

Restructuring State Public Infrastructure Programs
Analysis for the Washington Legislature

State of Washington
Office of Financial Management

December 2008

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EXECUTIVE SUMMARY

This report is organized into two parts at the direction of the 2008 Legislature. A public infrastructure program restructuring Implementation Plan is included in Part I and Part II includes the analysis requested in the Legislative proviso. What follows is an executive summary of the analysis which covers 29 of 84 of the state's public infrastructure grant and loan programs generally addressing local drinking water, wastewater, stormwater and select community building and facility projects.

Investment in Local Public Infrastructure

What's Working

- Communities across the state, together with state government, invested \$9.1 billion in local roadways, water, sewer and drainage systems between 1998 and 2006.¹
- Of the \$9.1 billion spent on public infrastructure, the state and federal government provided 26 percent of the resources.²
- Local public infrastructure investments in water, sewer, stormwater, solid waste and buildings over a five-year period were financed through a combination of local funds often from utility rate revenue, municipal bonds (\$4.6 billion), state low-interest loans (\$1.7 billion) and state grant programs (\$659 million). Bonds and loans are repaid with interest, generally over 20 years, from local sources.
- The State of Washington's combined local public infrastructure revolving loan programs are large (current portfolio of outstanding loans is \$3.3 billion at an average interest rate of 1.38 percent). The size of the portfolio is growing as loans are repaid and additional capital comes into the loan programs.
- The State of Washington uses federal private activity bond authority to further economic development projects and finance supporting public infrastructure at tax-exempt bond interest rates through the state's Bond Cap Allocation Program. An estimated \$385 million in tax-exempt bond authority was used over five years for local public infrastructure related investments by private sector firms and economic development entities.

What Could Be Improved

Significant confusion appears to exist regarding about how much funding actually goes to local governments and other recipients of state assistance. Loan principal amounts are reported as "awards" or "state assistance," which can lead to an incorrect perception that much more state funding is going to local government than is really being received. Loans are repaid to the state with interest from local tax or ratepayer revenue, and the typical "benefit" to local government is the difference between what would have been paid in private borrowing interest costs and state loan

¹ *Meeting the Growth Management Challenge in Growing Communities, the Washington State Growth Management Act Effectiveness Report*, Department of Community, Trade and Economic Development, December 2008, p. 5.

² *Ibid.*, Appendix D, p. 233-236.

interest costs. The state is not funding the initial cost of the project (for example, a \$30 million dollar sewer treatment plant). Instead, the state is reducing long-term financing costs (for example, reducing 20 years of interest from 4.5 percent interest rates to 0.50 percent interest rates).

Recommendation

Consider a reporting standard for state loans (and other interest rate buy-down programs) that is defined as the value of lower-than-market-interest payments rather than the face value of the loan, to clarify for everyone the value created to local governments and other loan recipients of state loan programs.

Implementation of State Policy Goals

What's Working

- Some general progress based on individual project outcomes is being made toward statutory legislative policy goals established for the 29 state grant and loan programs related to water, wastewater, stormwater, solid waste and buildings administered by the state departments of Ecology; Health; and Community, Trade and Economic Development.
- Most of the 29 programs are aligned with one or more umbrella state policies (the Growth Management Act, the State Economic Development Plan, climate change initiatives or Puget Sound Partnership).
- Programs (approximately one third) that are required to comply with federal policy or administrative direction have integrated that federal direction into all elements of their programs.

What Could be Improved

- The inventoried 29 state grant and loan programs are guided by a wide, sometimes inconsistent, array of stated and unstated policy goals. Some programs have too many policy goals to reasonably attain.
- Nearly all of inventoried state grant and loan program's award systems explicitly emphasize alignment with stated policy goals in their point system and/or eligibility criteria. One quarter of awards meet 74% or less of possible award points. Programs with awards receiving the least points included Building for the Arts, Youth Recreation Facilities, Local Infrastructure Financing Tool, CERB Job Development, Community Development Block Grant, Centennial Clean Water Fund and Water Pollution Control Revolving Fund. Eleven programs have no point rating system, including Capital and Operating Budget Special Projects.
- The state does not have a method for routinely reviewing and adjusting public infrastructure policy goals for individual programs over time.
- The state does not have a method in place for aligning state grant and loan programs to support statewide objectives either within an infrastructure system (e.g., water programs) or across infrastructure systems (e.g., growth management). Any adopted method should include clear articulation of statewide policy goals and identification of progress benchmarks in order to provide consistent statewide direction.

- There is not a strong connection between state policy goals, state infrastructure assistance programs and local government capital facility financing plans required by state law. Local plans identify infrastructure capacity issues that are required to be addressed in order to support statewide growth management and economic development objectives.
- The state does not have a process in place that facilitates prioritization of public infrastructure investments.
- Local reliance on state grants and loans, as reflected in projected funding in capital facilities plans, exceeds availability of actual funding. This is in part because there is no way of knowing how much funding will be available from the state. Without accurate information on funding, it is difficult for local governments to know the magnitude of adjustments that need to be made to land use plans or other strategies and policies.
- Returns expected from state investment are not clearly identified across programs. Potential returns could include:
 - Expected incremental statewide policy benefits or outcomes.
 - Leveraging of non-state project funding adjusted based on community means.
 - Direct or indirect growth multiplier in state and/or local tax revenue.
 - Economic multipliers that could include both construction and permanent employment.
 - Avoided future public infrastructure costs as a result of demand or resource management initiatives.

Recommendations

- Create a coordinated state plan that includes statewide policy goals, defines expected statewide incremental policy outcomes, needs/gap analysis and a statewide financing plan. This plan would need to be updated at least every 10 years or whenever major changes are made in regulatory programs effecting infrastructure investment.
 - As part of the state plan, determine the types of measures of return on investment (ROI) to the state that are of the greatest value given the state's policy objectives. Use these measures for reporting and, when appropriate, in evaluating projects or statewide investment priorities.
 - Periodically review each grant and loan program for consistency with, and adjustment to, the statewide plan. Adjust the number or focus of program policy goals as appropriate.
- Consider developing a single or consistent state process or budget mechanism that provides a method for statewide prioritization of public infrastructure assistance.

Definition of Public Infrastructure Needs and Funding Gap

What's Working

- Five of 29 state grant and loan programs reported a method for assessing public infrastructure funding needs statewide.
- Nearly all local governments planning under the Growth Management Act define public infrastructure requirements with a multi-year funding plan and update these plans on a regular schedule.³
- Most special districts operating water and sewer utilities are required to define public infrastructure requirements in facility master plans submitted to the state.⁴

What Could Be Improved

- Very few inventoried programs have a method of determining statewide need and the statewide funding gap for the public infrastructure they fund that goes beyond estimating the number of unfunded applications.
- Assessments of statewide public infrastructure need and the statewide funding gap have historically been undertaken about once every 10 years with varying degrees of success. A current assessment of 2009 to 2015 public infrastructure need is not available.
- Various methods of estimating additional state funding needs for the study programs beyond existing appropriation levels show a range of potential additional grant funding. State grant funding estimates vary from \$790 million to \$504 million for six years based on a historical benchmark of 18% state contribution to public infrastructure construction and limited infrastructure needs data. Additional loan funding estimates vary from \$1.12 billion to \$1.23 billion (face value of loans) using a historical benchmark of 40% state loan financing for public infrastructure construction.
- The gap between funding needs and local and state funding availability is growing, especially in the areas of roadways and drinking water.⁵
- Public infrastructure capacity issues are the most acute for cities in transportation, parks and water and for counties in transportation, public safety, sewer or parks.⁶
- Special districts' concerns focus on the cost of compliance with state and federal standards.⁷

Recommendations

- Establish a registry of current local capital facility and financing plans to provide continuous information on need and serve as the basis for 10-year state plans.

³ *Meeting the Growth Management Challenge*, p. 19.

⁴ *Ibid.*, Appendix D

⁵ *Ibid.*, p. 5.

⁶ *Ibid.*

⁷ *Restructuring State Public Infrastructure Programs*, Office of Financial Management, November 2008, Part III.

- Require inclusion of the number and cost of projects completed in the last local planning cycle in local capital facility plans to provide local and state method of gauging progress.
- Consider allocation of a larger proportion of state public infrastructure assistance to initiatives, programs or projects that reduce the longer-term cost of public infrastructure by reducing demand or creating more sustainable resources.
- Consider allocation of a larger proportion of state public infrastructure assistance to encouraging new or expanded regional public infrastructure solutions that take advantage of scale and reduce the overall public cost of infrastructure.

Grant and Loan Program Accountability, Efficiency and Effectiveness

What's Working

- Most of the 29 grant and loan programs have at least four out of the five program accountability elements outlined in this legislative study proviso in place, an improvement since 2005.
- Significant integration and consolidation between programs has already occurred through joint administration, joint or common state assistance applications, single state board oversight of related programs, and interdepartmental contracting.
- Over the last five years state grant and loan programs have helped to reduce the future cost of public infrastructure by funding a small number of local initiatives to improve the sustainability of water resources or reduce demand for expansion of infrastructure capacity.
- The 29 state grant and loan program review identified some potential best practices that may be helpful in improving the performance of the entire system.

What Could Be Improved

- Policy makers and applicants perceive that the current public infrastructure grant and loan system requires applicants (and policy makers) to “hunt” through an overly complex system of potential funding sources to provide the “package” of financing needed to execute public infrastructure projects – at a significant cost in time and money to tax payers.
- Funding is not readily available to meet project construction schedules in order to minimize costs to the public that can occur with delays and longer project completion times. Delay of two years in assembling project “funding packages” for each billion dollars in public infrastructure was found to cost as much as the total amount of funds state grant assistance for five years (\$670 million).
- The number and cost of applications/awards of state assistance for the same project is inefficient for recipients and the state. This is especially true for small jurisdictions with limited resources in the infrastructure categories of water and wastewater where multiple awards are most frequent.

- Programs could be consolidated even further by building on the progress that has already been made and the models that are being used to consolidate grant and loan program administration through contracting between departments and pooling or joint administration of programs.
- Most programs have four of five accountability elements identified by the Legislature in place (policies directing award criteria, award criteria, performance measures, feedback on policy implementation, and needs assessment). The pieces that are the least developed or consistent with policy direction are: performance measures, feedback and needs assessment.
- Legislative proviso projects in the capital and operating budgets have increased over time to represent the largest grant “program” among the 29 programs reviewed. These projects as a whole were subject to the least number of accountability elements (state policies directing award criteria, application of award criteria, performance measures, feedback on state policy implementation, and needs assessment).
- Statewide performance tracking by system (in contrast to individual program) is weak. Among the things we don’t know:
 - Number of public infrastructure projects completed on time as outlined in local capital facility plans supporting growth management and economic development;
 - Public infrastructure investment that allows or facilitates growth outside urban growth areas (UGAs) with state dollars;
 - How much funding is going to designated high-priority geographic areas for investment;
 - Return on investment indicators tracked and aggregated.
- It is unclear whether best practices are identified and used to make system improvements. Potential best practices that were identified include:
 - Methods of sharing administrative costs within individual departments;
 - Statewide needs assessment methods;
 - Award systems with a clear policy focus;
 - Policy goal related performance measurement;
 - Common project data and definitions to facilitate reporting and comparison within and across programs.
- With a few notable exceptions, regional projects that serve multiple jurisdictions are subject to the same funding maximums as an individual jurisdiction, which provides a disincentive to regionalize.

Recommendations

- Determine methods of reducing real costs of program participation to recipients. Target issues that increase overall project costs the most, such as expanded project execution timelines and long-term financing costs.
- Continue program consolidation and contracting efforts among programs and across departments. Target programs making the most multiple awards.

- Revise funding systems to provide incentives (or at least eliminate disincentives) for regional and consolidated provision of local government services.
- Address the weakest program accountability elements for existing grant and loan programs: performance measures tied to policy goals and needs assessment.
- Improve statewide performance reporting by infrastructure system.
- Use best practices within and across departments to inform efforts to improve grant and loan program outcomes.

Public Infrastructure Financing Toolbox

What's Working

- Under normal market conditions, municipal bond financing at tax exempt interest rates is readily available to local governments with credit ratings that are equal to or higher than AA. These interest rates are generally below what a private business would pay for a long term loan. Sixteen percent of local government capital projects (194 out of 1,213) that were financed with bonds, state loans or grants fell in this category during the five-year study period.
- Until 2008, municipal bond financing has also been readily available for local governments with credit ratings lower than AA to finance \$1.5 million or larger projects through the use of bond insurance. Sixty seven percent (\$3 billion) of the \$4.6 billion in bond issues during the five-year study period were insured.
- The majority of state low-interest loans went to local governments with strong management practices and resources. These elements are also considered by bond rating agencies and are required for bonds with higher credit ratings.
- For smaller capital projects (less than \$1.5 million), long-term financing is available only to creditworthy issuers through a small number of state banks and state low-interest loans. Smaller capital projects represented 65% of all capital projects over the study period.
- Thirty five percent of the total number of state grants and loans in the last five years have gone to fiscally distressed local governments. About 60 percent of all local governments in Washington are classified as fiscally distressed.

What Could Be Improved

- Local governments do not have a reliable private sector mechanism for financing public infrastructure projects needing \$1.5 million or less in financing.
- Local governments with bond ratings lower than AA may not have a reliable mechanism for reducing the cost of bond financing for projects over \$1.5 million since the viability of bond insurance is in question.
- Many states across the country have accelerated the availability of lower-interest state loans for public infrastructure through issuing bonds against a portion of their loan portfolios. This method of raising loan capital has not been used or evaluated in Washington.

- Washington has a successful program of pooling equipment and real estate financing for local and state government to gain better interest rates and market access. This same concept has not been evaluated for small public infrastructure projects in Washington.
- The state public infrastructure financing system is relatively inflexible and does not adjust as municipal bond market conditions or interest rates change.

Recommendations

- Prior to adoption of the first state public infrastructure plan, and as part of the planning process, align the emphasis of state *grant* programs and state policy goals so that state assistance goes first to:
 - smaller projects with limited access to other forms of financing;
 - communities of limited means;
 - projects required of communities of all sizes to meet newer environmental standards; and
 - projects that emphasize demand or sustainable resource management.
- Prior to adoption of the first state public infrastructure plan, and as part of the planning process, consider aligning state *loan* programs and state policy goals so that state assistance goes first to:
 - smaller projects with limited access to other forms of financing;
 - communities of limited means;
 - projects required of communities of all sizes to meet new environmental standards;
 - projects that significantly or strategically further statewide public infrastructure, growth management or economic development goals;
 - projects that support new or expanded regionalization; and
 - projects that implement capital components of demand or sustainable resource management initiatives.
- Evaluate and, if feasible, implement through changes in state statute, accelerating the availability of lower-interest state loans for public infrastructure through issuance of bonds against a portion of existing loan portfolios.
- Evaluate creating a state program that strengthens access to the municipal bond market at lower interest rates for local government borrowers. Such an initiative could be patterned after the state's current local government equipment borrowing pool. Instead of the general tax authority of the state, the pool could be backed by Public Works Assistance Account reserves. The pool may be even more effective if it is coupled with an expanded municipal bond interest write-down program for smaller borrowers.
- Provide a method (statutory and/or structural) of reviewing and adjusting, if necessary, state loan terms and policies when private borrowing conditions significantly change.

BACKGROUND

Public infrastructure is both a state and local responsibility. Infrastructure projects build or replace parts of many different community-owned systems: transportation, roadways, water (water quality, drinking water, irrigation, wastewater and stormwater), solid and hazardous waste, affordable housing, health and community facilities, public safety facilities, and parks and recreation.

Public infrastructure is generally financed through savings, grants, long term low interest state loans and the issuance of long-term debt usually in the form of municipal bonds. Loans and bonds are paid back over time from annual tax or ratepayer revenue. Due to their smaller size and perceived credit risk, small jurisdictions often have difficulty qualifying for private borrowing. Additionally, these jurisdictions are often geographically remote and have limited opportunities to participate in regional solutions to infrastructure problems.

State infrastructure assistance is provided to a variety of recipients, which include local governments (cities, counties and special purpose districts), tribes and nonprofit and for-profit organizations. Local governments receive approximately 90 percent of the assistance provided by the programs covered in this study. State assistance is provided in the form of grants of state money, loans of state funds that are repaid with interest, and various forms of municipal bond credit support that are authorized and sometimes funded by the state. The state rarely funds all of a public infrastructure project, but instead matches local funding or helps reduce the long-term financing costs of a portion of the project. Assistance is generally delivered in an incentivized manner, intended to guide projects to conform to state policy and goals. In this manner communities receive assistance and state government is able to leverage its funds to promote its goals.

Many features of public infrastructure projects are defined by state and federal regulations or requirements, but are most often built and paid for by local governments with reimbursement for a portion of the project costs from grants or assistance with long-term financing costs through loans. Infrastructure projects address a variety of policy goals: attaining compliance with environmental, health and safety regulations, facilitating economic development and enhancing quality of life or business climate.

The source of funding for public infrastructure is changing – there is less federal money available and more reliance on state provided funds. For example, in the 1970s sewer treatment plant funding was provided primarily by federal grants paying as much as 90 percent of the project costs. Over the last 30 years, the amount of public infrastructure funding provided by the federal government has been dramatically reduced and the portion of projects covered by local and state funds has greatly increased.

Legislative studies commissioned from 2005 forward have identified 84 different Washington State public infrastructure assistance programs serving local communities. Programs range in size from the Public Works Assistance Account construction loan program, which issued over \$1.5 billion in loans over the last 10 years, to the Safe Drinking Water Action grant program, which delivered \$4.5 million in grants over the same time period. State assistance programs were created over three decades beginning in the 1980s to address specific issues or needs. The resulting “system” today contains multiple programs, often addressing the same infrastructure systems, creating a maze to be navigated by recipients.

