources Program will not have enough funding to adequately respond to the needs of water management. Existing activities including water rights processing, instream flow protection, compliance, and information system maintenance may have to be further reduced. Lack of program capacity, especially for water rights and change processing could exert a drag on achieving the state's economic recovery.

Specific Fee Options Considered:

1. **Establish an annual fee on households and businesses, administered through the property tax system.** This approach would require all households and businesses in the state that use water to pay a fee, whether water is self supplied or supplied by a water utility or water association. Because over two million households and businesses would pay the fee, the amount charged per household/business would be very small. Conservatively assuming there would be two million fee payers, an annual fee of just $10 per household (less than one dollar per month) would raise $20 million per year. Collection of the fee through the county property tax assessment system would be relatively inexpensive. The major challenges to this approach would be that the fee could be construed to be a tax and therefore possibly subject to supermajority legislative approval. If any of several proposed initiatives are passed by voters this fall, a vote of the people would also be necessary.
2. **Dedicate a portion of the state utility tax to water management programs.** The utility tax is an existing tax that primarily accrues to the State General Fund. Some utility tax revenue has accrued in the past to the Public Works Trust Fund from which grants and loans are provided for water system and other utility capital projects. As all utility tax revenue is currently flowing to the considerably stressed GF-S, this option would likely require an increase in the utility tax applied to water-related utilities. This tax would be broad based because it would be passed along by utilities to millions of customers. However, self-supplied water users would not be taxed because they are not part of a water utility. As this would clearly be a tax, increasing it could be subject to supermajority legislative approval and potentially a vote of the people.
3. **Levy a fee through electric utility bills.** Much of the electricity used in the state comes from hydropower or involves the use of water for cooling (nuclear, coal, or gas powered). Wind and solar power are exceptions. Such a fee would also be broad-based, reaching most water users, as nearly all households and businesses are electric utility customers. However, this could be construed to be a tax and possibly subject to supermajority legislative approval and possibly a vote of the people.
4. **Establish a new water management services fee on existing water rights and water right claims.** About 50,000 water right certificates, several thousand water right permits, and about 170,000 water right claims are on file with Ecology. These filings represent most if not all legal, diversionary beneficial water uses made under state law. Water rights and claims are held by individuals, corporations, utilities, irrigation districts, farmers, fish hatcheries, state agencies, local governments, and the federal government. One form of such a fee has existed for hydropower facilities since 1929 (*see* RCW 90.16.050).

   The major hurdle to implementing such a fee (if approved by the Legislature) is that Ecology does not have current contact information for many or most water right holders and claimants. Unless a water right certificate or claim has been changed in recent years, the name and contact information of the original applicant or claimant are all that exist in our files. That information may be up to 93 years old. Most properties change ownership periodically, but there is no requirement to inform Ecology of changes in ownership. Therefore, most of the owner and contact information in our files is out of date and useless for purposes of contacting the current water right holder or building a billing system for a new fee.

Getting updated owner and contact information is a challenging, expensive, and time-consuming job. About a decade ago, Ecology began to electronically map all water rights and claims for various reasons including the need for such information by watershed planning units. This effort has continued at varying levels of effort as funds are available to hire "mappers." About 40 percent of the 225,000 water rights and claims have been mapped. Once the water rights for an area are mapped, it is possible to electronically overlay the place of use of water rights with county electronic land ownership mapped layers (although a few counties still use hand mapped parcel information) to generate the current owner and contact information of land parcels with appurtenant water right certificates and claims. A concerted effort would be required, involving over a dozen mapping technicians to complete the mapping of all water rights and claims within two years. Once accomplished, it should be possible to develop a billing system for current holders of water right and claims. Such an effort would require some form of bridge funding to complete the mapping and to build the billing system.

Relatively modest annual fees on water right permittees, certificate holders, and claimants could raise a large proportion of the revenue required for ongoing water resources management activities. Such a fee could replace a large proportion of GF-S dollars currently appropriated for this work and could also support expanding some critical areas of work such as adjudications, scientifically based information gathering, and water budgeting.

Following are example fee schedules and the estimated revenue that would be raised by such fees:

2013-2015 Biennium Example Fee Structure[1]			
Quantity of Water[2] (est. CFS)	**Number Paying Fee (est.)**	**Total Revenue**	**Amount of Annual Fee**
> 5	**664**	**1,328,000**	**1000**
5 to >1	**2,444**	**2,444,000**	**500**
1 to > 0.5	**2,653**	**1,326,500**	**250**
0.5 to > 0.1	**11,780**	**5,890,000**	
0.1 to > 0	**53,385**	**10,677,000**	**100**
Information Not Available[3]	**48,472**	**9,694,400**	
TOTAL	**119,398**	**31,359,900**	
	Average Fee	**262.65**	

1: This fee structure is one example of how fees could be set based on an approximate calculation of the amount of water used and inclusion of all users (at the same rate) except single domestic and power generation uses, which are excluded. This example is based on an estimation of the amount of water used instantaneously (Qi) but could also be based on acre-feet per year (Qa) and/or based on different rates for different uses, i.e. municipal, industrial, agriculture, etc.

