

Report on Funding and Financing for Reclaimed Water Facilities

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I. Introduction

The “Long-Term Funding Sub-Task Force” of the Reclaimed Water Use Rule Advisory Committee was created by the 2007 Washington Legislature to recommend provisions for a long-term funding source for water reclamation facilities.¹ As part of the process for addressing the Legislature’s direction, the Sub-Task Force was interested in learning how other states funded or financed reclaimed water (“RCW”) facilities, and what innovative sources of financing existed that might be adapted to paying for water reclamation facilities.

This report reviews financing tools for RCW projects that are in used in other states, especially Arizona, California, Florida and Texas. It also looks at various funding sources used in other states for a variety of environmental purposes that might be adapted by Washington to finance reclaimed water and related projects. A separate report for the “Removing Barriers” Sub-Task Force” will examine potential incentives that have been used elsewhere for RCW and other purposes.

Except where noted otherwise, this report does not include discussion of existing Washington programs or analysis of Washington law. If there is interest in any of the options from other states, a separate review of Washington programs, law and practices would be needed.

II. Financing Reclaimed Water Facilities in Other States

Other states and utilities that have implemented water reclamation projects use a variety of financing tools, including

1. Federal grants,
2. State bond issues supporting loans and grants,
3. State revolving funds (SRF),
4. Dedicated revenues from specific taxes;
5. Direct appropriations from state, county or city funds,
6. Utility fees and charges, and other self-generated revenues,
7. Funds borrowed by utilities on capital markets, and
8. Private capital where a project benefits a specific business.

¹ Washington Senate Bill 6117, Section 10.

Appendix A contains tables showing the principal funding and financing sources used in selected states, with examples of specific projects. By comparison, Appendix B summarizes how Washington projects have been financed, based on *Case Studies in Reclaimed Water Use* by the Department of Ecology's Kathy Cupps and Emily Morris.²

A. State grants and loans

Leading states finance RCW facilities through state revolving loan programs, other grant and loan programs and direct appropriations. Some of these states have financed projects in innovative ways.

Florida has a unique system to help finance reclaimed water and other water resource projects. The state has created five water management districts that can encourage and direct water users and utilities to use reclaimed water and implement reuse programs. In addition to disbursing state funds, the districts have been granted the authority to levy *ad valorem* taxes from landowners and use the proceeds to make grants to local water suppliers for alternative water supplies and conservation activities.

Florida has also enacted a funding program specifically for water reclamation and other alternative water supply projects. The Water Protection and Sustainability Program, enacted in 2005, requires the five water management districts to promote alternative water supply projects. The law provides significant annual recurring state funding. Funds are administered and matched by the water management districts. During the first two years of the program, it helped fund 238 projects with a total construction cost of approximately \$2.5 billion. Projected costs of all reclaimed water projects over the next 20 years exceed \$9 billion, of which \$1.2 billion is projected to come from state funds.³

California has adopted a Water Recycling Funding Program (WRFPP) to promote the beneficial use of treated municipal wastewater to augment fresh water supplies in California. Currently, the WRFPP administers 49 construction projects and 33 facility planning studies. The funding program consists of the State Revolving Loan Fund and a grant and loan fund created from bond laws passed from 1978 and 2002. Some state general funds have also been used for state grants. Nearly \$650 million in State grants and loans has been provided through these programs through September 2006.⁴

The **Texas** Water Development Board includes as principal sources of financial assistance for reclaimed water, the Clean Water State Revolving Fund and:

- A deferred interest loan program (State has a temporary ownership interest in a facility. State's ownership is purchased by applicant as their customer base grows.), and

² <http://www.ecy.wa.gov/biblio/0510013.html>

³ *Tapping New Sources*, Annual Status Report on Regional Water Supply Planning, Florida Department of Environmental Protection, March 2007.

⁴ http://www.dep.state.fl.us/water/waterpolicy/docs/RWSP_ASR_2006.pdf

- A water and wastewater loan program for planning, acquisition and construction of water related infrastructure, for political subdivisions and nonprofit water supply corporations.⁵

B. Sources of information about Grants and Loans

There are excellent sources of information about grants and loans available for water reclamation projects. On a national level, the most comprehensive source of information specific to water reclamation projects is Chapter 6 of *EPA's Guidelines for Water Reuse*, September 2004.⁶ In addition to listing common sources of Federal and State grants and loans, it discusses private capital contributions and internally generated funding alternatives. Interestingly it highlights Washington's "rather innovative" Public Utility Tax levied on gross income of public and private utilities, with partial exemptions for favored reclaimed water services. There is a suggestion that many variations on this incentive theme could be adopted by states, such as imposing a utility tax directly on large water users and granting exemptions for reclaimed water use.