The Financial Health of Local Government

The state has an interest in the financial viability and effective management of local governments. Counties and cities are important strategic partners in the biennial delivery of over \$20 billion in non-education related governmental services in Washington.⁸

The 2006 *County Financial Health and Governance Alternative Study* conducted by CTED found that 121 cities (67 percent) and 23 counties (56 percent) are fiscally distressed. Fiscal stress is an indication of a lack of balance between resources and requirements to fund basic services. Fiscally distressed governments generally lack the resources to maintain or build public infrastructure. In order to measure fiscal health, 10 key indicators of financial condition were selected for Washington cities and counties. The study found that local governments with four or more stress indicators are generally smaller in population and are grouped in three areas of the state (northeast, southeast and south central/west). In addition, San Juan and Kitsap counties and more than half of the cities in Skagit and Spokane Counties were classified as stressed.

The financial health study also found a high correlation between local governments with high levels of fiscal stress and service areas that contained low employment and personal income growth. Any programs that affect the economic health of these regions of the state over the long term may also improve the financial health of the associated local governments.

The Growth Management Act and Public Infrastructure

Prior to the adoption of the Growth Management Act (GMA) in 1990, few local governments planned for the construction and maintenance of capital facility systems in a comprehensive way. Even fewer developed multi-year financing plans. Some planning was required in order to receive federal or state funding, and as a result some local governments completed water and sewer system plans or six-year transportation improvement plans. These plans were not always directly connected to planned growth provided for in the community's comprehensive land use plan and most local governments did not adopt community wide capital improvement programs or financing plans.

After the GMA was enacted by the Legislature, many more jurisdictions completed long-term utility, transportation and, in some cases, parks and recreation plans that were connected to the community's land use plan and growth assumptions. For the first time in many communities all capital facilities requirements were considered for funding along with the annual operating budget of the jurisdiction.

Local governments planning under the GMA attempt to quantify their public infrastructure needs. This often involves completing six-year comprehensive plans addressing growth and land use, identifying the remaining capacity of existing infrastructure and estimating future infrastructure requirements for desired or expected growth for 20 years in the future. Under GMA, if there is not adequate funding to maintain service levels or construct public infrastructure then land use plans must be revised.

⁸ Washington State and Local Finance Data web site, Legislative Evaluation and Accountability Program, [http://leap-apps.leg.wa.gov/LGFS/exec_default.asp?\]=T&\]=T](http://leap-apps.leg.wa.gov/LGFS/exec_default.asp?]=T&]=T).

The GMA requires coordination between the various public infrastructure system plans and available financing in an adopted capital facility element with a public infrastructure financing plan. In the event that funding is insufficient for planned infrastructure actions are required by the jurisdiction to bring expenses and resources into line. These actions may include revisions to land use plans to modify planned growth in order to reduce capital facility requirements. Local governments have developed a number of strategies over the last fifteen years to address this issue.⁹

The Study Proviso (House Bill 2765)

This legislative report addresses the intent of the Legislature to examine ways to maximize the public value of state assistance to grant and loan recipients. The Legislature also wishes to know the level of unmet need for public infrastructure investment throughout the state.

The 2008 Legislature directed the Office of Financial Management (OFM) to conduct an analysis and prepare an implementation plan in HB 2765. The proviso reads as follows:

HB 2765, Section 1022 FOR THE OFFICE OF FINANCIAL MANAGEMENT

Infrastructure Investment System (08-2-859)

The appropriation in this section is subject to the following conditions and limitations: The legislature intends to begin a process of reevaluating the policy goals and priorities for the allocation of infrastructure assistance program funds through the use of information that is available and reviewed each biennium by the infrastructure programs.

(1) The appropriation in this section is provided solely for the office of financial management, in cooperation with the department of community, trade, and economic development, the department of ecology, the department of health, the transportation improvement board, and the office of the state treasurer to develop an implementation plan. The implementation plan will also be developed in consultation with existing and potential state infrastructure program grant and loan recipients, other stakeholders, and the legislature. The implementation plan must identify options for the organization and coordination of appropriate state infrastructure assistance programs into an improved infrastructure investment system. The implementation plan must identify opportunities for the improved infrastructure investment system to achieve the following:

- (a) Ease of access to program information and applications;*
- (b) Access to technical assistance;*
- (c) Coordination of program investment to ensure that all budget and tax support from all state sources is disclosed and considered as a total package of assistance. This includes the identification of taxes paid by taxing districts and regions and the benefits received from those same districts and regions;*
- (d) The promotion of strategic investments of state resources that are aligned with state policy goals, which includes laws, administrative rules, and program policies;*
- (e) The reduction of the cost of private market borrowing for jurisdictions with higher costs;*
- (f) The identification of additional revenue for local infrastructure; and*
- (g) Effective and efficient program administration.*

⁹ Meeting the Growth Management Challenge, p. 29.

(2) The development of an implementation plan must build upon prior studies and inventories of infrastructure programs and a further analysis of the major local infrastructure assistance programs. The implementation plan must be based on analysis, including the following:

(a) Identification of the benefits from state grants and interest rate subsidies to rate payers and local tax payers;

(b) A comparison of state policy goals, which are primary considerations in determining project funding decisions, with the actual funding decisions, the criteria used to rank proposals, and the performance measures used to monitor the success of the programs;

(c) The compilation of the total amount of assistance received by jurisdictions over the past five biennia;

(d) A comparison of the terms of a sample of low-interest loans provided to public infrastructure projects with the terms of private market borrowing that the jurisdictions would have been able to obtain. The sample of loans must include different types and sizes of projects and jurisdictions; and

(e) An identification of funds leveraged with state infrastructure resources.

(3) The legislature also intends to use information from the multiple infrastructure assistance programs to provide direction for future funding priorities. The legislature will base those priorities on information from infrastructure assistance programs, including the programs' recommendations for the following:

(a) Needed investment for the different types of infrastructure projects over the next six years;

(b) Funding allocation of the projected existing state infrastructure assistance resources to those types of projects;

(c) Reallocation of existing state resources for infrastructure projects; and

(d) New and existing local and state revenue sources to address unfunded local infrastructure needs. In estimating the needed investment for different types of infrastructure projects, infrastructure assistance programs may include in their recommendations new types of projects that are not authorized in statute.

(4) The implementation plan and analysis must be completed by December 1, 2008.

From the budget proviso eight study questions were developed to guide the research and writing of this analysis and implementation plan:

- **Study Question 1:** How much state assistance is received by communities and how is it distributed statewide?
- **Study Question 2:** How are the 29 public infrastructure programs guided by state policy in administering state assistance? Do the results reflect policy goals?
- **Study Question 3:** What other funds are leveraged with state public infrastructure assistance?
- **Study Question 4:** How much state funding for public infrastructure is needed over the next six years? What types of infrastructure need additional funding?
- **Study Question 5:** Are there any key points from the analysis of state programs that can be used as guidance or considerations in the restructuring implementation plan?
- **Study Question 6:** Should there be a change in the proportion of state assistance provided by grant, loan or bond support based on the relative cost/benefit of each to the state or to various types of local governments?

- **Study Question 7:** Should the state consider providing credit enhancement for local public infrastructure bonds or a method of pooling bond issues to reduce the cost of borrowing for all local governments or local governments with specific characteristics?
- **Study Question 8:** Should the state consider issuing bonds against a portion of the capital in its loan funds in order to make additional assistance available for public infrastructure?

Major Contributing Infrastructure Studies

There have been several public infrastructure studies commissioned by the Legislature over time, each with a different focus, examining different elements of the topic.

In 1999 the *State of Washington Local Government Infrastructure Study* found a gap in available financing versus need of over \$3 billion for the period of 1998 to 2003. This financing gap covered the infrastructure categories of water, sewer, bridges, roads and stormwater facilities.

In 2005 Berk and Associates compiled an inventory and evaluated state public infrastructure assistance programs and funds. The study assessed 12 infrastructure categories: water quality, wastewater, stormwater, solid and hazardous waste, flood and irrigation management, emergency management, housing, health facilities, community facilities, public safety facilities and outdoor recreation. Berk and Associates found that “Washington’s complex network of infrastructure programs and funds is a consequence of state and federal directives and actions taken over time... Programs are regularly added and amended by Congress, the Legislature, and the State’s voters.” The Berk study recommendations included increasing strategic focus and direction across agencies with alignment between policy, management and performance outcomes, and improving financial management, information management and communications.

In 2006, the Joint Legislative Audit and Review Committee (JLARC) conducted an inventory of state public infrastructure assistance programs. JLARC divided the programs into three categories: basic infrastructure (water and waste), transportation infrastructure (roads, bridges and other modes of transportation), and other infrastructure (buildings, facilities, and recreation). The inventory included summaries of legislative intent, fiscal information, eligibility requirements, award processes and program goals. These summaries serve as a guide for policy makers and potential local government applicants.

In November 2008 the CTED produced *Meeting the Growth Management Challenge in Growing Communities, the Washington State Growth Management Act Effectiveness Report*. The report focused on improving the effectiveness of GMA to plan, construct and finance public infrastructure to meet the needs of growing communities.

The study found that local GMA planning is effective in focusing communities on mid-range planning for infrastructure creation while matching needs with available resources. However, a growing gap exists between funding requirements and funding availability, especially for roadway and domestic water projects. The study also found that reliance on outside funding reduces the effectiveness of public infrastructure capital project execution due to uncertainty about the availability of funds to complete projects. As an example, over 90 percent of transportation projects in unincorporated urban growth areas were not substantially underway or being completed in their planned time frame. The study also found a lack of regional coordination of resources and infrastructure system demand management strategies that could reduce costs or financing gaps.

The GMA study provides recommendations including:

- Expansion of the capital facility elements of comprehensive plans to include tracking of project completion in order to monitor progress;
- Requiring communities to work together to implement integrated regional public infrastructure financing plans;
- Amending state statutes to improve consistency of action between local utility providers;
- Improving the alignment of financing for public infrastructure and tax revenue generated by growth and development;
- Improving the alignment of state assistance and award criteria with the needs of growing communities;
- Providing state infrastructure planning assistance grants to small jurisdictions; and

Requiring plans to include strategies for dealing with the financing of public infrastructure provision to existing or planned low-density development.

METHODOLOGY

Drawing from previous efforts, this study examines infrastructure assistance programs and provides recommendations for improvements to the delivery of state assistance. In order to provide focus, a subset of the state's 84 public infrastructure assistance programs is the subject of this study. The 29 programs are administered by three Washington State agencies, the departments of Community, Trade and Economic Development (CTED), Ecology (ECY), and Health (DOH).

The selected programs represent a core set of services that make utility-oriented investment and generally provide public infrastructure assistance in the areas of water, sewer, stormwater, solid waste and selected types of buildings or facilities as opposed to transportation, road building, housing, hazardous waste, flood management, emergency management or outdoor recreation. During the course of the study we found that the Safe Drinking Water Action Grant program was part of a much larger Department of Ecology combined program that provides a variety of grants and loans to remediate environmental hazards. Future public infrastructure work may want to incorporate the larger program.

Each of the programs submitted data which appears in full in Appendix B. All programs provided a list of five years of loan, grant or other state assistance by project along with specific information about each project. The data template developed by Joint Legislative Audit and Review Committee (JLARC) for their 2006 study together with that study's content were used, modified and updated to meet the data collection requirements for this study. Ten years of grant and loan award information was gathered using the 2005 Berk Report as a base. Programs were asked to correct any errors in the earlier year's data and update the data summary for the years 2004 forward. The detailed project data is summarized by program in a map and pie charts presented with each program and aggregated in summary tables in Appendix B.

Programs Included in Study

All of the basic infrastructure programs addressed by this study are listed by department.

Department of Ecology

1. Centennial Clean Water Fund
2. Clean Water Act, Section 319
3. Coordinated Prevention Grant (Solid Waste)
4. Safe Drinking Water Action Grant (Solid Waste)
5. Water Pollution Control Revolving Fund
6. Watershed Plan Implementation and Flow Achievement

Department of Community, Trade and Economic Development

7. Bond Cap Allocation – Private Activity Tax Exempt Bonds for Economic Development
8. Building Communities Fund
9. Building for the Arts
10. Capital and Operating Budget - Special Projects
11. Community Development Block Grant (CDBG) Community Investment Program
12. Community Development Block Grant (CDBG) General Purpose Program
13. Community Development Block Grant (CDBG) Housing Enhancement Program
14. Community Development Block Grant (CDBG) Imminent Threat Program
15. Community Development Block Grant (CDBG) Interim Construction Financing Program
16. Community Economic Revitalization Board (CERB) Job Development Program
17. Community Economic Revitalization Board (CERB) Rural Program
18. Community Economic Revitalization Board (CERB) Traditional Program
19. Community Services Facilities
20. Energy Freedom
21. Local Infrastructure Financing Tool (LIFT)
22. Public Works Assistance Account (PWAA) Construction Loan Program
23. Public Works Assistance Account (PWAA) Pre-construction Loan Program
24. Public Works Assistance Account (PWAA) Planning Loan Program
25. Public Works Assistance Account (PWAA) Emergency Loan Program
26. Rural Washington Loan Fund
27. Youth Recreation Facilities

Department of Health

28. Drinking Water State Revolving Fund
29. Water System Acquisition and Rehabilitation

Data Self-Reported

In order to minimize the amount of repetitive data collection, the data template developed by JLARC for its 2006 study together with the JLARC data were used and modified to meet the data collection requirements of HB 2765. Unlike the JLARC study, this study relied on self-reported information from the three departments and program staff. Due to time constraints, auditing of the information was not a part of the study scope. However, an effort was made to clarify apparent inconsistencies in reported data.

Limits of Data, Grants and Loans

Ten years of grant and loan award information was gathered using the 2005 Berk Report as a base. Programs were asked to correct any errors in the earlier year's data as presented in the Berk Report and update the data summary for the years 2004 forward. Funding years included in the ten year data are typically 1999 through 2008. Again due to time limitations, auditing of the information was not a part of the study scope. The Berk Report data had several limitations, which included aggregating grant and loan numbers in a way that did not allow for separate reporting; and the presentation of a mix of offered, committed and dispersed funding data across programs. As a result, this study includes some of those limitations.

Definition of Funding Year Varies Between Programs

Depending on the program, statistical information may be based on a "funding year" that began in January, July or October. In addition, four programs reported funding in their 10-year summary on a biennial rather than annual basis. These variations were accepted as givens for this report and no attempt was made to adjust the statistical reporting to fit a standard time frame. "Annual" results therefore all represent (unless noted) 12 months of program activity. However, the beginning and end of the 12-month periods do not match across programs.

Detail Data Limited to Five-Year History

Detailed information about the characteristics of grants, loans or other types of state assistance was gathered for five rather than 10 years. Easily accessible automated information was available for many CTED programs for five but not 10 years. Since CTED programs represented 22 of the 29 programs, a decision was made to limit the collection of detailed information to five years across all programs. Five years of program data generally included the funding years of 2004 to 2008.

Program Data Lacked Common Definitions

Definitions of common terms varied, sometimes significantly, across programs. These differences, in some cases, affected the validity of the data collected and reported. Where validity is an issue, it is noted, and in some cases the data summary has been modified, if possible, to account for some of the variation. For example, a common definition of "total project cost" is not shared across programs, and data collected on total project cost, when collected, varied significantly. An applicant for state assistance may report "total project cost" as including just the cost of the project element that is being partially funded through state assistance, such as project design or construction, but not the full of cost of all elements or phases of the project. Some of elements or phases of a project may not be known or may change as the scoping, design, property acquisition, bidding and construction phases precede – affecting what is reported as "total project cost." In addition, many jurisdictions received grants or loans from more than one program or in more than one year for the same or different parts of a project. "Total project cost" therefore may have been reported a number of times, in different ways over time for the same project which received several forms of state assistance.

Data Analyzed in Tables

The tables in Appendix B include all grants and loans reported by the 29 programs for the five-year period, or combined 10-year funding as noted. Two programs, Bond Cap Allocation and Local Infrastructure Financing Tool, provided support other than grants or loans, and so are excluded from some tables, as footnoted.

Some tables included in the text of this report were created to assist with analysis and are based on slightly different data than those in Appendix B. Because the scope of this study is state and local financing of local public infrastructure projects, grants and loans made to state agencies or to projects on a statewide scale were excluded, as were most loans to for-profit businesses. Assistance from both Bond Cap Allocation and Local Infrastructure Financing Tool was also excluded from these tables.

To more fully understand how projects are financed, analytical tables include data gathered from the Bond User's Clearinghouse. Bonds funding the infrastructure types included in this study, and originating between 2003 and 2007, are included.

Financial Analysis Assumptions

Appendix C includes a financial analysis conducted by Seattle-Northwest Securities. The assumptions used in that analysis are outlined in Appendix C. Information from the analysis is discussed in this report and used the same assumptions.

Other Sources of Data

In addition to prior studies, information from current studies was gathered and referenced when relevant. The Department of Community, Trade and Economic Development is completing a legislative study related to the effectiveness of the Growth Management Act and the infrastructure segment of that study was available to the Office of Financial Management as a resource. The Department of Ecology and the Public Works Board are engaged in legislative studies related to funding of small community and regional wastewater facilities and a pilot of a state municipal bond interest rate buy down program. Preliminary information from both efforts was available for this study.

Through the cooperation of the State Treasurer's Office, the state's financial advisor and bond counsel consulted on the cost/benefit comparison of various forms of state assistance that appears in Appendix C.