2: The quantity of water is estimated based on the data available within the Water Resources Tracking System database. Note that the database containing water permit, certificate, and claim information is not complete and will require the data to be updated and amended. Depending on those results, the fee structure would change based on the amount of water used and the actual purposes of use included in the final fee structure. One cubic foot per second of water is enough water to irrigate approximately 50 acres of land or enough to supply at least 1,000 homes with domestic water, including moderate outdoor use.

3: It is estimated that approximately 48,472 records have insufficient information to estimate the amount of water used in relation to a specific document. For the purposes of this example, these documents would be billed at the lowest fee tier until additional information is collected.

One challenging problem that is sure to arise is that many (perhaps a majority) of water right claims are either inaccurate (especially as to quantity and location) or spurious (e.g. many appear to claim water for uses initiated after 1917 for surface water or after 1945 for groundwater or in some cases for future use). Billing these claimants could touch off a large number of claim amendment requests to Ecology. Similarly, the use of water under a significant proportion of claims and certificates has probably been changed on one or more various aspects (place, purpose, point of withdrawal, or diversion) without the holder having sought permission for the change(s). We know this from our experience in the Yakima adjudication. Numerous changes and claim amendments (perhaps thousands) are likely to be generated simply by touching these documents and discovering these flaws. This will represent a significant new workload and increase the application backlog.

5. **Put a new water management services fee on only the largest water rights and claims.** This would limit the requirement to pay a fee to only the water rights and claims that are for more than some threshold amount of water (e.g. all water rights or claims for over 1.0 cubic feet per second of water). This approach could either be permanent, or transitional while the current owner and contact information is developed for all water right holders and claimants. Ecology estimates that about 80 percent of water use is made by the largest 5,000 or so water right holders and claimants. Securing the current names and contact information for 5,000 people or entities should be much more quickly and easily accomplished than doing the same for 225,000 of them. The main drawbacks of this approach would be fairness arguments by the larger users, the arbitrary nature of the threshold, and the fact that the fees would need to be much higher on each of these entities than if all water users were being levied the fee in order to collect the same amount of revenue. Nevertheless, it could provide the bridge funding to get the entire set of water right certificates and claims into a billing system.

6. **Base a water management services fee on actual use rather than the certificated or claimed paper quantities.** This approach could provide an incentive to use less water than the amount claimed or allowed under a certificate. It would reward thrift and conservation practices. However if the fees are relatively low (in the $100 to $300 range) any price signal would be weak and probably not effective. Furthermore, a relatively small proportion of all water rights and claims have the measuring devices necessary to implement this option.

7. **Apply a water management services fee to permit-exempt wells, as well as to permits, certificates and claimed rights.** Ecology estimates there are somewhere around 400,000 active water supply wells in the state, though there is no way of knowing how many with any confidence. Since 1971, well drillers have been required to file a notice of intent and a well report with Ecology. Ecology estimates that compliance with this requirement has improved over the years to be in excess of 80 percent currently. Wells established prior to 1971 are generally not well documented, if at all.

   Due to the very large numbers, the sketchy documentation of many wells, and small amount of water presumably withdrawn by the vast majority of them, implementing an annual fee on such wells would be difficult to administer. Just getting the word out to the owners would be very challenging. The one way that it might be done would be to include a notice that fees are due in the annual property tax statements that are sent out by county assessors. A modest flat annual fee on such wells could generate large amounts of revenue due to the large

numbers. For example, even if only half of the owners of the estimated number of permit-exempt wells in the state (200,000) submitted an annual fee of $50, it would generate $10 million in annual revenue. Achieving a high level of compliance could be difficult and the level of resulting controversy could be a discouragement from pursuing this option.

An alternative to assessing annual fees on permit-exempt wells would be to implement a registration program for them so that more is known about them, where they are located and what use is being made of them. A one-time registration fee could be charged to offset the costs of the administration and data system work that would be required.

Ecology's Fee and Funding Recommendations

Establish an annual *Water Right Management Services Fee* for all water right holders (permits, certificates, and claims).

- This fee would be based on the amount of water used by the water right holder.
- Charging a modest fee could generate sufficient revenue to adequately fund the Water Resources Program and move away from State General Fund dependence for those activities not currently supported by fees (such as that proportion of well drilling, water rights processing, and dam safety supported by the current fees).
- This would partially displace use of State General Fund and could generate added revenue to support new or expanded initiatives such as a state water supply and demand forecasting, Spokane adjudication, and groundwater monitoring.
- Permit-exempt groundwater withdrawals would not be subject to an annual water right management services fee at this time, but could be subject to a new registration process and a one-time administrative fee to gather vital data about location and extent of such water rights.
- Develop a system to bill water right permit, certificate, and claims holders using bridge funding. This would pay for water rights mapping and data development, and other near-term priority needs to make water management more cost-effective and reliable (an estimated $2.5 million would be needed for FY 11-13).
  - A new billing structure will take time to develop and implement.
  - Bridge funding would allow sufficient time for Ecology to produce State General Fund savings once water right holder/claimant revenue is realized.
  - Bridge funding could come from a fund transfer from a dedicated account (preferred path) or by charging only the largest water users initially (alternative path) while the water rights records are updated and the information is recorded using computer mapping tools (GIS).