There is an even more comprehensive list of Federal and private sources of financing for water infrastructure generally in *EPA's Guidebook of Financial Tools: Paying for Sustainable Environmental Systems*, April 1999.⁷ This compendium is a bit outdated but is now being updated. However, it has a very complete list of Federal and non-Federal programs that have been used to fund water related projects. Similar to those used by the Washington Department of Revenue, it enumerates nine criteria to compare various financial tools that states, municipalities or utilities might adopt. The criteria are:

1. Actual use
2. Revenue stability
3. Revenue size
4. Revenue cost/savings
5. Administrative ease
6. Equity
7. Cost/benefit relationship
8. Financial leveraging
9. Environmental benefits

It evaluates tools for raising revenue, including a wide variety of general and special taxes, fees, special charges, fines and penalties. It also evaluates tools for acquiring capital, including bonds, loans, grants, credit enhancements, and tools for building public-private partnerships.

More specific to the Northwest is a searchable database called the Directory of Watershed Resources maintained by the Environmental Finance Center at Boise State

⁵ http://www.twdb.state.tx.us/assistance/financial/financial_main.asp#public

⁶ <http://www.epa.gov/nrmrl/pubs/625r04108/625r04108.pdf>

⁷ <http://www.epa.gov/efinpage/guidebook/guidebooktp.htm>

University.⁸ The Directory includes information on funding programs available from federal, state, private, and other sources. For example, a search for state programs available in Washington for funding water quality capital projects yields thirty results including program descriptions, eligibility and contact information. A search for Federal programs results in 14 programs.

The availability of these and similar tools indicates that there are adequate resources for finding all existing sources of Federal and state programs for financial assistance. In some cases, creativity will be needed to make water reclamation fit, but policy appears to be headed in the direction of making it easier. For example, a recent draft report from EPA's Office of Wastewater Management emphasizes that a wide range of reuse projects are eligible for State Revolving Loan Fund financing, including projects before, at and after a publicly owned treatment works, including gray water systems, higher levels of treatment, piping to the property line, etc⁹. While applicable only to interpretation of the Clean Water Act, it is likely that EPA's direction will be influential with other Federal programs.

C. Self-financing of Reclaimed Water Projects in Other States

Self-generated funds that utilities in other states often use include dedicated capital funds for new construction, cash reserves, existing operating revenues, increases in user fees, special assessment or tax district revenues and bonds, revenue bonds, developer agreements, impact fees, connection fee charges, and general fund advances.¹⁰ In a typical example of self financing of reclaimed water projects, the San Antonio Water System used a combination of revenues, revenue bonds, tax-exempt commercial paper and capital recovery fees (impact fees and other fees) to finance one of its projects.¹¹

The main source of capital for the portion of project costs that are not subsidized by Federal or state grants is borrowed funds, either from public finance sources such as the SRF or accessing capital markets, using tax exempt financing whenever available. The key issue for Reclaimed Water (RCW) projects, as with other infrastructure, is how the debt service will be paid off. In determining who should pay how much for the debt service, some of the vital considerations are:

1. User Pays

Should the users of reclaimed water pay all or a substantial portion of the costs of treatment and delivery of the reclaimed water? In the City of Longboat Key, Florida, for example, the end users pay for the entire cost of the system.¹² This straightforward allocation is relatively rare because of the usual desire to attract customers to use

⁸ <http://efc.boisestate.edu/watershed/>

⁹ *The Clean Water State Revolving Fund Program: Tapping its Untapped Potential. EPA Draft, 2007.*

¹⁰ See *USEPA Guidelines, supra.*

¹¹ <http://www.saws.org/>

¹² *USEPA Guidelines for Water Reuse, supra, p. 211.*

reclaimed water with a subsidized rate. In Washington, the Snoqualmie project was fully financed by the Weyerhaeuser Corporation.¹³

2. Allocation Among Ratepayers

To what extent should costs in excess of grants be shared among wastewater, water and user ratepayers? Utilities' decisions on how to allocate costs fairly and equitably across all classes of users are highly dependent on policy objectives. For example, the costs of tertiary treatment could be shared among water and wastewater customers based on the extent to which treatment was needed for water quality purposes or for providing reclaimed water. If incentives are desired to attract new customers for reclaimed water, it might be appropriate to subsidize the cost of reclaimed water by surcharging peak demand for both conservation and subsidy objectives. In the East Valley Water Recycling project in California, for example, the non-grant funded portion of the total cost is being funded by water ratepayers through special conservation and reclamation rate adjustments.¹⁴

There has been a growing emphasis on the role of economic analysis in justifying RCW as the least cost option and justifying allocation among ratepayers. The recent project of the Water Reuse Foundation develops an economic framework that is designed to estimate and communicate a full range of benefits associated with water reuse projects.¹⁵ These benefits include enhanced wetlands, in-stream flows, recreation, cultural and aesthetic values, better reliability and deferred costs of water supply development. To the extent that they can be quantified or even monetized, they can not only provide more justification for water reuse projects, but can also be used to justify allocation of costs among different ratepayers and the general taxpayer. A 2002 California Recycled Water Task Force called for the development of a mechanism for identifying equitable capital and operational funding schemes, based on the allocation of the benefits and costs in an economic analysis.¹⁶ This could provide useful tools for utilities willing to incorporate economic analysis.