Data on municipal bond sales over the five-year study period, bond ratings, employment growth, local government financial condition, tax revenue, population and population growth came from the following sources:

1. Municipal bond sales – Bond Users Clearinghouse, Washington State Department of Community, Trade and Economic Development

2. Washington Local Government Bond Ratings – Moody’s Investment Service and Standard and Poor’s
3. Employment Growth Data – Washington State Employment Security Department
4. Local Government Financial Condition – Research Services, Washington State Department of Community, Trade and Economic Development
5. Real Estate Excise and Utility Tax Revenue – Washington State Department of Revenue
6. Population and Population Growth – Washington State Office of Financial Management (cities, towns, and counties), Department of Health (water districts), Washington Public Ports Association (port districts), Washington Association of Sewer and Water Districts (sewer districts), Washington Public Utility Districts Association (PUDs).

ANALYSIS

Profile of the Public Infrastructure Financing System

Eighty-four state public infrastructure grant and loan programs addressing a wide range of public infrastructure needs have been identified in prior legislative studies. In 2008 the Legislature directed the Office of Financial Management (OFM) to analyze and provide an implementation plan for improving the grant and loan delivery system. OFM selected a subgroup of the 84 programs that specifically fund basic infrastructure projects such as stormwater, drinking water, sewer, and solid waste. The subgroup consisted of 29 public infrastructure grant and loan programs administered by the departments of Community, Trade and Economic Development (CTED), Health (DOH) and Ecology (ECY), with the exception of major programs related to housing, parks and transportation.

The 29 programs represent the core state assistance programs that address the following public systems: drinking water, sewer, stormwater, solid waste and community buildings and facilities as opposed to infrastructure for transportation, road building, housing, hazardous waste, emergency management and outdoor recreation. Some of the 29 study programs are authorized to provide grants or loans for transportation infrastructure, however the bulk of each program's awards are generally for utilities.

These core public infrastructure systems are owned and operated primarily by cities and towns, counties, special purpose districts and, in the case of many community buildings and facilities, local governments and nonprofit organizations. Federal, state and local policy making bodies have determined basic public health and safety standards for these systems, and local governments have constructed or re-constructed public systems to meet those standards. The state and federal governments have helped local governments to finance public infrastructure in various ways and to varying degrees over many decades.

It is estimated that Washington cities and counties spent \$9.1 billion on public infrastructure between 1998 and 2006. Of this total approximately \$3.18 billion was spent on drinking water and wastewater infrastructure.¹⁰

How are Public Infrastructure Projects Financed?

Traditionally, public infrastructure has been financed through a combination of federal, state and local resources. Federal and state governments have generally provided funding in the form of grants or loans matched by local resources. Over the last decade federal and state funding has on average been at about 26 percent of total local capital expenditures.¹¹ Local governments typically fund the types of public infrastructure in this study by seeking a combination of grants, loans and private financing, generally through tax-exempt municipal bonds, over a longer term. The bonds and loans are re-paid over time through user rate revenue and sometimes tax revenue. Local contribution to the cost of public infrastructure has been on average 74 percent of capital expenditures.¹²

¹⁰ *Meeting the Growth Management Challenge*, Appendix D, p. 228-231.

¹¹ *Ibid.*, p. 233-236.

¹² *Ibid.*, p. 5.

Financing costs (interest paid over the term of a loan or bond) is also a cost to local government. Financing costs, total interest payments over the life of a typical 20-year borrowing, generally have been equal to two times the cost of the project. A local government typically seeks a “package” of financing. Rarely is a major public infrastructure project funded through one source.

Cities and special districts own and operate the majority of the public infrastructure covered by this study. Counties play an important role, especially in wastewater and solid waste. Public infrastructure projects typically are identified in six- to 20-year plans for individual infrastructure systems and/or in the growth management capital facility plan of the local government with land use authority in the geographic area served by the project. After a project is identified, a number of tasks have to be completed in order for the project to become a reality: scope definition, design, funding plan, assembly of the funding package, environmental review and permitting, pre-construction activities and construction have to be planned and carried out. The length of time from the moment the need for a project is identified to the day it becomes operational is often called a project’s timeline. Timelines for public infrastructure projects typically span two to six years. Larger projects often have even longer timelines. It is generally believed that the shorter a project’s timeline the less it will cost overall. Time can be added to a project in many ways. The components of the timeline that are most relevant to this study are planning, funding and permitting. State agencies typically have the most interaction with public infrastructure projects at these three points.

Financing of public infrastructure projects covered by this study was examined in detail. The three typical components of long-term infrastructure financing – grants, loans and bond financing – were profiled over five years for various sizes and types of jurisdictions. Overall, bond financing is the primary form of long-term construction financing (70 percent of funding dollars) followed by low interest rate state loans (23 percent) and then by grant financing (7 percent). Grant financing is classified here as long-term financing because the majority of the grant making resources in this study come from the issuance of state of Washington general obligation bonds that are repaid by the state over 20 or more years from state resources. While the financing resources used by communities emphasize bond financing, the number of individual transactions or components of public infrastructure financing packages occur in inverse proportion. There are many more individual grant awards for smaller amounts of money than loan or bond transactions and there are relatively more loans than bond transactions.

Table 1: Overview of Five-Year Bond, Grant and Loan¹ Financing

All Projects				Construction Projects Only			
Number	Funding Type	Total	Percent	Number	Funding Type	Total	Percent
	Bond	366	13%		Bond	349	22%
	Grant	1,457	54%		Grant	676	42%
	Loan	890	33%		Loan	598	37%
	Total	2,713			Total	1,623	
Amount	Funding Type	Total	Percent	Amount	Funding Type	Total	Percent
	Bond	\$4,581,055,728	66%		Bond	\$4,500,075,674	70%
	Grant	\$659,648,183	10%		Grant	\$483,859,899	7%
	Loan	\$1,662,526,033	24%		Loan	\$1,484,614,518	23%
	Total	\$6,903,229,944			Total	\$6,468,550,090	

¹ Includes the face value of bonds and loans. Bonds and loans must be repaid, most with interest.

Since local governments must put together a financing “package” of local and state resources for many projects, typically local governments seek state funding from multiple sources over a series of years or award cycles. Generally grant and loan offers are made only once at a set time each year. Private financing, on the other hand, may be obtained whenever a local jurisdiction is ready and needs the financing in the project construction cycle, which generally revolves around construction seasons. The local government may receive state funding once or several times for the same project to create the total financing package. The focus group data (see Part III of the full report) showed that jurisdictions applied from two to seven times before receiving funding at a cost of \$10,000 to \$20,000 for each application. During the five years examined in this study 53 percent or \$1.2 billion of state financing (grants and loans) provided additional funding to the same project. It is likely that there are additional grant and loan transactions funding the same project that were not captured in the five-year sample. These transactions occurred either before or after the five sample years. Drinking water and wastewater projects followed by stormwater and buildings and facilities were the infrastructure systems where multiple awards were the most frequent. (see Tables 2 and 3).

Table 2: Multiple Financing of Projects by Primary Infrastructure Type¹

	Primary Infrastructure Type ¹	Number of:		Percent of Excess Transactions	Number of Projects Funded with:			Percent of Projects with:		
		Transactions	Projects ²		Only 1 Transaction	2-4 Transactions	5 or More Transactions	Only 1 Transaction	2-4 Transactions	5 or More Transactions
Number	Wastewater	517	250	107%	134	98	18	54%	39%	7%
	Water	618	448	38%	347	95	6	77%	21%	1%
	Stormwater	41	30	37%	24	5	1	80%	17%	3%
	Facilities	637	556	15%	495	61	0	89%	11%	0%
	Other	850	818	4%	791	27	0	97%	3%	0%
	Multiple	50	47	6%	46	1	0	98%	2%	0%
	Total	2,713	2,149	26%	1,837	287	25	85%	13%	1%
Amount	Wastewater	\$2,578,448,784		\$538,289,831	\$732,044,535	\$1,308,114,418	21%	28%	51%	
	Water	\$1,363,735,156		\$512,230,554	\$278,736,473	\$572,768,128	38%	20%	42%	
	Stormwater	\$38,756,828		\$17,790,143	\$19,163,801	\$1,802,884	46%	49%	5%	
	Facilities	\$1,724,491,228		\$1,085,469,262	\$639,021,966	\$0	63%	37%	0%	
	Other	\$724,737,238		\$639,079,309	\$85,657,928	\$0	88%	12%	0%	
	Multiple	\$473,060,710		\$469,718,010	\$3,342,700	\$0	99%	1%	0%	
	Total	\$6,903,229,944		\$3,262,577,109	\$1,757,967,404	\$1,882,685,431	47%	25%	27%	

¹ Transactions funding individual projects occasionally were listed with different infrastructure types. For the purpose of this table only, a primary infrastructure type was determined for each project. Therefore, totals by infrastructure type on this table may vary slightly from other tables. Water includes Drinking Water and Irrigation/Agriculture. Facilities include Buildings and Facilities and Community and Social Service Facilities. Other includes Transportation, Solid and Hazardous Waste, and Biofuels.

² Transactions were grouped into projects by examining data provided by the programs, including project name, contractor, location, date and infrastructure type. Since no standard format for reporting this data exists across programs, grouping transactions into projects was a subjective process. Some projects funded during the study years received funding before 2003 or will receive funding after 2008, so the proportion of transactions to projects funded multiple times is likely understated.

Table 3: Multiple Financing of Projects by Primary Jurisdiction Size¹

Primary Jurisdiction Size ¹	Number of:		Percent of Excess Transactions	Number of Projects Funded with:			Percent of Projects with:		
	Transactions	Projects ²		Only 1 Transaction	2-4 Transactions	5 or More Transactions	Only 1 Transaction	2-4 Transactions	5 or More Transactions
Large	1,053	885	19%	789	91	5	89%	10%	1%
Medium	721	598	21%	532	60	6	89%	10%	1%
Small	939	666	41%	516	136	14	77%	20%	2%
Total	2,713	2,149	26%	1,837	287	25	86%	13%	1%
Amount									
Large		\$4,677,244,787		\$2,108,046,360	\$943,728,016	\$1,625,470,412	45%	20%	35%
Medium		\$1,326,025,283		\$770,714,339	\$421,369,099	\$133,941,845	58%	32%	10%
Small		\$899,959,873		\$383,816,410	\$392,870,289	\$123,273,174	43%	44%	14%
Total		\$6,903,229,944		\$3,262,577,109	\$1,757,967,404	\$1,882,685,431	47%	25%	27%

¹ Individual projects were occasionally funded by one or more jurisdictions of different size. For the purpose of this table only, a primary jurisdiction size was determined for each project. Therefore, totals by jurisdiction size on this table may vary slightly from other tables. Large jurisdictions include populations over 50,000, medium jurisdictions ranged from 10,000 to 49,999, and small jurisdictions include populations under 10,000.

² Transactions were grouped into projects by examining data provided by the programs including project name, contractor, location, date, and infrastructure type. Since no standard format for reporting this data exists across programs, grouping transactions into projects was a subjective process. Some projects funded during the study years received funding before 2003 or will receive funding after 2008, so the proportion of transactions to projects funded multiple times is likely understated.

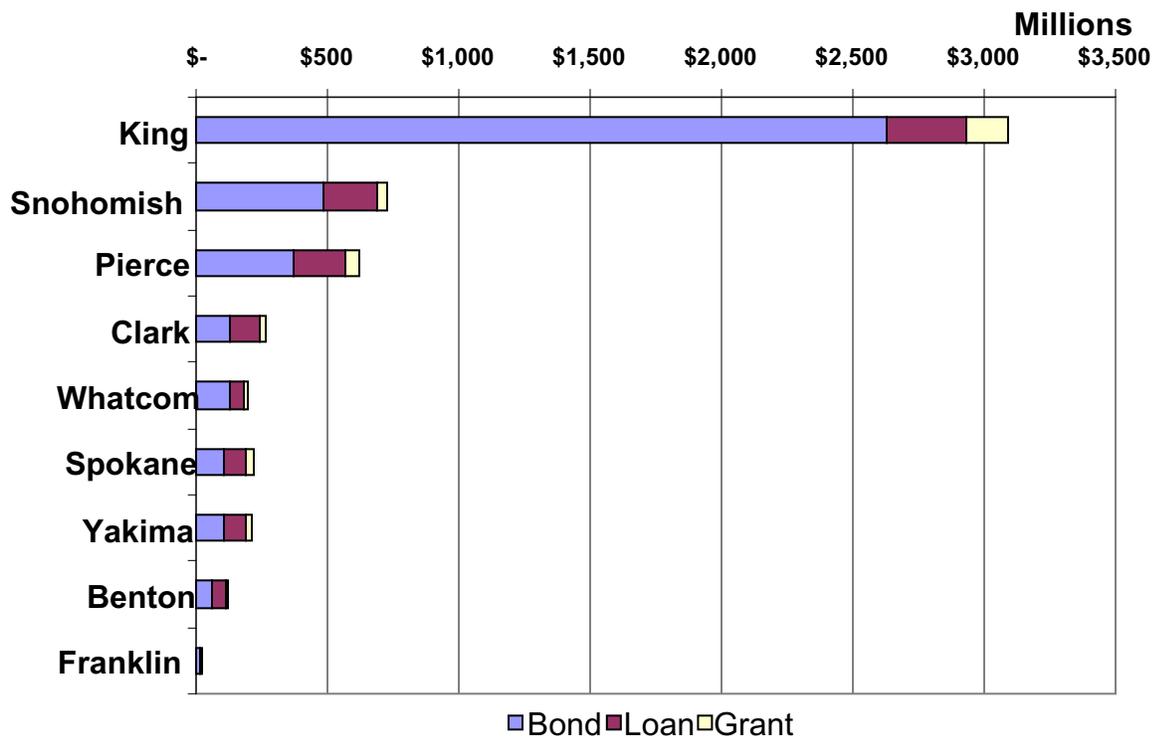
Large Jurisdictions (Greater Than 50,000 Populations)

This group has the most access to the bond market with typically higher bond ratings (a measure of credit worthiness that influences interest rates) and larger project sizes. Bond ratings included AAA and AA primarily. Projects of less than \$1.5 to \$2 million were difficult to finance in the municipal bond market over the last 20 years regardless of credit rating.

Large local government jurisdictions financed 81 percent of their long term capital needs (\$3.4 billion) during the five-year study period with bonds. There were 112 bond issues with an average size of \$30.7 million (see Table 4). State low-interest loans represented 14 percent of all financing for this group through 182 transactions, with an average loan size of \$3.2 million. Grant financing represented only 5 percent of total financing but 464 (or 61 percent) of the financial transactions at an average grant size of \$428,000 each.

Cities tended to be rated AAA and AA in this size category; counties AA and large special districts AA or A. Special district bond issues in this size group were generally smaller (\$8.6 million) than cities and counties.

Chart I: Proportional Breakdown of Bond, Loan and Grant Financing to Counties with Large Jurisdictions



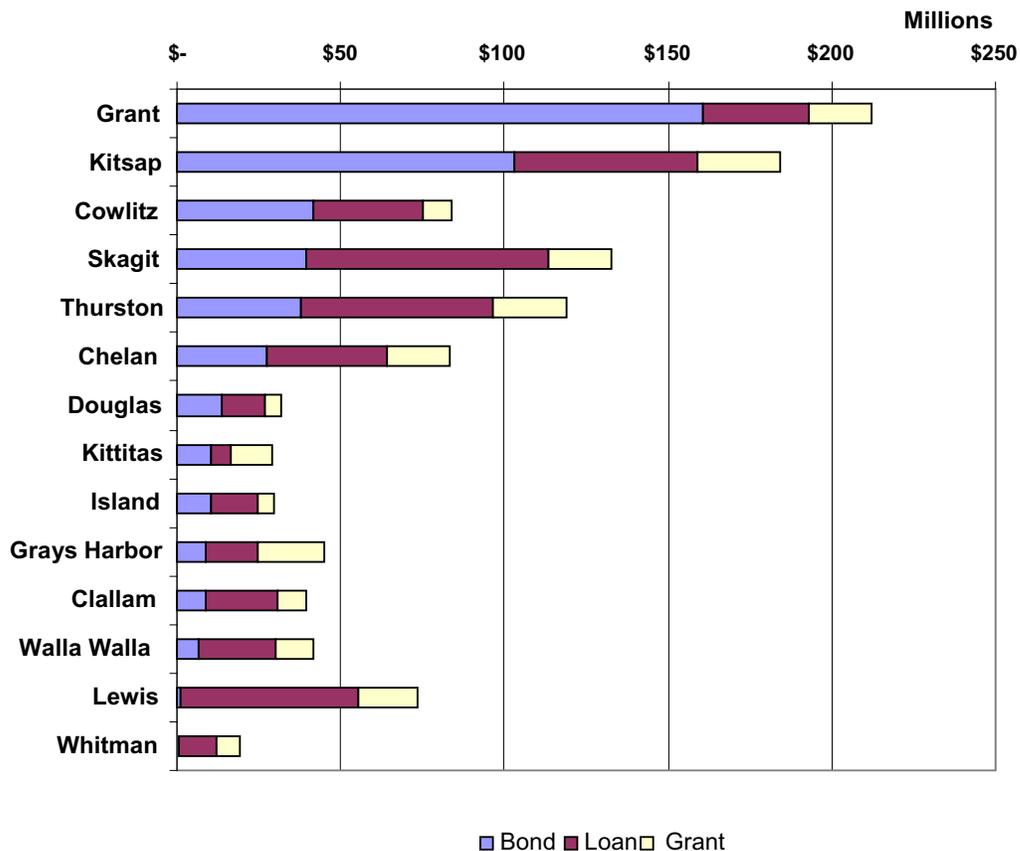
Medium-Size Jurisdictions (50,000 to 10,000 Populations)

This size group has access to the bond market with A and AA bond ratings and moderate project sizes. A significant number of jurisdictions (40 percent) in this size class are unrated. Projects of less than \$1.5 to \$2 million were difficult to finance in the municipal bond market over the last 20 years regardless of credit rating.