3. Affordability Issues

How should rate adjustments deal with affordability issues? The upward adjustment of rates of either water or wastewater customers to pay either for the full costs of service delivery or for additional costs of improvements such as reclaimed water projects will almost always be limited by the inability of some customers to be able to pay for any increase. Some customers may be unable to pay existing charges and are or have been in default, adding the costs of collection and cut off. This is an individual household problem, not, as it is usually characterized, a community affordability problem. It doesn't have to be a political problem if careful attention is paid to dealing

¹³ *Case Studies in Reclaimed Water Use*, *supra*.

¹⁴ See generally, *Allocation of Recycled Water Costs* Robert S. Grantham, Carollo Engineers, Walnut Creek, California. See also, *EPA Guidelines*, *supra*, pp. 206-9.

¹⁵ *An Economic Framework for Evaluating the Benefits and Costs of Water Reuse*, Robert S. Taucher, 2006

¹⁶ <http://www.owue.water.ca.gov/recycle/docs/ExecSummary.pdf>

with affordability in rate design. A recent publication by EPA's Environmental Financial Advisory Board offers some practical suggestions for clearly identifying and dealing with affordability. It acknowledges that some subsidy for some customers will be necessary. It evaluates four possible sources and weighs the advantages and disadvantages of each. It also recommends a thorough job be done to identify the customers truly needing a subsidy and to target only them.¹⁷

IV. Potential Sources of direct revenue or capitalization of Grant and Loan funds for Reclaimed Water projects

While existing sources of grants and loans and self financing for RCW projects may likely continue to be the major means of financing future ones, the Washington legislature has asked for options for a long term funding strategy to support RCW projects. The Long-Term Funding Sub-Task Force with the assistance of the Department of Revenue has considered a variety of proposals to raise additional revenues and/or to provide incentives to utilities to build reclaimed water facilities.

This portion of the report examines sources other states have used or considered or some experts have advocated for funding water and wastewater or other facilities, sometimes including reclaimed water. If there is interest in any of these sources, a next step would be to research Washington law, including debt and other constitutional limits, to see whether they are practically available without major changes in fundamental law.

A. Bond issues

General obligation bonds issued with the full faith and credit of the states, usually with statewide voter approval, can be used in several ways. They can provide grants to write down the construction costs of new or expanded facilities or can be directed to existing or new loan funds such as the state revolving funds for water and wastewater. Over a number of years starting in 1978, California has passed several bond laws and has created a fund, which provided loans and grants for planning and construction of water recycling projects.¹⁸ New York has passed a number of bond issues for eligible water quality projects.¹⁹

B. Dedicated revenues

A number of states have passed laws, some approved by voters, which dedicate designated sources of revenue for specific environmental purposes. In the current fiscal year, New York's Environmental Protection Fund will receive \$225 million from the real property transfer tax for various environmental purposes. By law, the amount will

¹⁷ *Affordability Rate Design for Households*, February 2006.

http://www.epa.gov/efinpage/Affordability_Rate_Design_report.pdf

¹⁸ <http://www.swrcb.ca.gov/recycling/fundingsources.html>

¹⁹ See, e.g., New York Environmental Conservation Law, Article 56, providing for implementation of the Clean Water/Clean Air Bond Act of 1996.

increase in the two subsequent fiscal years to \$300 million.²⁰ Maryland's Program Open Space has produced hundreds of millions of dollars over nearly 30 years to acquire lands that protect water quality, conserve natural areas, and create parks. The funds come from a 0.5% transfer tax on the sale of real estate. Over \$95 million has been appropriated for fiscal 2008.²¹ A number of states also use lottery, fines and penalties, surpluses, hunting and fishing fees or other dedicated sources to fund specific programs. Oregon dedicates a portion of its lottery fund for parks and salmon restoration.²² Nebraska allocates 44.5% of its lottery proceeds to the Environmental Trust Fund which funds a broad list of environmental purposes including actions to conserve water and/or efficiently and effectively manage water use.²³

C. Legislative appropriations from general tax revenues

The North Carolina Clean Water Management Trust Fund is supported by appropriations from the legislature.²⁴ Over \$700 million has been granted to projects, about one-third of which are water quality related.

D. Tax/fee on water users

In 2005, Maryland adopted an annual "flush fee" of \$30, or \$2.50 a month, to the utility bills of property owners who use the public sewer system and also a fee on septic tank owners.²⁵ The money collected from public sewer system users is used to upgrade wastewater treatment facilities. The money collected from septic tank owners is split, with 60% of it used to fund grants for septic system improvements and 40% used for a program that encourages farmers to plant crops that reduce nutrient loading in Chesapeake Bay. Maryland expects to raise about \$65 million a year from public system users and \$12.6 million a year from septic tank users. Maryland will use the \$65 million from sewage treatment plant users to back more than \$700 million in revenue bonds. These bonds will partially fund nearly \$1 billion in capital projects at 66 major sewage treatment plants.

Taxes or fees on water withdrawals are not widely used and are controversial. For example, Minnesota collects a water use fee that generated about \$2.5 million for the state's general fund in 2001. Businesses pay more than 60% of the money raised. A water tax on industrial and commercial users proposed by a gubernatorial candidate in 2002 to close the state's budget gap would have produced substantial revenue, but got no traction.