Medium-size local government jurisdictions financed about half (52 percent) of their long-term capital needs (\$684 million) during the five-year study period with bonds. There were 111 bond issues with an average size of \$6.2 million. State low-interest loans represented 39 percent of all financing through 232 transactions with an average loan size of \$2.2 million. Grant financing represented only 10 percent of total financing but 343 (or 50 percent) of the financial transactions at an average grant size of \$367,000 each.

Cities and special districts were more often rated A or unrated in this size category; counties tended to be unrated. Special district bond issues in this size group were generally larger (\$7.7 million) than cities and counties.

Chart II: Proportional Breakdown of Bond, Loan and Grant Financing to Counties with Medium Jurisdictions



Small-Size Jurisdictions (10,000 or Less Population)

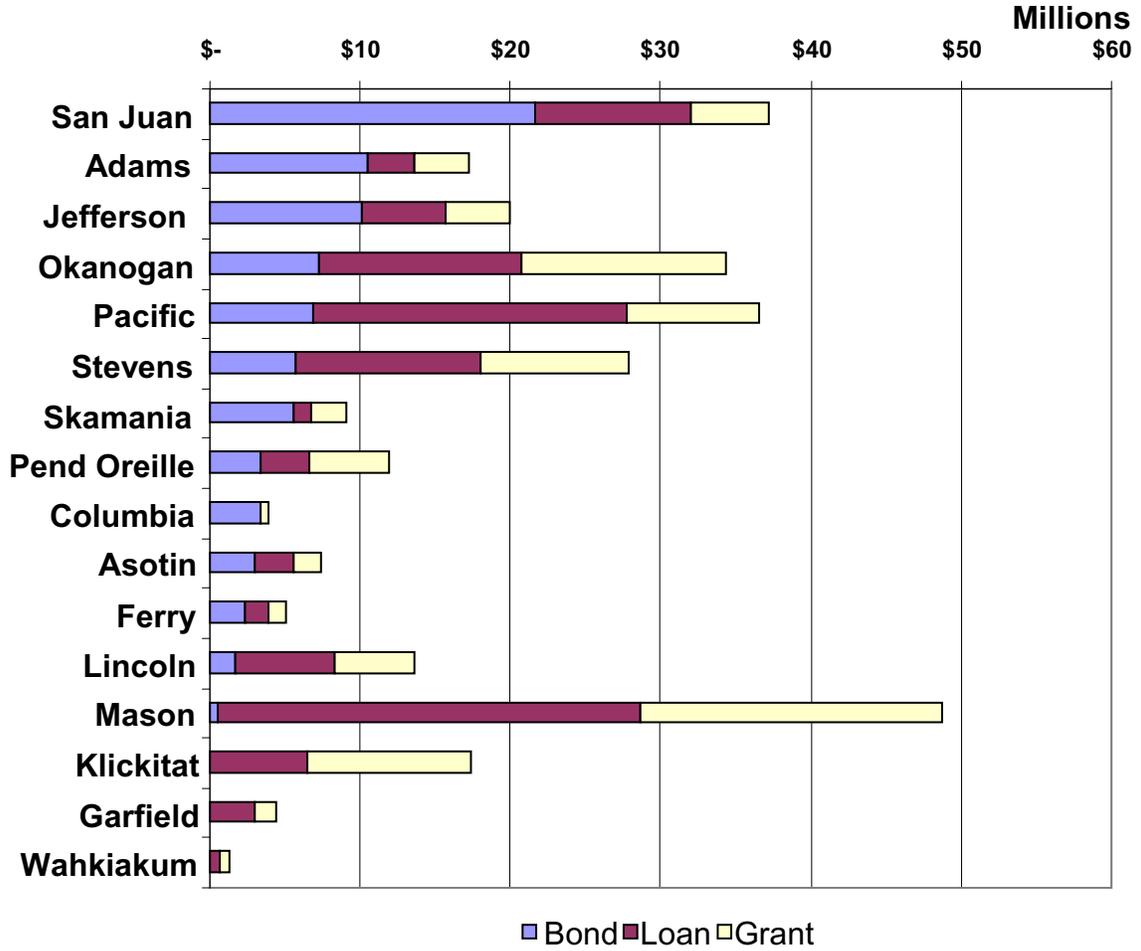
This group has little access to the bond market, with only 17 rated bond issues over five years. Most tax-exempt financing was done through non-rated negotiated private placements. Most small jurisdictions are unrated. Of those that are rated, ratings tend to be A. Projects of less than \$1.5 to \$2 million were difficult to finance in the municipal bond market over the last 20 years regardless of credit rating. This size group tended to have projects in that price range.

Small-size local government jurisdictions financed about one quarter (23 percent) of their long-term capital needs (\$197 million) during the five-year study period with bonds or private sector loans. There were 136 bond issues/private sector loans with an average size of \$1.4 million. Small counties did not issue any bonds. Small cities issued two-thirds of the bonds in this category and small special districts one-third. Special district and city bond issues/loans in this size group all tended to be around the same size.

State low-interest loans represented 60 percent of all dollars used to finance public infrastructure for this group through 390 transactions with an average loan size of \$1.3 million. Small cities received 61 percent of state low-interest loans to small jurisdictions and special districts 39 percent (see table in Summary below). The average loan size for cities was \$2.3 million. The average loan size for special districts was \$1.5 million.

Grant financing represented 17 percent of the total dollar value of all financing through 257 individual transactions at an average grant size of \$555,000 each. This average grant size is the largest of all size groups.

Chart III: Proportional Breakdown of Bond, Loan and Grant Financing to Counties with Small Jurisdictions



Local Government Summary

The table below summarizes the proportion of bond, grant and loan financing used by each size category of local government jurisdictions. Shaded cells represent the largest percents for each jurisdiction size.

**Table 4a: Proportion of Bond, Grant and Loan¹ Financing by Jurisdiction Size²
Cities and Towns, Counties, and Special Districts Only**

	Size	Bond	Grant	Loan ¹	Total
Number	Large	112	464	182	758
	Medium	111	343	232	686
	Small	136	257	390	783
	Large	15%	61%	24%	100%
	Medium	16%	50%	34%	100%
	Small	17%	33%	50%	100%
Amount	Large	\$3,438,581,279	\$198,774,637	\$590,841,656	\$4,228,197,571
	Medium	\$684,420,519	\$126,202,950	\$514,667,523	\$1,325,290,992
	Small	\$196,943,930	\$142,699,334	\$515,058,878	\$854,702,142
	Large	81%	5%	14%	100%
	Medium	52%	10%	39%	100%
	Small	23%	17%	60%	100%

¹ Includes the face value of bonds and loans. Bonds and loans must be repaid, most with interest.

² Large jurisdictions include populations over 50,000, medium jurisdictions ranged from 10,000 to 49,999, and small jurisdictions include populations under 10,000.

Other Recipients

This group includes the 10 percent of recipients of study program assistance that are nonprofit, for-profit and a variety of other governmental types. This group has access to different kinds of long term financing than those reviewed for this study. As such, the information that is available likely does not include all of the private financing used by this group.

Larger recipients had some access to municipal bonds but primarily used (98 percent) state grant financing. Medium size recipients used only grant financing and small recipients used a mix of grant and loan financing. The small recipients include small water purveyors (either nonprofit or for-profit) that qualify for state loan and grant assistance. In some cases, state loan assistance is the only form of long term financing available to this group.

Table 4b: Proportion of Bond, Grant and Loan¹ Financing by Jurisdiction Size²

Other Recipients Only					
	Size	Bond	Grant	Loan ¹	Total
Number	Large	6	284	1	291
	Medium		39		39
	Small	1	70	85	156
	Large	2%	98%	0%	100%
	Medium	0%	100%	0%	100%
	Small	1%	45%	54%	100%
Amount	Large	\$257,510,000	\$155,579,051	\$101,000	\$413,190,051
	Medium		\$19,363,376		\$19,363,376
	Small	\$3,600,000	\$17,028,835	\$41,856,976	\$62,485,811
	Large	62%	38%	0%	100%
	Medium	0%	100%	0%	100%
	Small	6%	27%	67%	100%

¹ Includes the face value of bonds and loans. Bonds and loans must be repaid, most with interest.

² Large jurisdictions include populations over 50,000, medium jurisdictions ranged from 10,000 to 49,999, and small jurisdictions include populations under 10,000.

Grant and Loan Delivery System

The 29 programs reviewed for this study delivered assistance to a wide range of clients, which includes local governments, nonprofit and for-profit organizations. Roughly 90 percent of the transactions and financing was provided to local government and 10 percent to nonprofits and for-profits. The nonprofits and for-profit organizations are most often financed for community buildings or facilities or economic development purposes.

Of the 29 assistance programs, 14 are grant programs, nine are loan programs, three offer both grants and loans and two construct public infrastructure by leveraging tax increases or private activity bond financing to meet identified state policy goals.

The self-reported information gathered from the 29 assistance programs indicates that they currently operate in five groups that share administration and/or oversight and in some cases common applications for assistance. Two programs share administration with programs not covered in this study and three programs operate independently (see Table 5). As shown in the table, two Department of Health drinking water programs contract for certain administrative functions with the Public Works Assistance Account programs, creating the State's largest pooled administration grouping. This group primarily administers loans. The largest grant-related pooled program oversees buildings and facilities related programs.

Table 5: Program Administration

	Program	Contracts Administration with Other State Agency	Pooled or Joint Staffing and/or Administration	Joint Advisory Board	Joint Applications	10 Year Total Funding for Programs
Total	Yes	2	25	9	7	\$4,403,180,342
	No	27	4	20	22	
Programs	Building Communities Fund		●			\$405,932,417
	Building for the Arts					
	Capital and Operating Budget					
	Community Services Facilities					
	Youth Recreation Facilities					
	Centennial Clean Water Fund ²		●		●	\$843,838,351
	Clean Water Act, Section 319					
	Water Pollution Control Revolving Fund					
	CDBG Community Investment		●			\$152,545,334
	CDBG General Purpose					
	CDBG Housing Enhancement					
	CDBG Imminent Threat					
	CDBG Interim Financing					
	Rural Washington Loan Fund					
	CERB Job Development		●	●		\$122,036,534
	CERB Rural					
	CERB Traditional					
	Local Infrastructure Financing Tool					
	PWAA Construction		●	●	●	\$1,927,381,500
	PWAA Emergency Loan					
	PWAA Planning					
PWAA Pre-construction						
Drinking Water State Revolving Fund ³	●					
Water System Acquisition & Rehabilitation ³	●					
Safe Drinking Water Action Grant ²		●			\$4,456,034	
Bond Cap Allocation					\$809,230,616	
Coordinated Prevention Grant					\$92,599,406	
Energy Freedom		●			\$20,500,150	
Watershed Plan Implementation					\$24,660,000	

¹ Includes grants and the face value of loans. Loans must be repaid, most with interest.

² 2.75 FTEs manage the Safe Drinking Water Action Grant along with all of the DOE Remedial Action Grant programs.

³ The Department of Health and the Public Works Board have an agreement which provides for policy, award and program decisions to be made by the Department of Health and administration to be provided by PWB.

The state's loan programs operate on a revolving basis with loan repayments being used to fund new loans in future years. The revolving loan funds are quite large. Two of the loan programs were capitalized in part by federal funding, the Drinking Water State Revolving Fund and the Water Pollution Control State Revolving Fund. The loan fund sizes as of 2008 are as follows:

Table 6: State of Washington Public Infrastructure Loan Portfolio, 2008

Program	Outstanding Loans	Percent of Total Outstanding Loans	Average Loan Interest Rate
Public Works Board ¹	\$2,147,156,000	65.2%	0.94%
Drinking Water State Revolving Fund ¹	\$226,004,000	6.9%	1.82%
Water Pollution Control State Revolving Fund ²	\$879,028,000	26.7%	2.3%
Community Economic Revitalization Board ³	\$39,508,679	1.2%	2.4%
Outstanding Loan Total	\$3,291,696,679	100%	1.38%

¹ As of July 10, 2008, face value of loans outstanding.

² As of September 30, 2008, face value of loans outstanding.

³ As of September 2008, face value of loans outstanding.

Note: The Rural Washington Loan Fund was also covered by this study but is not included in the table. As of June 30, 2008, face value of outstanding loans to private business for operations totaled \$4.9 million at an average interest rate of 6.37 percent. Generally these loans do not finance public infrastructure.

Analysis of Infrastructure Programs

This section of the report takes each of the eight analytical questions posed in the legislative study proviso and summarizes the information related to each question from data gathered for this study, prior studies and contemporary literature on the subject. An inventory and summary of data related to the 29 grant and loan programs appears in Appendix B and a financial analysis of current and potential financing methods appears in Appendix C.

Study Question 1

How much state assistance is received by communities and how is it distributed statewide?

The study proviso specifically requested data on the amount of state public infrastructure assistance that has been provided over the last ten years. Table 7 summarizes 10 years of assistance provided by each of the 29 programs listed in order of primary assistance type (grant, loan or other) and by program size. When a program provided both grants and loans the combined value is reported. Table 7 is presented using the traditional method of reporting state assistance, aligned with prior legislative reports.

Table 7: Programs Included in Study, by 10-year Funding Total

	Program	Department	Primary Type of Assistance (Grants, Loans, or Other ¹)	10-Year Funding Total	
Grants	1	Capital and Operating Budget Special Projects	CTED	Grant	\$333,297,199
	2	Centennial Clean Water Fund	Ecology	Grant	\$161,420,857
	3	Coordinated Prevention Grant	Ecology	Grant	\$92,599,406
	4	CDBG - General Purpose	CTED	Grant	\$82,394,775
	5	CERB - Job Development	CTED	Grant	\$49,501,000
	6	CDBG - Community Investment	CTED	Grant	\$42,305,412
	7	Community Service Facilities	CTED	Grant	\$30,376,341
	8	Building For the Arts	CTED	Grant	\$30,088,000
	9	Watershed Plan Implementation	Ecology	Grant	\$24,660,000
	10	Clean Water Act, Section 319	Ecology	Grant	\$20,815,096
	11	Youth Recreational Facilities	CTED	Grant	\$12,170,877
	12	Water System Acquisition and Rehabilitation	Health	Grant	\$8,795,426
	13	CDBG - Housing Enhancement	CTED	Grant	\$5,932,659
	14	Safe Drinking Water Action Grants	Ecology	Grant	\$4,456,034
	15	CDBG - Imminent Threat	CTED	Grant	\$2,431,318
	16	Building Communities Fund ²	CTED	Grant	
Loans*	17	PWAA Construction	CTED	Loan	\$1,518,604,721
	18	Water Pollution Control Revolving Fund	Ecology	Loan	\$661,602,398
	19	Drinking Water State Revolving Fund	Health	Loan	\$257,619,602
	20	PWAA Pre-construction	CTED	Loan	\$122,935,572
	21	CERB - Traditional	CTED	Loan	\$61,535,534
	22	CERB – Rural ³	CTED	Loan	
	23	Energy Freedom	CTED	Loan	\$20,500,150
	24	PWAA Emergency	CTED	Loan	\$13,848,526
	25	CDBG - Interim Construction Financing	CTED	Loan	\$10,099,050
	26	Rural Washington Loan Fund	CTED	Loan	\$9,382,120
	27	PWAA Planning	CTED	Loan	\$5,577,654
Other	28	Bond Cap Allocation	CTED	Other	\$809,230,616
	29	Local Infrastructure Financing Tool ⁴	CTED	Other	\$11,000,000
Total:				\$4,403,180,342	

¹ Includes the face value of loans. Loans must be repaid, most with interest. "Other" includes taxing and tax exempt bond cap authority.

² Building Communities Fund is a new program and will begin funding in 2009.

³ CERB reported combined 10-year totals for Rural and Traditional.

⁴ Taxing authority granted for 25 years; \$11,000,000 represents taxing authority during the 10-year study period ending in 2008.

The 10-year total of state assistance was also calculated by infrastructure category (e.g., wastewater or drinking water) and by recipient type. Among the 29 study programs, wastewater and drinking water programs provide the most assistance followed by assistance related to buildings and facilities. Local governments received 90 percent of state assistance with cities receiving over one half. After local governments, nonprofits are the next largest recipient group. This information is presented in the table below.