²⁰See Assembly Bill Summary A08339. The new law allows for additional deposits to be made to the environmental protection fund.

²¹<http://assembly.state.ny.us/leg/?bn=A08339>

²²<http://www.mdredbookonline.com/redbkpublic/template.asp>

²³<http://www.oregonlottery.org/general/2bil.php>

²⁴http://www.environmentaltrust.org/about_the_trust/our_priorities.htm

²⁵<http://www.cwmtf.net/2006cwmtfar.pdf>

²⁵<http://www.cga.ct.gov/2007/rpt/2007-R-0248.htm>

Some utility districts collect both a user charge from the consumers and a water and sewerage tax from the property owners.²⁶

There is growing support for taxes or deposits on bottled water however, which suggests that the historical public antipathy toward taxing what many members of the public believe should be a free commodity may be eroding. A recent proposal to impose a tax of anywhere from 10 to 25 cents on the cost of every bottle of water sold in Chicago got positive support from the Mayor.²⁷

A carefully targeted state tax on water withdrawals or consumption, with appropriate exemptions for health related consumption, especially by lower income households, could conceivably be justified by the historical under-pricing of water. It would be politically challenging, but Maryland's recent experience with adopting a flush fee shows that the right balance of modest rates and clearly identified uses of revenue raised, a consensus based coalition in support and a sense of imminent crisis can overcome basic consumer resistance. Reclaimed water would likely be only one of a series of water related purposes to which the revenues would be directed. A cost-effectiveness test on proposed projects might make the proposal more acceptable.

E. Voluntary contributions by ratepayers

Tom Fox and Jim Hagstrom²⁸ have proposed that utilities collect a voluntary surcharge from rate payers and funnel the proceeds into a capital fund to invest in sustainable water infrastructure. The idea has not been fully developed, but it is based on existing green energy voluntary surcharges collected by many utilities around the country. In those programs, customers can choose to purchase new, renewable energy for a percentage of their annual electricity use. The proceeds are invested in projects like wind farms, geothermal, or tidal energy projects in which the utility participates. An alternative model is one pioneered by The Bonneville Environmental Foundation, a non-profit organization. The Foundation sells carbon offsets as renewable energy certificates, which it calls *Green Tags*, to replace polluting sources of electricity with solar and wind sources. The advantage of a nonprofit is that the amounts paid for the Green Tags may be tax deductible to the consumer.

A water or wastewater utility could devise a similar program, allowing customers to add varying percentages to their bill to invest in sustainable (green) infrastructure, including reclaimed water projects. One issue would be defining exactly what projects would qualify for certification as sustainable. The Foundation uses a panel of outside experts to certify projects as meeting Green Tag criteria.

²⁶ See e.g., Chennai (India) Metropolitan Water and Sewerage Board
<http://www.chennaietrowater.com/finance/financemain.htm>

²⁷ http://www.suntimes.com/news/politics/509503_water081407.article

²⁸ Both members of the Reclaimed Water Use Rule Advisory Committee

F. Financial guaranty

Using the guaranty authority of the State Revolving Fund can expand the number of projects financed. The Federal Clean Water and Safe Drinking Water Acts both allow states “to guarantee, or purchase insurance for, local obligations where such action would improve credit market access or reduce interest rates.”²⁹ Using this authority would not be a new source of revenue but could extend the overall capacity of the SRF’s to finance local projects.³⁰

G. Maximum leveraging of State Revolving Funds

A number of states have acted to leverage the capacity of their State Revolving Loan Funds (“SRF”). For an SRF using a leveraged loan approach, loans to finance qualifying projects at below market rates are funded in whole or in part with borrowed money (“leveraged loans”) as opposed to being limited to the Fund’s equity. With leveraged loans, the capacity of the SRF to make loans for qualifying projects will exceed the amount of the SRF’s equity. An advantage of the leveraged approach is the ability to provide subsidized loans for a significantly greater amount of qualifying project costs. Another is the ability to increase the loan capacity of the fund up to several times depending on the level of interest subsidy provided. Washington Department of Ecology is looking at the pros and cons of leveraging the Washington Clean Water State Revolving Fund.

H. State Revolving Fund priorities

States have considerable discretion in establishing priorities for investments in projects. While the overall emphasis of SRF’s is to meet clean and drinking water quality requirements, EPA is encouraging states to make maximum use of existing eligibilities. A recent draft paper from EPA’s SRF office re-emphasizes that water reuse projects are eligible for SRF financing.³¹ Massachusetts awards points in part on the extent to which a project is consistent with local and regional growth plans.³² Similarly, a state could grant priority points for projects that incorporate reclaimed water.

I. Private activity bonds

Private activity bonds (PAB) are often used to develop infrastructure in designated redevelopment areas. Private activity bonds are a financing tool that local government can employ to provide debt financing for projects that significantly benefit

²⁹ FWQA (P.L. 100-4), Title VI, Sec. 603(d)(3); FSDWA (P.L. 104-182), Sec. 1452(3)(f).