Table 8: 10-Year Grant and Loan¹ Financing by Infrastructure and Jurisdiction Type (Dollars in Millions)

Infrastructure Type ²		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Totals	Percent
Number	Wastewater	73	64	86	67	77	88	81	82	64	85	767	19.4%
	Water	62	87	91	95	94	100	99	102	83	38	851	21.6%
	Stormwater	8	5	9	5	5	6	5	3	0	0	46	1.2%
	Facilities	36.5	39.5	48	48	49	51	100	95	174	184.5	669	17.0%
	Other	56	200	123	195	93	226	90	174	184.5	271.5	1,613	40.9%
	Totals:³	235.5	395.5	357	410	318	471	375	456	427.5	500.5	3,946	100.0%
Amount	Wastewater	\$85.0	\$86.4	\$140.2	\$117.7	\$160.8	\$239.0	\$193.3	\$187.4	\$131.3	\$294.1	\$1,635.1	45.3%
	Water	\$56.1	\$72.2	\$112.8	\$126.6	\$59.2	\$115.7	\$84.0	\$80.3	\$77.6	\$59.5	\$844.1	23.4%
	Stormwater	\$7.5	\$8.1	\$9.7	\$1.2	\$0.7	\$9.4	\$8.9	\$1.7	\$0.0	\$0.0	\$47.3	1.3%
	Facilities	\$12.8	\$14.8	\$25.5	\$24.9	\$16.2	\$18.9	\$50.1	\$48.0	\$66.0	\$72.2	\$349.5	9.7%
	Other	\$16.0	\$76.5	\$43.4	\$60.1	\$65.4	\$113.1	\$31.4	\$48.9	\$127.4	\$150.6	\$732.8	20.3%
	Totals:³	\$177.3	\$258.1	\$331.6	\$330.6	\$302.3	\$496.0	\$367.7	\$366.3	\$402.3	\$576.5	\$3,608.8	100.0%
Jurisdiction Type		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Totals	Percent
Number	Cities and Towns	114.5	131.5	164	150	128.5	197.5	149.5	165.5	119	179	1,499	38.0%
	Counties	29	116	60	124	36.5	119.5	42.5	111.5	88.5	128.5	856	21.7%
	Special Districts	55	89	81	79	79.5	87.5	100	90	87	76	823	20.9%
	Nonprofit Organizations	30.5	31.5	35	41	55.5	60.5	71.5	77.5	122	107	632	16.0%
	For-Profit Organizations	2	6	1	2	11	3	0	0	7	0	32	0.8%
	Tribes	0.5	3.5	5	2	5	0	3.5	1.5	3	4	28	0.7%
Other	4	18	11	12	2	3	8	10	10	1	75	1.9%	
Totals:³	235.5	395.5	357	410	318	471	375	456	427.5	500.5	3,946	100.0%	
Amount	Cities and Towns	\$109.2	\$113.1	\$209.3	\$184.1	\$132.2	\$309.7	\$206.5	\$198.4	\$211.3	\$295.4	\$1,969.2	54.6%
	Counties	\$21.5	\$73.1	\$41.5	\$55.8	\$103.7	\$65.1	\$39.3	\$45.3	\$33.5	\$82.0	\$560.9	15.5%
	Special Districts	\$34.2	\$59.3	\$60.5	\$76.4	\$41.3	\$94.7	\$64.1	\$88.7	\$77.4	\$129.5	\$720.1	20.0%
	Nonprofit Organizations	\$10.9	\$9.5	\$10.7	\$12.0	\$21.2	\$25.6	\$25.4	\$28.2	\$75.1	\$66.2	\$284.9	7.9%
	For-Profit Organizations	\$1.3	\$1.6	\$0.1	\$1.2	\$2.9	\$0.7	\$0.0	\$0.0	\$2.8	\$0.0	\$10.6	0.3%
	Tribes	\$0.0	\$0.4	\$0.9	\$0.4	\$0.7	\$0.0	\$1.4	\$0.5	\$2.0	\$1.8	\$8.2	0.2%
Other	\$0.3	\$1.1	\$8.5	\$0.7	\$0.2	\$0.2	\$31.1	\$5.1	\$0.0	\$1.5	\$48.9	1.4%	
Totals:³	\$177.3	\$258.1	\$331.6	\$330.6	\$302.3	\$496.0	\$367.7	\$366.3	\$402.3	\$576.5	\$3,608.8	100.0%	

¹ Includes grants and the face values of loans. Loans must be repaid, most with interest.

² Water includes Drinking Water and Irrigation/Agriculture. Facilities include Buildings and Facilities and Community and Social Service Facilities. Other includes Transportation, Solid and Hazardous Waste, and Biofuels.

³ The following programs were reported by biennium: Building for the Arts, Capital and Operating Budget, Community Services Facilities, and Youth Recreational Facilities. For these programs each biennial figure was divided in half and assigned to individual years. For example, a \$1,000,000 award for the 1999-01 biennia would be reported here as .5 awards and \$500,000 in 1999 and .5 awards and \$500,000 in 2000. These tables do not include two programs: Bond Cap Allocation and Local Infrastructure Financing Tool.

Analysis of the Amount of State Assistance

Detailed analysis of state assistance awards was completed for a five-year rather than a ten-year period due to issues with time and data availability. Detailed information about state assistance and local infrastructure bond financing for the same infrastructure categories was collected for five years. State and federal assistance, bond financing and cash contributions from recipients typically provide the financing package for public infrastructure projects. The following tables summarize state assistance and local bond financing overall, by jurisdiction size and by infrastructure category.

Using the traditional method of reporting state loan assistance, this table shows that bond financing is the principal financing method for the public infrastructure that is the focus of this study, and that the number of bonds issued is relatively small. State grants make the smallest contribution to the financing of public infrastructure but represent the largest number of individual transactions. State loans fall in the middle.

Table 9: Overview of Five-Year Bond, Grant and Loan¹ Financing

All Projects				Construction Projects Only			
Number	Funding Type	Total	Percent	Number	Funding Type	Total	Percent
	Bond	366	13%		Bond	349	22%
	Grant	1,457	54%		Grant	676	42%
	Loan	890	33%		Loan	598	37%
	Total	2,713			Total	1,623	
Amount	Funding Type	Total	Percent	Amount	Funding Type	Total	Percent
	Bond	\$4,581,055,728	66%		Bond	\$4,500,075,674	70%
	Grant	\$659,648,183	10%		Grant	\$483,859,899	7%
	Loan	\$1,662,526,033	24%		Loan	\$1,484,614,518	23%
	Total	\$6,903,229,944			Total	\$6,468,550,090	

¹ Includes the face value of bonds and loans. Bonds and loans must be repaid, most with interest.

In order to provide a picture of how recipients use state assistance in financing public infrastructure, the detailed data was analyzed by jurisdiction size. Organizations other than local governments were classified by the estimated size of their service area. The table below shows that larger jurisdictions (greater than 50,000 populations) and medium-size jurisdictions rely heavily on bond financing while small jurisdictions (less than 10,000 population) rely most heavily on state loan financing. Large jurisdictions received the most grant awards in both numbers and dollars.

Table 10: Proportion of Bond, Grant and Loan¹ Financing by Jurisdiction Size²

	Size	Bond	Grant	Loan	Total
Number	Large	118	748	183	1049
	Medium	111	382	232	725
	Small	137	327	475	939
	Large	11%	71%	17%	100%
	Medium	15%	53%	32%	100%
	Small	15%	35%	51%	100%
Amount	Large	\$3,696,091,279	\$354,353,688	\$590,942,656	\$4,641,387,622
	Medium	\$684,420,519	\$145,566,326	\$514,667,523	\$1,344,654,368
	Small	\$200,543,930	\$159,728,169	\$556,915,854	\$917,187,953
	Large	80%	8%	13%	100%
	Medium	51%	11%	38%	100%
	Small	22%	17%	61%	100%

¹ Includes the face value of bonds and loans. Bonds and loans must be repaid, most with interest.

² Large jurisdictions include populations over 50,000, medium jurisdictions ranged from 10,000 to 49,999, and small jurisdictions include populations under 10,000.

Looking at funding by infrastructure type (Table 11), wastewater and drinking water projects relied heavily on bond financing while buildings and facility projects relied most heavily on grants. State loans played the most significant role in financing wastewater and drinking water projects.

Finally, public infrastructure financing was evaluated by recipient type. Table 12 shows that counties and cities rely the most heavily on bond financing. The use of state loans is especially important for cities and special districts. Nonprofits and special districts rely more heavily on state grant assistance than other groups in the study infrastructure categories. However, the predominance of nonprofits' use of grant financing may be due in part to a lack of data on other forms of long-term financing available to nonprofits. This type of data was not available for this study.

Table 11: Bond, Grant and Loan¹ Financing by Infrastructure Type

All Projects

Infrastructure Type ²	Funding Type	Number	Amount	Percent
Wastewater	Bond	70	\$1,341,617,821	55%
	Grant	53	\$88,074,603	4%
	Loan	370	\$1,005,275,846	41%
Water	Bond	80	699,832,855	59%
	Grant	159	73,580,324	6%
	Loan	366	416,397,175	35%
Stormwater	Bond	12	\$63,275,098	73%
	Grant	8	\$2,630,200	3%
	Loan	20	\$21,096,535	24%
Facilities	Bond	103	1,402,625,382	82%
	Grant	517	296,181,596	17%
	Loan	15	11,319,250	1%
Other	Bond	64	387,795,829	50%
	Grant	700	191,363,385	25%
	Loan	109	199,915,786	26%
Multiple	Bond	37	\$685,908,743	98%
	Grant	20	\$7,818,076	1%
	Loan	10	\$8,521,442	1%
Total		2,713	\$6,903,229,944	

Construction Projects Only

Infrastructure Type ²	Funding Type	Number	Amount	Percent
Wastewater	Bond	68	\$1,341,092,821	58%
	Grant	49	\$86,107,959	4%
	Loan	214	\$881,311,440	38%
Water	Bond	78	699,693,355	61%
	Grant	122	65,591,647	6%
	Loan	280	385,275,849	33%
Stormwater	Bond	10	\$62,207,848	75%
	Grant	4	\$1,266,300	2%
	Loan	12	\$19,859,571	24%
Facilities	Bond	102	1,396,625,382	85%
	Grant	432	243,587,878	15%
	Loan	13	11,169,250	1%
Other	Bond	54	314,547,525	55%
	Grant	49	79,488,040	14%
	Loan	69	178,476,966	31%
Multiple	Bond	37	\$685,908,743	98%
	Grant	20	\$7,818,076	1%
	Loan	10	\$8,521,442	1%
Total		1,623	\$6,468,550,090	

¹ Includes the face value of bonds and loans. Bonds and loans must be repaid, most with interest.

² Water includes Drinking Water and Irrigation/Agriculture. Facilities include Buildings and Community and Social Service Facilities. Other includes Transportation, Solid and Hazardous Waste, and Biofuels.

Table 12: Bond, Grant and Loan¹ Financing by Jurisdiction Type

All Projects					Construction Projects Only				
Jurisdiction Type	Funding Type	Number	Amount	%	Jurisdiction Type	Funding Type	Number	Amount	%
Cities and Towns	Bond	220	\$2,086,676,250	62%	Cities and Towns	Bond	211	\$2,013,627,946	64%
	Grant	406	\$251,131,879	7%		Grant	217	\$210,693,636	7%
	Loan	461	\$1,053,696,547	31%		Loan	286	\$942,813,873	30%
Counties	Bond	55	\$1,856,115,786	87%	Counties	Bond	54	\$1,850,640,786	91%
	Grant	453	\$119,863,374	6%		Grant	56	\$46,268,253	2%
	Loan	63	\$160,776,081	8%		Loan	31	\$137,303,671	7%
Special Districts ²	Bond	84	\$377,153,692	43%	Special Districts ²	Bond	77	\$374,696,942	46%
	Grant	205	\$96,681,668	11%		Grant	82	\$68,989,230	9%
	Loan	280	\$406,095,430	46%		Loan	199	\$367,602,998	45%
Nonprofit Organization	Bond	4	\$132,475,000	39%	Nonprofit Organization	Bond	4	\$132,475,000	43%
	Grant	368	\$179,910,671	52%		Grant	308	\$148,069,976	48%
	Loan	61	\$30,433,756	9%		Loan	61	\$30,433,756	10%
For-Profit Organization	Bond	1	\$101,035,000	92%	For-Profit Organization	Bond	1	\$101,035,000	92%
	Grant	2	\$2,179,892	2%		Grant	1	\$2,129,892	2%
	Loan	21	\$6,460,220	6%		Loan	21	\$6,460,220	6%
Tribes	Grant	13	\$3,827,699	100%	Tribes	Grant	5	\$2,238,912	100%
Other	Bond	2	\$27,600,000	71%	Other	Bond	2	\$27,600,000	83%
	Grant	10	\$6,053,000	16%		Grant	7	\$5,470,000	17%
	Loan	4	\$5,064,000	13%		Loan			
Total		2,713	\$6,903,229,944		Total		1,623	\$6,468,550,090	

¹ Includes the face value of bonds and loans. Bonds and loans must be repaid, most with interest.

² Special Districts includes public utility, port, conservation, irrigation, diking, school and mosquito control districts

Defining and Reporting “State Assistance”

Loans and some other atypical types of state assistance have been traditionally reported based on the face value of the loan or bond authority rather than the value of the benefit that the assistance provides to the recipient. The actual benefit of a state loan is in reduced interest payments since the recipient pays back the loan principal with interest to the state from local funds. For example, a \$10 million loan is reported as \$10 million of state assistance. In fact, the loan is providing on average \$4.6 million in benefit to the recipient in the form of the present value of reduced interest payments on long-term financing. The benefit is calculated by determining the difference between what the recipient would pay in interest costs if it had borrowed in the municipal bond market versus the interest cost of a state loan. Over time the recipient pays to the state the \$10 million of the loan principal and \$1.45 million in interest at 1.38 percent (average state loan interest rate) instead of \$7.3 million in interest at 6.08 percent (average municipal bond interest rate for last 20 years). The present value of the difference in interest payments is \$4.6 million.

Reporting state assistance in “benefit” terms significantly affects the reported total of state assistance and the relative amount of assistance provided. The table below shows the relative amount of state assistance provided to the study infrastructure types compared to bond financing. The left-hand column reflects the traditional reporting method and the right-hand column is adjusted to report loan assistance in terms of its benefit. Note that in the first column loan assistance is reported as over double grant assistance, and in the second column loan and grant assistance are almost equal. When the actual benefit of loans is reported, total state assistance is considerably smaller, from \$2.3 billion to \$1.4 billion.

Table 13: Comparison of Face Value and Actual Benefit of Loans

All Projects

Face Value of Loans				Actual Benefit of Loans				
Number	Funding Type	Total	Percent	Number	Funding Type	Total	Percent	
	Bond	366	13%		Bond	366	13%	13%
	Grant	1,457	54%		Grant	1,457	54%	54%
	Loan	890	33%		Loan	890	33%	33%
	Total	2,713			Total	2,713		
Amount	Funding Type	Total	Percent	Amount	Funding Type	Total	Percent	
	Bond	\$4,581,055,728	66%		Bond	\$4,581,055,728	76%	76%
	Grant	\$659,648,183	10%		Grant	\$659,648,183	11%	11%
	Loan	\$1,662,526,033	24%		Loan	\$781,303,326	13%	13%
	Total	\$6,903,229,944			Total	\$6,022,007,236		

Table 13: Comparison of Face Value and Actual Benefit of Loans, continued

Construction Projects Only

Face Value of Loans				Actual Benefit of Loans			
Number	Funding Type	Total	Percent	Number	Funding Type	Total	Percent
	Bond	349	22%		Bond	349	22%
	Grant	676	42%		Grant	676	42%
	Loan	598	37%		Loan	598	37%
Total		1,623		Total		1,623	
Amount	Funding Type	Total	Percent	Amount	Funding Type	Total	Percent
	Bond	\$4,500,075,674	70%		Bond	\$4,500,075,674	79%
	Grant	\$483,859,899	7%		Grant	\$483,859,899	9%
	Loan	\$1,484,614,518	23%		Loan	\$695,919,735	12%
	Total		\$6,468,550,090			Total	

Similar adjustments were made to reports by jurisdiction size and by infrastructure type. The adjusted tables appear below. You will note that bond (local) financing becomes an even larger component of public infrastructure financing for large and medium-size jurisdictions, especially in the infrastructure categories of wastewater and drinking water.

Table 14: Comparison of Face Value and Actual Benefit of Loans by Infrastructure Type

All Projects

Infrastructure Type	Funding Type	Number	Actual Benefit of Loans		Face Value of Loans	
			Amount	Percent	Amount	Percent
Wastewater	Bond	70	\$1,341,617,821	70%	\$1,341,617,821	55%
	Grant	53	\$88,074,603	5%	\$88,074,603	4%
	Loan	370	\$474,801,588	25%	\$1,005,275,846	41%
Drinking Water	Bond	64	\$668,223,576	73%	\$668,223,576	59%
	Grant	97	\$53,274,686	6%	\$53,274,686	5%
	Loan	363	\$193,976,519	21%	\$408,911,261	36%
Buildings and Facilities	Bond	7	\$89,235,000	37%	\$89,235,000	36%
	Grant	273	\$144,857,469	61%	\$144,857,469	59%
	Loan	15	\$5,180,149	2%	\$11,319,250	5%
Stormwater	Bond	12	\$63,275,098	84%	\$63,275,098	73%
	Grant	8	\$2,630,200	3%	\$2,630,200	3%
	Loan	20	\$9,519,657	13%	\$21,096,535	24%
All Other	Bond	213	\$2,418,704,233	84%	\$2,418,704,233	80%
	Grant	1,026	\$370,811,225	13%	\$370,811,225	12%
	Loan	122	\$97,825,413	3%	\$215,923,142	7%
Total		2,713	\$6,022,007,236		\$6,903,229,944	

Table 15: Comparison of Face Value and Actual Benefit of Loans by Jurisdiction Size

Face Value of Loans						Actual Benefit of Loans					
Size	Bond	Grant	Loan	Total	Number	Size	Bond	Grant	Loan	Total	Number
Large	118	748	183	1049	1049	Large	118	748	183	1049	1049
Medium	111	382	232	725	725	Medium	111	382	232	725	725
Small	137	327	475	939	939	Small	137	327	475	939	939
Large	11%	71%	17%	100%	100%	Large	11%	71%	17%	100%	100%
Medium	15%	53%	32%	100%	100%	Medium	15%	53%	32%	100%	100%
Small	15%	35%	51%	100%	100%	Small	15%	35%	51%	100%	100%
Large	\$3,696,091,279	\$354,353,688	\$590,942,656	\$4,641,387,622	Number	Large	\$3,696,091,279	\$354,353,688	\$256,057,040	\$4,306,502,006	Amount
Medium	\$684,420,519	\$145,566,326	\$514,667,523	\$1,344,654,368	Amount	Medium	\$684,420,519	\$145,566,326	\$238,861,153	\$1,068,847,999	Amount
Small	\$200,543,930	\$159,728,169	\$556,915,854	\$917,187,953	Amount	Small	\$200,543,930	\$159,728,169	\$286,385,132	\$646,657,231	Amount
Large	80%	8%	13%	100%	100%	Large	86%	8%	6%	100%	100%
Medium	51%	11%	38%	100%	100%	Medium	64%	14%	22%	100%	100%
Small	22%	17%	61%	100%	100%	Small	31%	25%	44%	100%	100%

Assembly of Public Infrastructure Financing Packages

The previous section of the report discussed the relative contribution of local bonds, state loans and state grants to the financing of public infrastructure projects in the primary study infrastructure categories for various types of recipients. This section evaluates, at a generalized level, the number of assistance transactions and types of state assistance that recipients assemble to finance public infrastructure projects over time across all programs.