³⁰ See *Conceptual Framework for Understanding the Direct and Leveraged SRF Approaches*, draft paper presented to the Environmental Financial Advisory Board, August 16, 2007. See also *Unleashing the SRF Guaranty Authority*, Presentation of James T. Gebhardt, CFO, NYS Environmental Facilities Corporation, at US EPA Environmental Financial Advisory Board Meeting, March 15, 2005.

³¹ *The Clean Water State Revolving Fund Program: Tapping its Untapped Potential*, *supra*.

³² <http://www.mass.gov/dep/water/wastewater/cwsrf.pdf>

private users, such as water and sewer projects. These bonds are often used for redevelopment projects in areas designated for redevelopment. Private activity bond financing normally results in reduced financing costs, since interest on the bonds is not subject to federal income taxes. The state or local government does not generally pledge its credit for payment of the bonded debt. Private activity bonds are normally payable solely from payments made by the private user of the property financed. A number of states have used PAB's for building or upgrading wastewater and drinking water facilities.³³ A state or municipality might choose to favor or even require reclaimed water facilities as a condition of making private activity bonds available. There are Federal caps on the total amount of private activity bonds a state can issue. A state might prioritize caps on PAB's to favor projects that incorporate reclaimed water.

J. Tax Increment Financing

Many states, including Washington, allow local communities to use the taxes resulting from the increase in taxable valuation caused by the construction of new industrial or commercial facilities to provide economic development incentives. Tax Increment Financing (TIF) may be used to offset the cost of public improvements and utilities, including water and sewer facilities. TIF is a method of facilitating development or redevelopment of defined areas of property by utilizing future tax revenues to pay for some of the necessary improvements. TIF allows local officials to designate an area ("TIF District") for improvement and then earmark any future growth in property tax revenues in that district to pay for the predetermined development expenditures in that district. Constitutional and statutory restrictions in Washington have limited the effectiveness of tax increment financing here. The Local Infrastructure Financing Tool (LIFT) Program, adopted in 2006, is intended to provide funding for local infrastructure using sales tax, property tax and selected other excise tax increases generated by an economic development project as part of a revenue development area designated by the sponsoring local government.³⁴ The LIFT Program allows selected local governments to take advantage of tax revenue generated by private investment in a Revenue Development Area (RDA) to make payments on bonds used to finance public infrastructure improvements, including water and sewer. Incremental revenue increases in the RDA and revenue from other local public sources are used to match state money and must also be used to repay the same bonds.

K. State pension funds

State pension funds have enormous and growing capacity. There is some interest in using them to invest in innovative projects that could include reclaimed water and other water conservation technologies. The California State Treasurer has proposed that California's public pension funds invest up to \$15 billion in urban, smart growth infrastructure projects.³⁵ It would provide a new source of capital for state and local

³³ See *Private Activity Bonds and Financing Water Infrastructure in Texas*, Jim Forte and Andrew Shaw at http://ncppp.org/resources/papers/shea_pab.pdf

³⁴ <http://www.commerce.wa.gov/site/999/default.aspx>

³⁵ http://treasurer.ca.gov/news/releases/2006/20060403_calbuild.pdf

infrastructure projects, supplementing the financing available from tax-exempt bonds and other traditional government financing mechanisms. Potential investments would include water-supply and conservation projects that would generate income from sources such as user fees. While the pension funds need to achieve a reasonable rate of return for investors and may not offer a significant direct subsidy to these projects, the investment they make may be on more favorable terms than might otherwise be available from private sources, especially if the transaction were structured such that the overall return was satisfied by other aspects of a larger project the pension fund was investing in. This will require some flexible and innovative thinking from both the utility and the pension fund.

L. Impact fees

The use of impact fees imposed by a utility on new development to finance RCW is well established. One use which might be explored is financing RCW retrofits as part of inner city or suburban redevelopment.

M. Brownfields/Superfund

In areas where RCW projects are planned and there is a Superfund or brownfield site that is being redeveloped, it may be possible to invest responsible-party funds to help implement the RCW project, both on and off site. Responsible parties and oversight agencies may agree to implement an RCW project as a more cost effective use of funds than requiring treatment of contaminated groundwater to drinking water standards. One major company that is a responsible party at numerous sites nationwide is looking at this possibility.

N. Creative use of Federal and State infrastructure funds

Federal highway funds can be used to deal with water quality issues in conjunction with projects. If an RCW project is planned in the vicinity of a federally funded project and it could meet the required mitigation criteria, some of the project funds might be allocated to assist with RCW funding. Similarly, state departments of transportation control federal Congestion Mitigation and Air Quality funds, which are often used for transit-oriented or other smart-growth developments. While it may only occasionally occur that an RCW project would be in an area where a highway, congestion mitigation or redevelopment project supported by Federal funds is being developed, a utility that is planning an RCW project should explore any possible synergies with those developing the other project.

O. Tax credits

The Federal New Markets Tax Credit Program permits taxpayers to receive a credit against Federal income taxes for making qualified equity investments in designated Community Development Entities (CDE's). Investments have been primarily in the form of loans to businesses in low-income communities,

chiefly for constructing and rehabilitating commercial real estate, to purchase fixed assets for businesses and to provide working capital for businesses. The NMTC Program has generated \$6.2 billion of investments in low-income communities throughout the country. Where reclaimed water projects are planned in areas where there is an active CDE, there may be an opportunity to work with the CDE and target businesses to finance RCW compatible infrastructure in their projects. Washington is among the top ten states in terms of the number of projects benefiting from the NMTC program.³⁶

P. Affinity credit cards.

Many nonprofit organizations use affinity cards to raise funds for their programs. Government supported environmental funds have been designated to receive funds from such credit card purchases. In Connecticut, for example, People's Bank has donated 0.5% of the interest on all purchases made with its Long Island Sound Affinity Credit Card to the Long Island Sound Fund.³⁷ The Fund is used for a variety of education, research, public access and habitat restoration projects benefiting the Sound.

Q. License plates.

A number of states use special license plate sales to fund environmental programs. The Connecticut Department of Environmental Protection's Long Island Sound License Plate Program contributes to the Long Island Sound Fund.³⁸ Maryland has established the Chesapeake Bay Trust, a private nonprofit grant-making organization dedicated to restoring and protecting the Bay and its tributaries. Most of the Trust's revenue comes from the Chesapeake Bay and Endangered Species Fund check-off on the state income tax form and from sales of a specialty license plate. In 2006, more than \$1.2 million was raised through the check-off.³⁹ In 2005, license plate sales raised more than \$819,000 for Chesapeake Bay restoration projects.⁴⁰

Conclusion

The foregoing is a sample of innovative sources of funding for RCW facilities or for similar environmental purposes. The Long-Term Funding Task-Force may wish to suggest any of them for further exploration by or for the Legislature and the Partnership for Puget Sound.

³⁶ See generally http://www.cdfifund.gov/what_we_do/programs_id.asp?programID=5

³⁷ <http://www.ct.gov/dep/cwp/view.asp?A=2705&Q=323536>

³⁸ http://www.ct.gov/dep/cwp/view.asp?a=2705&q=323786&depNav_GID=1635

³⁹ http://www.cbtrust.org/site/c.enJIKQNoFiG/b.2028375/k.5BFC/Contribute_at_Tax_Time.htm

⁴⁰ <http://www.bayplate.org/atf/cf/%7BBA3A79C4-5D59-49CC-878E-3B8B50C9515D%7D/Marylanders%20Support%20the%20Chesapeake%20and%20Purchase%20Plates.doc>

Appendix A Financing mechanisms in selected states

ARIZONA

Finance mechanisms

- **Federal Grants** (e.g. Federal Emergency Management Agency, Environmental Protection Agency, Army Corps of Engineers, Bureau of Reclamation, U.S. Fish and Wildlife Service, U.S. Department of Housing and Urban Development)
- **State Bond Issues Supporting Loans and Grants**
- **State Revolving Fund** (Arizona's Clean Water Revolving Fund)
- **Municipal Bond Issues Supporting Loans and Grants**
- **Direct Appropriations from State Funds** (e.g. Arizona Division of Emergency Management, Arizona Department of Transportation, Arizona Department of Environmental Quality, Arizona State Historic Preservation Office, Arizona Department of Water Resources, State Water Protection Fund, State General Fund)
- **Direct Appropriations from City General Fund**
- **Utility Fees and Charges, Developer Impact Fees**

Examples

Butler Drive Water Reclamation Facility (Peoria, AZ)

\$121 million (including land acquisition)

State and municipal bonds (59%), developer impact fees (30%), pay-as-you-go capital (11%)

http://www.peoriaaz.com/BuildingPeoria/BP_UTIL_ButlerWRF.asp,

<http://www.azwifa.gov/QuickLinks/2006CWIUP.pdf>

Kearny Water Reclamation Facility (Kearny, AZ)

\$2.6 million

Approval and funding from: Federal Emergency Management Agency, Arizona Division of Emergency Management, Arizona Department of Transportation, Arizona Department of Environmental Quality, Environmental Protection Agency, Army Corps of Engineers, Arizona State Historic Preservation Office, U.S. Fish and Wildlife Service, Arizona Department of Water Resources

<http://www.rcegleberry.com/kearnywater.htm>

CALIFORNIA

Finance mechanisms

- **Federal Grants** (e.g. Border Environmental Cooperation Commission)
- **State Bond Issues Supporting Loans and Grants** (e.g. through state's "Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Bond Act," state general

obligation bonds)

- **Municipal Bond Issues Supporting Loans and Grants** (e.g. Eastern Municipal Water District)
- **State Revolving Fund**
- **State Grant and Loan Programs** (e.g. Water Recycling Facilities Planning Grant Program, Water Recycling Loan Program, and Water Recycling Construction Program)
- **Low-interest Municipal Loans**
- **Utility Fees** (e.g. Los Angeles Water District's "Environmental Assessment Fee" on water users, Regional Sewage Program Funds)

Examples

Carbon Canyon Recycled Water Project (Regional Facilities)