In order to determine the type and amount of state assistance that was being assembled for the same project, all of the grant, loan and bond transactions of the 29 state programs and bond issuers for five years were sorted by recipient/issuer name and by infrastructure category. The data set for each grant, loan and bond issue included a short description of the project being financed. Information on each transaction was reviewed in an effort to determine which transactions were related to the same public infrastructure project and so noted. Since additional awards were likely made to projects either before or after the five years reviewed in this study, it is likely that the number of projects receiving multiple awards and the length of time from first to last award are conservative.

Table 16 shows the number of public infrastructure projects funded by grants and loans that required several applications and awards of assistance to complete the project's financing package. Excluding bonds, 100 percent of biofuel and solid/hazardous waste projects were funded via a single application. The remaining infrastructure categories showed varying levels of multiple awards. Wastewater, drinking water, stormwater and buildings and facilities infrastructure categories had the largest number of multiple awards with wastewater and stormwater programs using more than 50 percent of their funding in the last five years for multiple award projects.

Table 16: Multiple Financing of Projects by Primary Infrastructure Type--Grants and Loans Only

Primary Infrastructure Type ¹	Number of:		Percent of Excess Transactions	Number of Projects Funded with:			Percent of Projects with:		
	Transactions	Projects ²		Only 1 Transaction	2-4 Transactions	5 or More Transactions	Only 1 Transaction	2-4 Transactions	5 or More Transactions
Number	440	222	98%	120	88	14	54%	40%	6%
Wastewater	526	412	28%	326	86	0	79%	21%	0%
Water	29	23	26%	18	5	0	78%	22%	0%
Stormwater	530	463	14%	410	53	0	89%	11%	0%
Facilities	794	764	4%	739	25	0	97%	3%	0%
Other	28	28	0%	28	0	0	100%	0%	0%
Multiple	2,347	1,912	23%	1,641	257	14	86%	13%	1%
Total									
Amount									
Wastewater			\$1,094,708,114	\$273,979,	\$571,895,356	\$248,833,556	25%	52%	23%
Water			\$487,308,601	\$271,936,	\$215,371,907	\$0	56%	44%	0%
Stormwater			\$30,546,730	\$11,382,9	\$19,163,801	\$0	37%	63%	0%
Facilities			\$306,970,846	\$213,141,	\$93,828,966	\$0	69%	31%	0%
Other			\$386,641,408	\$319,134,	\$67,507,190	\$0	83%	17%	0%
Multiple			\$15,998,518	\$15,998,5	\$0	\$0	100%	0%	0%
Total			\$2,322,174,216	\$1,105,57	\$967,767,220	\$248,833,556	48%	42%	11%

¹ Transactions funding individual projects occasionally were listed with different infrastructure types. For the purpose of this table only, a primary infrastructure type was determined for each project. Therefore, totals by infrastructure type on this table may vary slightly from other tables. Water includes Drinking Water and Irrigation/Agriculture. Facilities includes Buildings and Facilities and Community and Social Service Facilities. Other includes Transportation, Solid and Hazardous Waste, and Biofuels.

² Transactions were grouped into projects by examining data provided by the programs including project name, contractor, location, date, and infrastructure type. Since no standard format for reporting this data exists across programs, grouping transactions into projects was a subjective process. Some projects funded during the study years received funding before 2003 or will receive funding after 2008, so the proportion of transactions to projects funded multiple times is likely understated.

Overall projects related to water, stormwater and wastewater had the highest percentage of additional awards for the same project. Multiple awards appeared, based only on the data, to be the result of several factors – awards for different phases of the same project (design or pre-construction and Phase I and Phase II of construction) or multiple applications for the maximum funding level from different programs for the same project.

Most grant and loan programs have single-year maximum funding limits that are far below a typical project's size. This means that in order to acquire a state loan for the majority of a project, a jurisdiction must apply for and receive the maximum loan amount over several years or from more than one program in a single year. Another typical scenario appeared to be a sequence that involved a successful application first for a grant followed by an application for one or more loans to finance the balance of the project.

In order to further evaluate which recipients were most often assembling financing via multiple awards, the data was analyzed by jurisdiction size. As shown in table 17 below, small jurisdictions were the most likely to assemble multiple sources of financing. However, medium and large jurisdictions received the majority of the dollars of financing.

Table 17: Multiple Financing of Projects by Primary Jurisdiction Size--Grants and Loans Only

Primary Jurisdiction Size ¹	Number of:		Percent of Excess Transactions	Number of Projects Funded with:			Percent of Projects with:		
	Transactions ²	Projects		Only 1 Transaction	2-4 Transactions	5 or More Transactions	Only 1 Transaction	2-4 Transactions	5 or More Transactions
Large	935	798	17%	711	84	3	89%	11%	0%
Medium	610	513	19%	455	56	2	89%	11%	0%
Small	802	601	33%	475	117	9	79%	19%	1%
Total	2,347	1,912	23%	1,641	257	14	86%	13%	1%
Large		\$982,468,509		\$537,386,524	\$344,416,573	\$100,665,412	55%	35%	10%
Medium		\$641,604,764		\$283,250,748	\$295,424,571	\$62,929,445	44%	46%	10%
Small		\$698,100,943		\$284,936,167	\$327,926,076	\$85,238,700	41%	47%	12%
Total		\$2,322,174,216		\$1,105,573,440	\$967,767,220	\$248,833,556	48%	42%	11%

¹ Individual projects were occasionally funded by one or more jurisdictions of different size. For the purpose of this table only, a primary jurisdiction size was determined for each project. Therefore, totals by jurisdiction size on this table may vary slightly from other tables. Large jurisdictions include populations over 50,000, medium jurisdictions ranged from 10,000 to 49,999, small jurisdictions include populations under 10,000.

² Transactions includes bonds, grants and the face value of loans. Loans must be repaid, most with interest.

According to state assistance recipients that participated in the study focus groups, each application for state assistance costs between \$10,000 and \$20,000 to complete and submit. The focus groups also reported that most successful awards are the result of at least two applications. Projects that require multiple funding sources therefore require a recipient to prepare and submit applications two or more times per award which, for a project with three sources of funding, means six or more times. In some cases, multiple applications for a single project represent cooperation between jurisdictions that are participating in a regional project, each applying for the annual maximum. Assembling a public infrastructure project's financing through a combination of multiple applications and awards, even if the recipient is financing the majority of the project from local sources, may lead to another expensive side-effect for the entire project – delays in construction and project completion. Projects that are delayed by several years due to funding delays can cost from 20 to 30 percent more than if funding were available at the first construction related state assistance application. A more extensive discussion of this issue is found in Study Question 5.

State Assistance by Type and Purpose

State public infrastructure assistance is often restricted to certain purposes (e.g., compliance with water quality standards) and types (e.g., construction). Detailed data was gathered from study programs about the nature of their assistance over the last five years. The tables below show that 41 percent of financing is being used to assist with compliance to environmental standards; an additional 24 percent is being used to increase capacity of existing infrastructure, while only 5 percent is focused on replacing infrastructure or reducing demand. Most funds (87 percent) are used for construction, with 8 percent used for planning and design work, and an additional 2 percent being used for projects designed to reduce the need for or size of future infrastructure requirements.

Table 18: Summary of Five-Year Grants and Loans¹ by Purpose

Totals		Increases capacity	Replacement	Reduce the need for, or size of, future infrastructure projects	Compliance with permit requirements and/or environmental standards	Other ²
Number	Grants	229	67	465	208	669
	Loans	131	51	15	660	50
	Other ³	6	0	0	0	19
	All:	366	118	480	868	738
	Percent of	15%	5%	20%	36%	30%
Amount	Grants	\$184,081,957	\$44,349,494	\$66,196,808	\$92,927,364	\$358,372,245
	Loans	\$464,431,457	\$95,117,899	\$53,168,260	\$1,017,137,499	\$40,645,744
	Other ³	\$11,000,000	\$0	\$0	\$0	\$385,091,189
	All Awards:	\$659,513,414	\$139,467,393	\$119,365,068	\$1,110,064,863	\$797,112,327
	Percent of	24%	5%	4%	41%	29%

¹ Includes grants and the face values of loans. Loans must be repaid, most with interest.

² In cases where programs reported that they did not collect data or categorize their projects as defined by this table, the projects were defined as "other."

³ Taxing and tax exempt bond cap authority.

⁴ Some projects had more than one purpose and the number and amount were counted once for each purpose.

Table 19: Summary of Grant and Loan¹ Financing by Project Type

Jurisdiction		Construction Project	Planning or Design of Individual Construction Project	Reduce the need for, or size of, future infrastructure projects	Other activities
Number	Cities and Towns	503	250	146	39
	Counties	88	67	318	71
	Special Districts	262	104	0	92
	Nonprofit Organizations	374	17	0	52
	For-Profit Organizations	22	1	0	0
	Tribes	5	2	0	6
	Other	27	4	0	40
	Totals:	1,281	445	464	300
	Percent²	53%	18%	19%	12%
Amount	Cities and Towns	\$1,152,966,205	\$143,851,462	\$11,387,228	\$35,776,021
	Counties	\$184,113,227	\$35,579,689	\$50,119,898	\$27,492,794
	Special Districts	\$373,994,780	\$30,430,570	\$0	\$34,829,832
	Nonprofit Organizations	\$184,163,732	\$9,980,000	\$0	\$26,178,220
	For-Profit Organizations	\$8,590,112	\$50,000	\$0	\$0
	Tribes	\$2,238,912	\$100,000	\$0	\$1,488,787
	Other	\$57,401,061	\$726,232	\$0	\$11,886,065
	Totals:	\$1,963,468,028	\$220,717,952	\$61,507,126	\$137,651,718
	Percent²	87%	8%	2%	5%

¹ Includes grants and the face values of loans. Loans must be repaid, most with interest.

² Some projects had more than one purpose and the number and amount were counted once for each purpose.

Geographic Distribution

The data provide some interesting information about the distribution of funds geographically relative to where revenue supporting a grant or loan program is collected. Many of the study grant and loan programs do not have an earmarked source of locally collected supporting tax revenue. The majority of grant programs, for example, are funded by statewide bond issues. However, some programs do have specific earmarked tax funding. The largest of these programs is funded by the Public Works Assistance Account (PWAA).

The PWAA loan programs were selected to compare by county geographic area the proportion of revenue contributed by each over five years to the proportion of assistance received. Public Works Assistance Account revenue comes from a combination of real estate excise tax (REET) collected at the time real estate changes hands and utility taxes paid on water, sewer and solid waste services. REET is collected at the county level and revenue per county is easily available. Utility tax revenue is not collected in a manner that can be easily disaggregated by county.

Therefore, utility tax revenue was distributed on a per capita basis statewide. An effort was made to test whether certain parts of the state or sizes of jurisdictions had higher or lower collections per capita due to concentrations of commercial accounts or relatively high or low utility rates. The per capita method appeared to be a fair representation of real conditions.

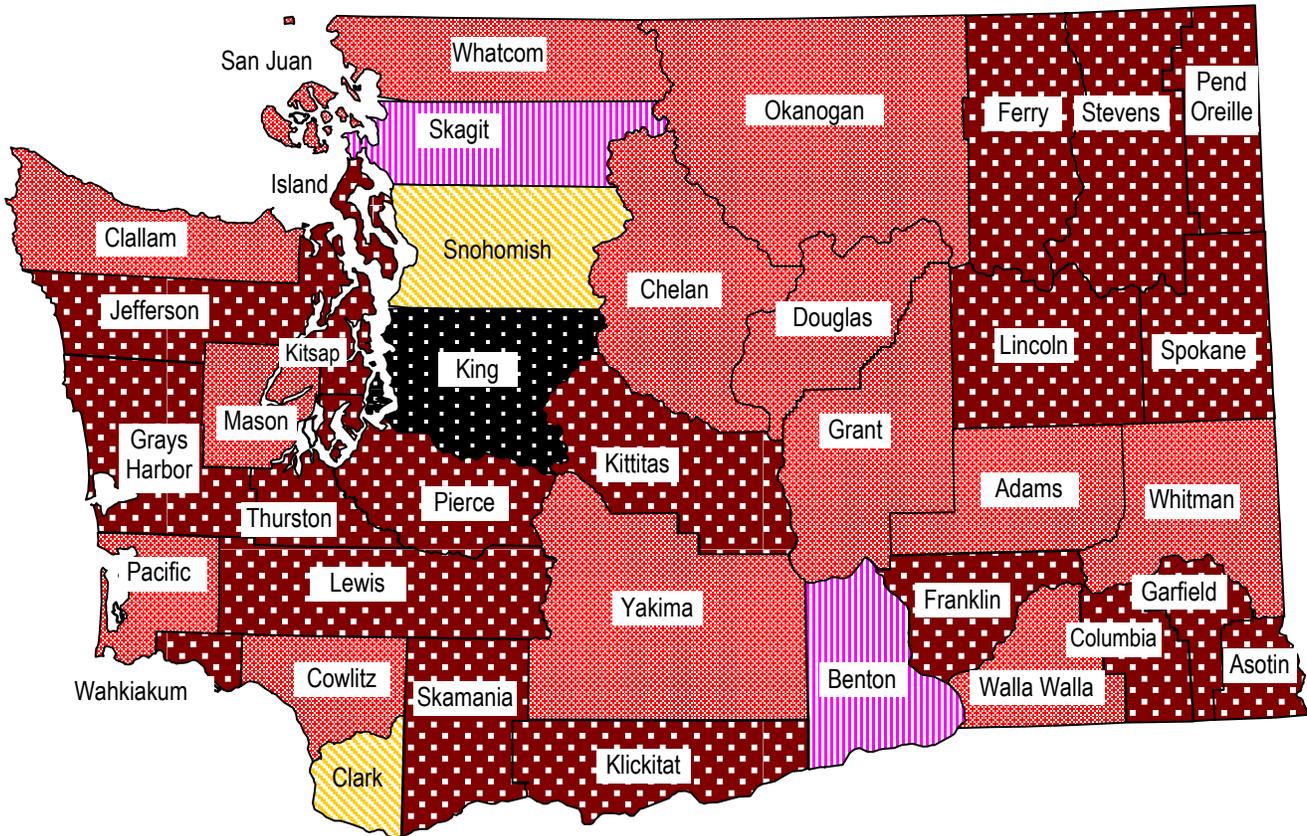
The map below shows the distribution of PWAA loans for the last five years relative to where tax revenue for the account was collected on a county geographic area basis. King County jurisdictions proportionately received 14 percent (\$150 million) less in loans than their proportion of contributed revenue, while the following proportionately receive more than their share of revenue: Snohomish County jurisdictions (\$49 million), Clark County jurisdictions (\$45 million), Skagit County jurisdictions (\$24 million) and Benton County jurisdictions (\$22 million). These four counties together received roughly the same amount as King County proportionately contributed.

The majority of the other counties in the state either had a balanced contribution or proportionately contributed 1 to 1.5 percent more than they received. The counties that received the higher share were urbanizing high-growth counties. With the exception of Clark County, the counties that have been identified as fiscally stressed either contributed an equal percentage of revenue relative to the percentage of awards dollars they received, or contributed a slightly greater percentage of the revenue compared to award dollars.

The four central Puget Sound counties (Kitsap, King, Pierce and Snohomish) proportionately contributed 63 percent of the revenue for the PWAA and received 52 percent of the loan dollars; the remainder of the state proportionately contributed 37 percent and received 48 percent.

Public Works Assistance Account Programs

Proportion of Loans Compared to Proportion of Tax Revenue Contributed per County for Public Works Assistance Account Programs during the Five-Year Study Period



The county's percentage of the total taxes contributed to PWAA programs was 14% **greater** than it's percentage of the total award dollars received

The counties' percentages of the total taxes contributed to PWAA programs were between 0% and 1.5% **greater** than the percentages of the award dollars these counties received

The counties' percentages of the total taxes contributed to PWAA programs were between 0% and 1.5% **less** than the percentages of the award dollars these counties received

The counties' percentages of the total taxes contributed to PWAA programs were between 2% and 2.5% **less** than the percentages of the award dollars these counties received

The counties' percentages of the total taxes contributed to PWAA programs were between 4% and 5% **less** than the percentages of the award dollars these counties received

Study Question 2

How are the 29 public infrastructure programs guided by state policy in administering state assistance? Do the results reflect policy goals?

All of the 29 programs were asked the same questions about how state policy guided their program's operations. Each program was assessed from five perspectives:

- Did the program include five common accountability elements in their programs operations?
- Which accountability elements were tied to or guided by state policy goals?
- To what extent were the programs' funding allocation and performance measures guided by state policy goals?
- What was the relationship between statewide policies related to growth management, economic development, climate change and Puget Sound water quality and each program?
- How did each program assess progress toward meeting state policy goals?

Defining State Policy Goals

State policy goals for local public infrastructure assistance programs are defined in a number of different ways. Typically goals are defined broadly or specifically for a program through the state and/or federal statute that created the program. About one-third of the 29 programs have related federal statutes. Policy goals may have been modified over time by legislative action at either the federal or state level. Many state assistance programs are two or more decades old and have experienced several rounds of modifications. These modifications may change or expand the focus of the program and often, add new policy goals for the program to achieve. With only three exceptions, the 29 programs in this study had three, and often more, statutory policy goals to achieve as part of their program mandate. The next two tables illustrate these points.

Table 20: Program Start Dates and Recent Modifications

Program	Year Established	Recent Modifications to:	
		Award Criteria	Finance Methods or Sources
Capital and Operating Budget	n/a	-	-
CDBG Community Investment	1982	Program terminated in 2008	
Community Development Block Grant (Combined)	1982	-	-
CERB Traditional	1982	2009	
PWAA Construction	1985	2008	-
PWAA Emergency Loan	1985	2008	2008
Rural Washington Loan Fund	1985	-	-
Centennial Clean Water Fund	1986		-
Bond Cap Allocation	1987	-	-
Clean Water Act, Section 319	1987	-	-
Coordinated Prevention Grant	1988	-	2005, 2007
Water Pollution Control Revolving Fund	1988		2007
PWAA Planning	1989	-	2005
Building for the Arts	1991-1998* codified in	-	-
CERB Rural	1991	2009	-
Safe Drinking Water Action Grant	1993	-	-
Community Services Facilities	1995-1996,* codified in	Program terminated in 2008	
PWAA Pre-construction	1995	-	2005
Drinking Water Revolving Fund	1996	-	-
Water System Acquisition and Rehabilitation	2003	-	-
Youth Recreation Facilities	2003	-	-
Watershed Plan Implementation	2004-present ¹	-	-
CERB Job Development	2005	Program terminates in 2009	
Energy Freedom	2006	-	-
Local Infrastructure Financing Tool	2006	Program completed in 2008	
Building Communities Fund	2008	-	-

¹ Via Capital Budget Proviso

Table 21: Relationship Between Award Criteria and Statewide Policy Considerations¹

Program	Overarching State Policies				Statutory Program Policy Goals						
	Growth Management Act	State Economic Development Plan	Puget Sound Partnership	Climate Change Initiatives	Public Health	Clean Water ³	Job Creation	Benefits to Low and Moderate Income Households	Fiscal Capacity or Need of applicant	Other Multiple	Other Individual
Building Communities Fund				•				•	•	•	
Building for the Arts				•						•	
Capital and Operating Budget				•							
Community Services Facilities				•					•	•	
Youth Recreation Facilities									•	•	
Centennial Clean Water Fund ²	•		•		•	•			•	•	
Clean Water Act, Section 319			•		•	•					
Water Pollution Control Revolving Fund			•		•	•					
CDBG Community Investment		•					•	•	•	•	
CDBG General Purpose	•	•						•	•	•	
CDBG Housing Enhancement								•	•	•	
CDBG Imminent Threat					•			•			•
CDBG Interim Financing								•	•	•	
Rural Washington Loan Fund		•					•	•		•	
CERB Job Development							•		•	•	
CERB Rural											
CERB Traditional		•					•		•	•	
Local Infrastructure Financing Tool	•	•					•		•	•	
PWAA Construction	•	•	•		•		•		•	•	
PWAA Emergency Loan	•				•				•	•	
PWAA Planning	•								•	•	
PWAA Pre-construction	•				•				•	•	
Drinking Water State Revolving Fund					•			•			•
Water System Acquisition & Rehabilitation					•	•		•		•	
Safe Drinking Water Action Grant			•		•	•				•	
Bond Cap Allocation	•	•			•		•			•	
Coordinated Prevention Grant	•		•	•	•					•	
Energy Freedom		•		•	•	•				•	
Watershed Plan Implementation	•	•	•	•		•				•	
Totals:	9	9	7	7	13	7	8	10	15	23	2

¹ Policies are reflected in eligibility or rating criteria for awards.

² Legislative proviso projects (11 out of 31) are not subject to award criteria.

³ Clean water includes drinking water, wastewater and non-point source projects.

Overarching State Policy Goals

A second layer of policy goals or expectations exists for many programs, and may be directly or indirectly reflected in statutory or administrative guidance. These goals can be classified in two ways. The first is alignment with statewide policies or initiatives such as growth management, economic development or climate change. While many programs have elements of their guiding statutes which refer to statewide policies (see table 21 above) most of the statutory guidance is framed or interpreted to mean that individual local jurisdictions or projects need to be in compliance with the related state law. The relative extent to which state investment in a project or jurisdiction furthers statewide growth management or economic development goals for example, is generally not considered.

The second classification of policy goals or expectation has to do with alignment of program administration with stated or unstated expectations such as “statewide proportional distribution of funds” or “local governments should not receive state money until they have enacted all possible local revenue sources.” Some of these stated and unstated expectations may be in conflict with each other or with maximizing the ability of a program to achieve its statutory policy goal(s). Below are examples of “policies” or expectations that may be stated or unstated.

- The objective is to build the largest number of public infrastructure projects, serving the greatest number of people.
- It is better to fund a little part of a lot of projects than a larger part of a few.
- We should be looking for the “biggest bang” for the state’s buck.
- The state should provide incentives with the least amount of money possible to motivate recipients to raise or spend the maximum in local funds.
- Local governments should not receive state money for public infrastructure until they have enacted all possible local infrastructure related revenue sources authorized by the state.
- State assistance should be distributed on the basis of need; if a recipient has the ability to fund a project itself or raise the funds then the state should not be involved.
- Regions of the state should receive approximately the same distribution of state aid as they contribute in revenue.
- Local governments should receive state aid in proportion to need or some other overriding state objective. If we distribute state assistance in the same proportion as the amount of revenue received, why should the state be involved at all? The money should just stay where it is collected.
- Local governments expect the state to fully replace federal assistance programs that have gone away over the last 20 years. If a sewer treatment plant or road was build with 80 to 90 percent federal funding 30 years ago, the locals are looking to the state for a similar share and the resources are just not available.
- State funds should only be spent to meet state-defined purposes or objectives; local priorities should not be a factor unless they are aligned with state purposes or objectives.
- State funds should not be spent on growth; growth should pay for itself.
- State funds should be used strategically to further state growth management and economic development goals.

Programs and the Five Common Accountability Elements

Five grant and loan program accountability elements were identified in the study proviso. All of the programs reported on the use of each element in their program’s operation. The table below summarizes the results. With one exception, all programs used state policy goals as part of the primary considerations in making assistance awards, used evaluation criteria in determining awards and had performance measures in place. Twenty-two programs (75 percent) also had a method in place for assessing progress toward their program’s policy goals. Only five programs (17 percent) had a method of assessing future statewide public infrastructure funding needs for their program.

Table 22: Self-Reported Accountability Elements of Programs

Program		Program Elements				
		Policies that are primary considerations determining awards	Evaluation criteria	Performance measures	Method for assessing progress toward policy goals	Method of assessing future infrastructure needs
Totals	Programs that have element	28	28	28	22	5
	Programs that partially have element					13
	Programs that don't have element	1	1	1	7	11
Programs	Building Communities Fund	•	•	•	•	
	Building for the Arts	•	•	•		Partial
	Capital and Operating Budget					
	Community Services Facilities	•	•	•		Partial
	Youth Recreation Facilities	•	•	•		Partial
	Centennial Clean Water Fund	•	•	•	•	Full
	Clean Water Act, Section 319	•	•	•	•	Full
	Water Pollution Control Revolving Fund	•	•	•	•	Full
	CDBG Community Investment	•	•	•	•	Partial
	CDBG General Purpose	•	•	•	•	Partial
	CDBG Housing Enhancement	•	•	•	•	Partial
	CDBG Imminent Threat	•	•	•	•	
	CDBG Interim Construction Financing	•	•	•	•	Partial
	Rural Washington Loan Fund	•	•	•	•	Partial
	CERB Job Development	•	•	•	•	
	CERB Rural	•	•	•	•	Partial
	CERB Traditional	•	•	•	•	Partial
	Local Infrastructure Financing Tool	•	•	•		
	PWAA Construction	•	•	•	•	
	PWAA Emergency Loan	•	•	•	•	
	PWAA Planning	•	•	•	•	
	PWAA Pre-construction	•	•	•	•	
	Drinking Water State Revolving Fund	•	•	•	•	Full
	Water System Acquisition and Rehabilitation	•	•	•	•	Full
	Safe Drinking Water Action Grant	•	•	•	•	Partial
	Bond Cap Allocation	•	•	•		
Coordinated Prevention Grant	•	•	•	•	Partial	
Energy Freedom	•	•	•			
Watershed Plan Implementation	•	•	•	•	Partial	

Accountability Elements and State Policy Goals

We evaluated which accountability elements in each program were guided by or tied to state policy goals – both programmatic statutory policy goals and statewide overarching policy goals. Overall, the alignment between policy goals and program accountability elements was good for the majority of programs. The weakest alignment was in the area of assessing statewide infrastructure needs, since few programs had a method for assessing need.

The Relationship Between Funding Allocation, Performance Measures and State Policy Goals

There is a strong relationship between funding allocation, performance measures and programmatic statutory policy goals.

- Programmatic statutory policy goals were primary considerations in determining assistance awards for 28 of 29 programs (see Table 22 above). No specific statutory policy goals are stated for operating and capital budget special projects.
- Both programmatic (28 out of 29) and overarching policy goals (21 out of 29) were tied to either eligibility or award criteria for most programs (see Table 2 in Appendix B). Policy goals represented 50 percent or more of eligibility or award criteria in 16 of 18 programs with point based award systems. Eleven programs do not have point based award systems however policy goals were still used in most cases in determining funding. (See Table 23 below).
- Twenty-two programs (75 percent) reported having a method of assessing progress toward meeting policy goals (see Table 1 in Appendix B).
- Some programs had a relatively large number of statutory policy goals. This larger number of goals may dilute the ability of the program to attain any individual objective or create conflicts in award systems.
- Policy goals are tied to performance measures in 26 (90 percent) of 29 programs. (See Table 5 in Appendix B).
- Policy goal based performance measures represented 50 percent or more of all performance measures for 17 of 28 programs (61 percent). (See Table 5 in Appendix B)

Table 23: Relationship Between Eligibility/Evaluation Criteria and Statutory Policy Goals

Program	Statutory Program Policy Goals							Relationship Between Eligibility/Evaluation Criteria and Statutory Policy Goals			
	Public Health	Clean Water ¹	Job Creation	Low/Moderate Income Household	Fiscal Capacity/Need of Applicant	Other Multiple	Other Individual	Aligned ²	Partially Aligned	Not Possible to Determine	
Totals:	13	7	8	8	15	23	2	24	2	3	
Building Communities Fund				•	•	•		•			
Building for the Arts						•		•			
Capital and Operating Budget										•	
Community Services Facilities				•	•	•		•			
Youth Recreation Facilities				•	•	•		•			
Centennial Clean Water Fund	•	•						•			
Clean Water Act, Section 319	•	•						•			
Water Pollution Control Revolving Fund	•	•						•			
CDBG Community Investment			•	•	•	•		•			
CDBG General Purpose				•	•	•		•			
CDBG Housing Enhancement				•	•	•		•			
CDBG Imminent Threat	•			•	•	•	•	•			
CDBG Interim Financing				•	•	•		•			
Rural Washington Loan Fund			•	•	•	•		•		•	
CERB Job Development			•		•	•		•			
CERB Rural								•			
CERB Traditional			•		•	•		•			
Local Infrastructure Financing Tool			•		•	•		•			
PWAA Construction	•		•		•	•		•	•		
PWAA Emergency Loan	•				•	•		•			
PWAA Planning					•	•		•			
PWAA Pre-construction	•				•	•		•	•		
Drinking Water State Revolving Fund	•						•	•			
Water System Acquisition & Rehabilitation	•	•				•		•			
Safe Drinking Water Action Grant	•	•				•		•			
Bond Cap Allocation	•		•	•		•		•			
Coordinated Prevention Grant	•					•		•			
Energy Freedom	•		•			•		•		•	
Watershed Plan Implementation		•				•		•			

¹ Clean water includes wastewater and non-point source projects.

² 50 percent or more of the eligibility and award criteria are aligned with the program's statutory policy goals.

The Relationship Between Programs and Statewide Policies

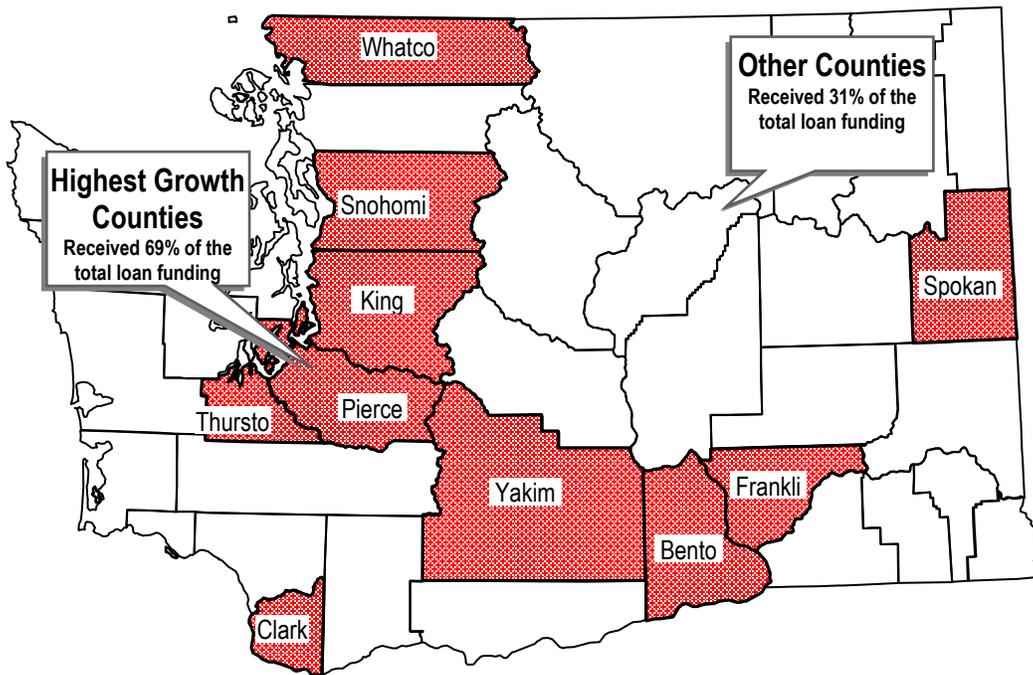
On average, programs most often reported that they helped implement (12 of 29 or 41 percent) the overarching state policies reflected in the Growth Management Act, the State Economic Development Plan, Climate Change Initiative or Puget Sound Partnership Initiative (See Table 3 in Appendix B). Six programs on average (21 percent) reported they both helped implement *and* potentially conflicted with, the same state policies. Four programs on average (14 percent) reported potential conflicts. Three programs reported that they neither helped implement nor conflicted with the overarching state policies.

The following maps depict state assistance (grants and loans) to the geographic areas where one might expect to see the most state investment aligned with the Growth Management Act, the State's Economic Development Plan and the Puget Sound Partnership initiatives. Climate change initiatives have not been well enough defined to lend themselves to analysis. The geographic areas reported include the 10 highest population growth counties in the state over the last decade (Growth Management), regional employment growth 2005-2007 (Economic Development Plan), and the area bordering Puget Sound receiving water quality related state assistance.

A high proportion of grant and loan assistance was allocated to high-growth counties over the last five years. A high proportion of water quality related assistance, relative to the number of counties in the geographic area, was also allocated to the counties bordering Puget Sound. The alignment between job growth and allocation of grants and loans is not as clear. Grants and loans, in general, were not predominately allocated to lower employment growth areas of the state for example (the lowest two employment growth regions received 21 percent of state assistance). Neither were grants and loans predominately allocated to the two highest employment growth areas (29 percent). The region designated as Puget Sound (King, Pierce and Thurston Counties) received the largest share of state assistance at 34 percent. When just economic development related grant and loan program awards are compared to job growth by region the alignment between programs and job growth is still unclear.