\$110 million

Federal and state grants, state low-interest loans, Metropolitan Water District Local Resources Program Rebates, Regional Sewage Program funds

www.scag.ca.gov/rcp/pdf/uwmp/SanBernardino/InlandEmpireUtilities2005UWMP.pdf

San Luis Obispo Water Treatment Plant (San Luis Obispo, CA)

\$11.8 million

Grant and low-interest loan from City

<http://www.sloreuse.org/history.html>

COLORADO

Finance mechanisms

- **State Grants**
- **State Revolving Fund**
- **State Loans**
- **Utility Fees and Charges** (e.g. customer rates)
- **Private Capital** (e.g. fees from primary users where a project benefits a specific business)

Examples

Denver Water Recycling Plant (Commerce City, CO)

\$154 million

Potable water customer rates

“Tap fee” from primary user, Xcel Energy’s Cherokee Power Plant (\$10 million)

http://72.14.253.104/search?q=cache:TK_L5DaRxqsJ:www.crgov.com/Files/TM6-Reclaimed%2520Water%2520Structure%2520and%2520Funding%2520Approaches.pdf+%22Denver+Water+Recycling+Plant%22+fund+cost&hl=en&ct=clnk&cd=4&gl=us&client=firefox-a (page 14)

Drake Water Reclamation Facility (Fort Collins, Colorado)

Anheuser-Busch (following agreement to have plant treat brewery wastewater)

Customer rates

<http://www.ci.fort-collins.co.us/wastewater/history.php>

J.D. Phillips Water Reclamation Facility (Colorado Springs, Colorado; *under construction*)

\$65 million

Customer rates

http://findarticles.com/p/articles/mi_qn4191/is_20070708/ai_n19354259
http://www.rmwea.org/rmwea/committees/Joint/jtac_luncheon_schedule.htm

FLORIDA

Finance mechanisms

- **Federal Grants** (e.g. U.S. Environmental Protection Agency, Federal State and Tribal Assistance Grants)
See www.oeonline.org/publications/reportsandstudies/or-untapped and <http://sjr.state.fl.us/programs/waterprotectsustain.html>
- **State Grants** (e.g. Florida Communities Trust, Florida Department of Environmental Protection, Water Supply Restoration, Water Protection and Sustainability Trust Fund, SFWMD Alternative Water Supply Grant Program)
See www.oeonline.org/publications/reportsandstudies/or-untapped and <http://sjr.state.fl.us/programs/waterprotectsustain.html>
- **State Revolving Fund loan program**
- **Water Management District Grants** (e.g. South Florida Water Management District)
- **Utility Fees and Charges, Impact Fees**
- **Private Capital – Developer Contributions**

Examples

Kanapaha Water Reclamation Facility

\$14 million (original plant), plus \$1.2 million (expansion)

Federal grants (Regional Utilities Board (GRU's predecessor) and the Environmental Protection Agency (EPA))

<http://www.gru.com/YourHome/ProductsServices/WaterWastewater/kanapahaHistory.jsp>

City of West Palm Beach Wetlands-Based Water Reclamation

Project

\$37.7 million project

Federal and state grants:

U.S. Environmental Protection Agency
(\$10.8 million)

Florida Communities Trust (\$2
million)

South Florida Water Management
District (\$1.32 million)

Florida Department of Environmental
Protection (\$280,000)

<http://www.cityofwpb.com/News/downloads/06-11-06CityofW.P.B.Wetlands-BasedWaterReclamationProject.pdf>

OREGON

Finance mechanisms

- **Federal Grants** (e.g. Bureau of Reclamation)
- **State Bonds** (e.g. general obligation bonds backed by tax revenues, revenue bonds backed by user fees, and “double-barrel bonds,” backed by both tax revenues and user fees) See www.oeonline.org/publications/reportsandstudies/or-untapped, p. 28
- **State Revolving Fund**
- **Municipal General Funds** (e.g. Portland, Oregon’s municipally operated water and wastewater utility)
- **Utility Fees and Charges**

Examples

Woodburn Treatment Plant's Wastewater Reuse Facility
(Woodburn, OR)

<http://www.nesc.wvu.edu/ndwc/articles/OT/WI05/reuse.pdf>

Winston-Green Wastewater Treatment Plant Upgrade and Reuse Planning (near Roseburg, OR)

<http://www.carollo.com/360/section.aspx/302>

TEXAS

Finance mechanisms

- **Federal Grants** (e.g. U.S. Bureau of Reclamation, U.S. Economic Development Administration)
- **State Bonds** (e.g. revenue and general obligation bonds)
See www.gao.gov/cgi-bin/getrpt?GAO-02-134 and <http://www.lib.utexas.edu/taro/tslac/30034/tsl-30034.html>
- **State Revolving Fund** (e.g. Texas Water Development Board's Clean Water State Revolving Fund)
- **Utility Fees and Charges**

Examples

San Antonio Water System's Water Reclamation Facilities (El Paso):

Medio Creek, Leon Creek, and Dos Rios

Financed through State Revolving Fund

See <http://www.saws.org/our%5Fwater/recycling/centers/>

Appendix B
Financing of Washington Projects

Place	Project	Finance mechanism	Amount	Remarks
Sequim*	RW '98 treatment plant	State Revolving Fund (SRF) loan	\$5.3 million	
	RW distribution system and park features	Legislative appropriation for park demo	\$3.4 million	
Sunland Clallam Co.	Irrigation water	SRF loan for design	\$76,000	
		Public Works Trust Fund loan for Construction/engineering	\$935,000	
North Bay/Case Inlet Mason Co.	Forest irrigation; aquifer recharge.	DOE \$5,000,000 grant,\$9,000,000 loan; USDA \$3,740,000 grant \$5,200,000 loan	\$22 million	Debt service paid from residential sewer rates, development charges, and connection fees
LOTT Budd Inlet	Irrigation at parks/facilities; various other uses	Bonds \$2.8	million	Bonds repaid from residential rates
LOTT's Hawks Prairie satellite	Wetland ponds and ground water recharge	Customer hook up fees and existing monthly sewer rates	\$30 million	
City of Yelm*	Seasonal urban landscape irrigation. Cochrane Memorial Park water features. Recharging ground water. Treatment plant	Centennial Clean Water Fund Grant (Legislative Appropriation) \$3,398,500 US Department of Agriculture Rural Development Loan \$3,857,000 US Department of	\$9.6 million	Yelm adopted a local reclaimed water ordinance establishing the conditions of reclaimed water use. The ordinance

	equipment process water. Fire fighting. Street cleaning. Dust control. Power generation	Agriculture Rural Development Grant \$344,449 Utility Local Improvement District \$2,000,000 City Funds \$30,901		includes a “mandatory use” clause allowing Yelm to require construction of reclaimed water distribution facilities as a condition of development approval. Yelm reclaimed water rates are approximately 80 percent of their drinking water rate
King County	Upgraded regional treatment plants to reclamation facilities	Regional funding system – with “fair” rate structure and a capacity charge.	\$2.24 million: South Treatment Plant upgrade \$300,000: West Point Treatment Plant	
City of Snoqualmie	Upgraded to a Class A reclamation plant	Fully funded by Weyerhaeuser Development Corporation (WEYCO)	\$18 million	Charges for the reclaimed water at the same cost as drinking water supplies
Holmes Harbor Sewer District	Collection system and treatment facility	Holmes Harbor formed a ULID to finance the facility through sewer revenue bonds and property assessments.	\$3.7 million	
City of Ephrata	Facility produces Class	Centennial Clean Water Fund grant and a Clean	\$6.8 million	

	A reclaimed water	Water State Revolving Fund loan.		
City of Royal City	Construction of a Class A reclamation facility	<p>US Department of Agriculture Rural Development Grant \$1.8 million</p> <p>US Department of Agriculture Rural Development Loan \$640,000</p> <p>Centennial Clean Water Fund Grant \$985,000</p> <p>Community Development Block Grant \$750,000</p> <p>Clean Water State Revolving Fund Loan \$245,525</p> <p>City Funds \$79,585</p>	\$3.7 million	Royal City used a Clean Water State Revolving Fund loan of \$73,845 for planning
City of Quincy and Earth Tech	To upgrade two plants, Quincy leveraged city finances by taking advantage of the design-build option offered under Washington's Water Quality Joint Development Act (Ch. 173.240 RCW)	<p>A USDA Rural Development loan for \$2.7 million provided some of the costs of the upgrade.</p> <p>Quincy further reduced debt by refinancing loans at a lower interest rate through the Clean Water State Revolving Fund loan in 2001 for the amount of \$2.5 million.</p>	\$5.90 million	
City of Walla Walla and Operations Management	Upgraded treatment facility to meet the state's Class A	Financing: Public Works Trust Fund \$5,159,197	\$33.1 million total (Phase 1	Connection fees are paid by the developer and assessed per

International	reclaim ed water standards		\$20 m, Phase 2 \$6.1 m, Phase 3 \$7 m)	foot of pipe.
City of College Place	Constructed an advanced wastewater treatment facility that meets Class C reclaimed water quality requirements.	\$210,000 low interest loan to enhance the watershed. Financial Assistance amount Public Works Trust Fund Loan - \$7 million Centennial Clean Water Fund Grant- \$2.5 million Clean Water State Revolving Fund Loan - \$5.6 million	\$16.4 million	
City of Medical Lake	Upgraded two wastewater treatment facilities and an aging lagoon system	Public Works Trust Fund Design Loan - \$96,000 Centennial Clean Water Fund Grant - \$2.5 million Public Works Trust Fund - \$1.5 million Capital Improvement Fund from City - \$1.0 m DSHS - \$9.0 million	\$14 million	Residential Sewer Rates: Monthly Rate \$30.00 Connection Fee \$1,250
City of Cheney	Construction of a Class D treatment plant.	Centennial Clean Water Fund Grant - \$3.0 million US EPA Innovative and Alternative Treatment Grant - \$6.0 million Public Works Trust Fund Loan - \$4.0 million USDA Rural Development Loan, (Later Refinanced with Clean Water State	\$13-\$15.7 million	

		Revolving Loan) - \$2.7 million		
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*one of four small community demonstration projects.