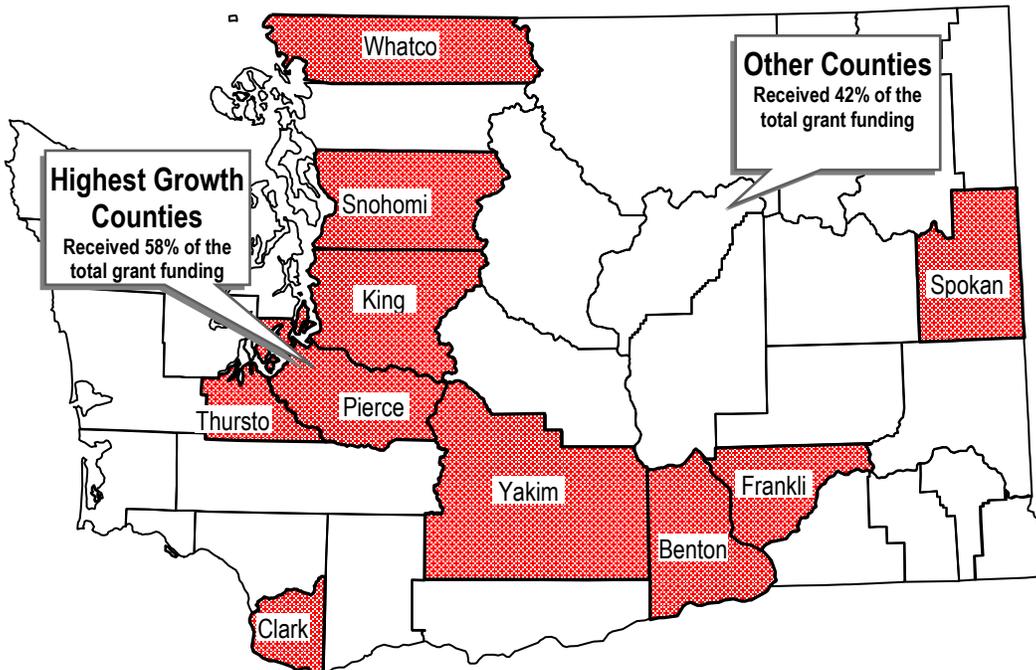
Ten Highest Growth Counties

Funding Received Through Loans During Five-Year Study Period



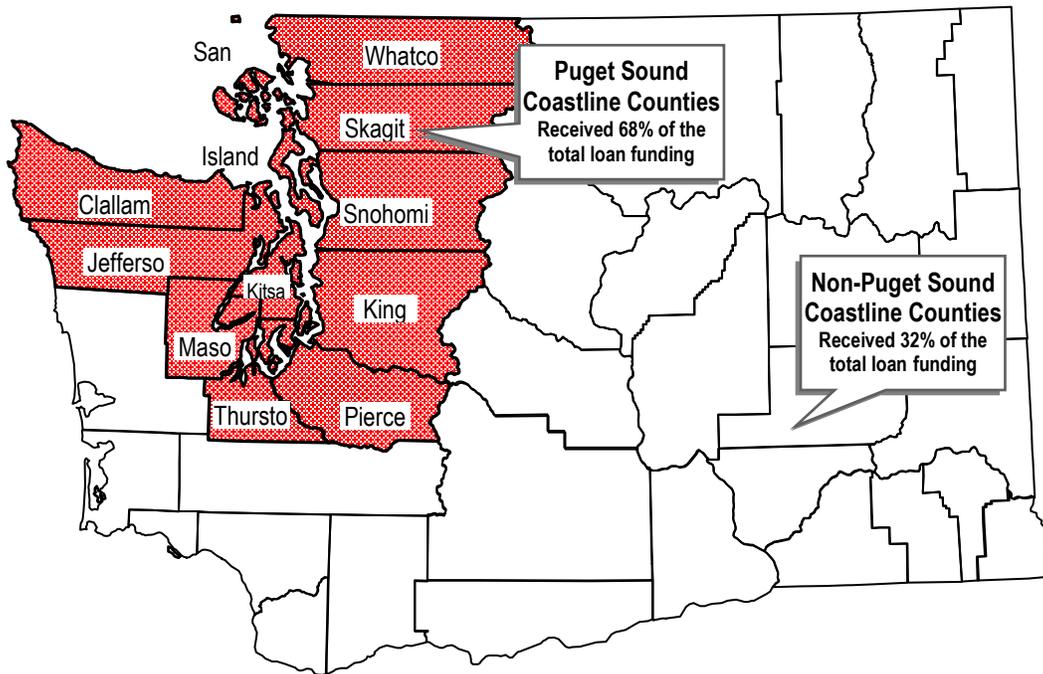
Ten Highest Growth Counties

Funding Received Through Grants During Five-Year Study Period



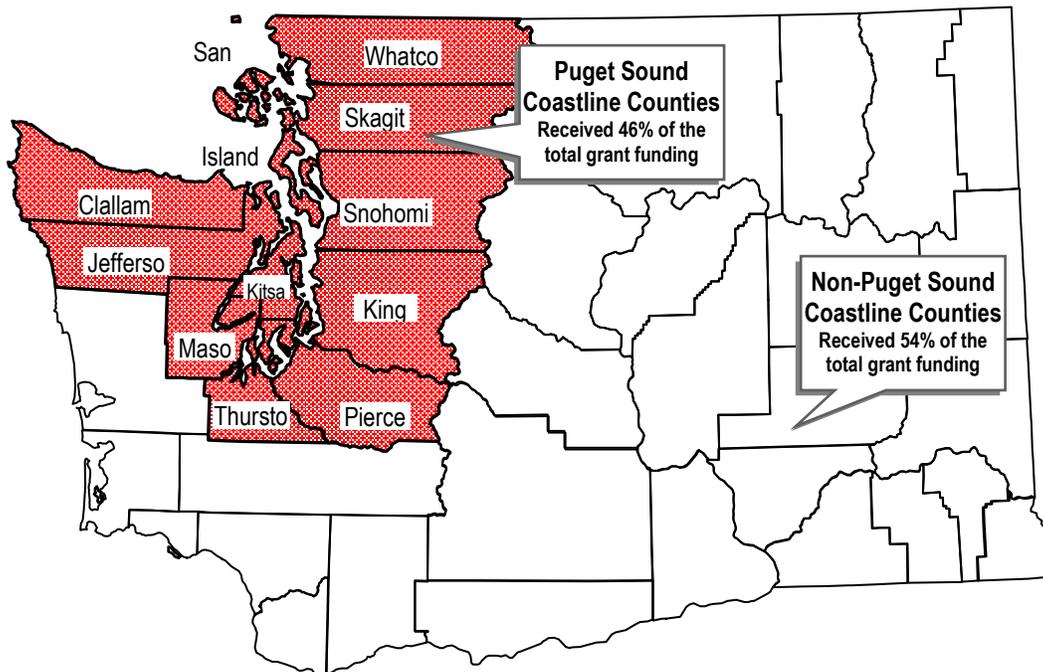
Puget Sound Coastline Counties

Funding Received Through Loans for Wastewater, Stormwater, Solid Waste and Hazardous Waste Projects During Five-Year Study Period



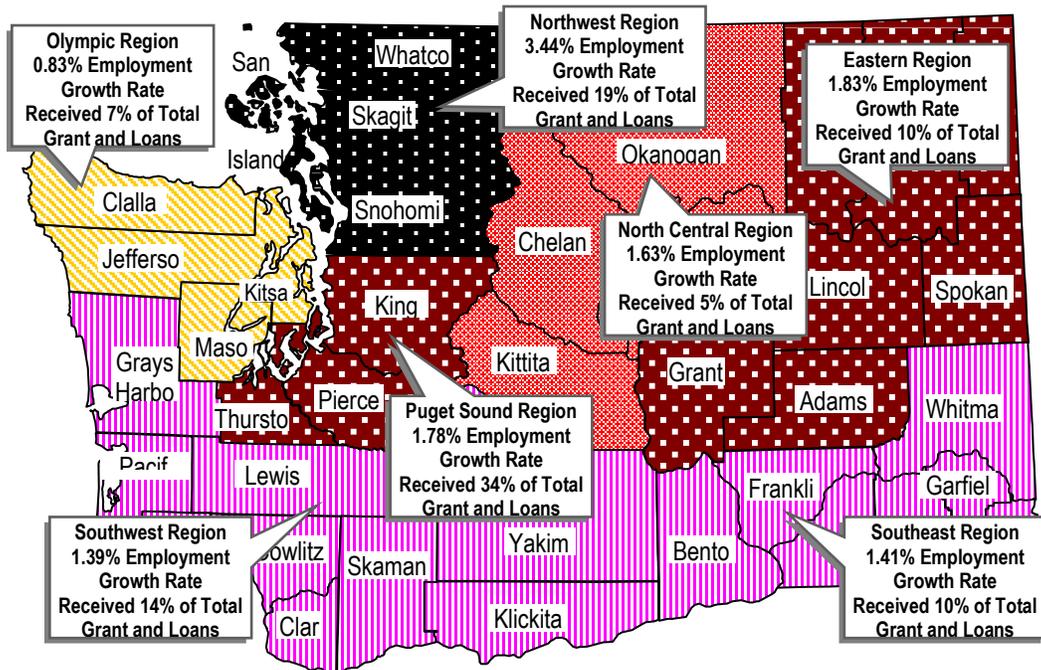
Puget Sound Coastline Counties

Funding Received Through Grants for Wastewater, Stormwater, Solid Waste and Hazardous Waste Projects During Five-Year Study Period



Economic Development Regions

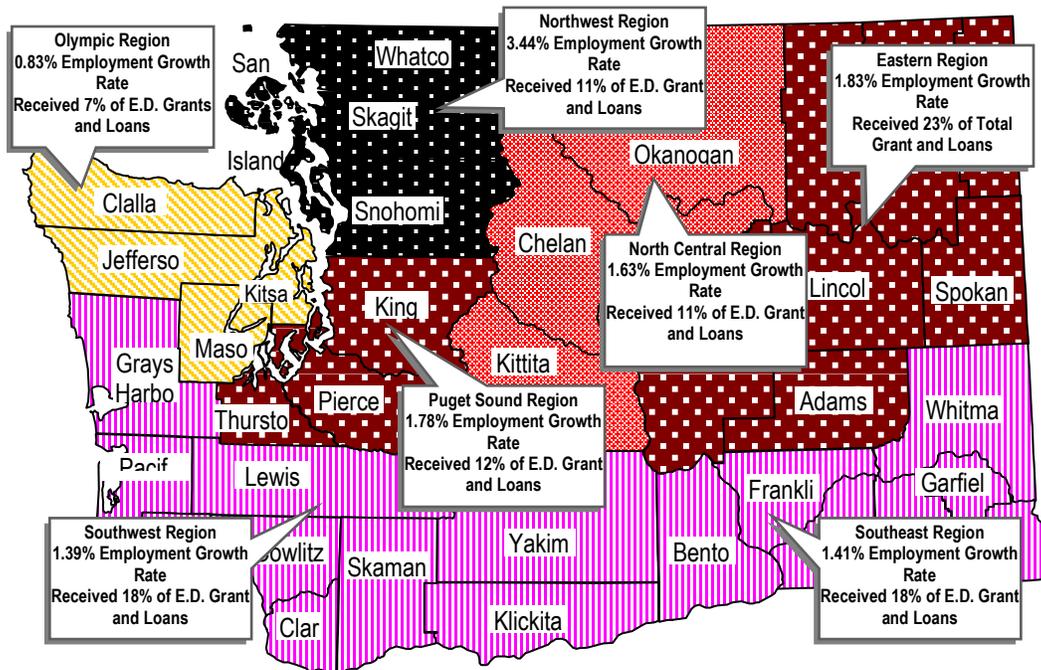
Percentage Increase in Average Employment and Percentage of Total Grant and Loans Received During Study Period



The statewide average employment growth rate was 1.89 percent for the three-year study period.

Economic Development Regions

Percentage Increase in Average Employment and Percentage of Economic Development Program Grants and Loans Received During Study Period



The statewide average employment growth rate was 1.89 percent for the three year study period. Programs which reported that they support the Economic Development Plan are the CDBG Community Investment program, the CDBG General Purpose program, the CDBG Housing Enhancement program, the CDBG Interim Financing program, the Community Economic Revitalization Board Traditional and Rural programs, the Coordinated Prevention Grant, the Energy Freedom program, the Rural Washington Loan Fund, the Safe Drinking Water Action Grant, and the Watershed Plan Implementation and Flow Achievement program.

Assessing Progress Toward Meeting State Policy Goals

We were not able to determine the amount of progress that has been made by the 29 grant and loan programs in attaining state policy goals. In order to determine progress, benchmarks would need to be established for each program related to a policy goal and the benchmarks would then be used to assess performance. Many more programs have established program performance measures than were counted in the 2005 JLARC study (28 instead of 14), we found that most policy goal related measures have been in place for a relatively short amount of time. In addition two groups of programs (water quality and PWAA programs) negotiate individual project performance measures with recipients as part of their assistance contracts.

Many programs reported having a method for assessing individual projects, but not aggregate or statewide progress in meeting state policy goals. There may be an underlying assumption that if projects are selected that align with state goals and the projects are successfully completed, then progress by definition is being made. The table below summarizes the information provided by programs about the methods they have in place for assessing progress toward policy goals.

Table 24: Methods to Assess Progress Toward Policy Goals

KEY
 Aligned ●
 Partially Aligned ○
 Not Aligned/Not Possible to Determine ○

Program	Methods to Assess Progress Toward Policy Goals Aligned with Performance Measures	Method(s) Used to Assess Progress Toward Policy Goals	
		Project Based	Program Based
Building Communities Fund	●	Monitor grantee expenditures and performance	-
Building for the Arts	○	-	-
Capital and Operating Budget	○	-	-
Community Services Facilities	○	-	-
Youth Recreation Facilities	○	-	-
Centennial Clean Water Fund	●	Each project scope defines water quality goals/outcomes. Ecology monitors performance from start to three years after completion of each project.	The program is working on cross-agency performance measures for statewide water quality outcomes.
Clean Water Act, Section 319	●	Federal EPA requires states to report annually on program and project results. In addition, the program completes actions described above for Centennial Clean Water Fund.	As described above and to the left
Water Pollution Control Revolving Fund	○	Federal EPA requires states to report annually on program and project results. In addition, the program completes actions described above for Centennial.	As described above and to the left. In addition, this program is audited by EPA and the State Auditor at least annually.
CDBG (Community Investment, General Purpose, Housing Enhancement, and Interim Construction Financing)	●	Project completion milestones, on-site monitoring, close out process	Outcome data related to HUD goals are gathered and input into HUD's Integrated Disbursement Information System.
CDBG Imminent Threat	●	Compliance with state and federal requirements are monitored; project outcomes are reported to HUD.	-
Rural Washington Loan Fund	●	Complete job monitoring reports for each project.	-

Table 24: Methods to Assess Progress Toward Policy Goals

KEY

- Aligned
- ◐ Partially Aligned
- Not Aligned/Not Possible to Determine

Program	Methods to Assess Progress Toward Policy Goals Aligned with Performance Measures	Method(s) Used to Assess Progress Toward Policy Goals	
		Project Based	Program Based
CERB Combined	●	Collect data on project outcomes, such as jobs created.	Effective 7/1/09, an expanded list of items will be assessed in the program's biennial report, pursuant to RCW 43.160.900
Local Infrastructure Financing Tool	○	-	-
PWAA (Construction, Pre-construction, Planning, Emergency)	◐	Loan recipients are required to submit quarterly progress reports on whether or not benchmarks are being met. Final results are reported to the Legislature in PW Board's Annual Legislative Report.	-
Drinking Water Revolving Fund	●	Federal EPA requires states to report annually on program and project results.	-
Water System Acquisition and Rehabilitation	○	Database tracks and reports on project results.	-
Safe Drinking Water Action Grant	●	Project progress and performance monitoring.	Extent to which program advances policy goals of Toxics Cleanup and Solid Waste and Financial Assistance Programs.
Bond Cap Allocation	○	-	-
Coordinated Prevention Grant	●	-	The program has 5- and 10- year goals and tracks progress towards them.
Energy Freedom	○	-	-
Watershed Plan Implementation	●	Monitoring, including measuring the volume of water acquired for instream flows as a result of the projects and the overall program; updated quarterly.	See description to the left.

Study Question 3

What other funds are leveraged with state public infrastructure assistance?

Leveraging of state investments in public infrastructure can be defined in a number of ways.

Leveraged Economic Growth

Leveraging has been traditionally reported as the relationship between state investment and private economic activity, both short-term construction related economic activity and long-term economic impacts. For example, the Public Works Board reports on the direct and indirect economic impacts of public works loan financing using an older econometric model. In 2008 the board reported that:

“The Board has collected more than \$1.241 billion in tax revenue, earned over \$17.1 million in interest earnings and accumulated more than \$711 million in loan repayments. The loans leveraged an additional \$2.6 billion for 1,670 construction projects across the state... The allocation of \$277.95 million through the 2008 recommended loan list will result in a direct investment of \$824.2 million in Washington’s economy. This investment is estimated to result in \$1.929 billion in additional economic activity.

*It could be estimated that every PWTF dollar yields an additional \$3.60 in economic activity in the state....”*¹³

The report goes on to say that many of its projects would probably have been done anyway due to their nature through financing provided locally with assistance from private financing (municipal bonds) or from other state or federal sources.

Washington currently uses an input-output econometric model to calculate the economic impacts of state investments.¹⁴ This model requires detailed information on the nature of individual project expenditures, information that is not generally easily accessible for the majority of the state’s grant and loan projects.

Funding Leveraged from Other Sources

Another method of looking at leveraging is to determine the balance of project financing that was invested in public infrastructure from other sources beyond state funding with the assumption that the state was a catalyst. Most grant and loan programs gathered information on the amount of the loan or grant assistance provided and the “total project cost” of the project being funded. However, it was not possible to calculate the percentage of funds ultimately provided by the state for most loan programs or loan and grant programs combined. During the five years examined, a high proportion of projects received funding from more than one source (more than 22 percent), causing the total project cost to be reported multiple times (see Table 16.) In addition, there is no common definition of “total project cost” and the “total project” may have been defined in phases or as including only construction or various components of a project’s costs from design through completion of construction.

¹³ 2008 Legislative Report, Public Works Board, 2008, p. 1.

¹⁴ The Washington Input-Output Model web site, Office of Financial Management, <http://www.ofm.wa.gov/economy/io/default.asp>.

The most accurate depiction of leverage (although some of the problems outlined above still apply) can be seen in the percentage of construction project cost financed through grants.

Some grants are not provided for construction so the number of grants shown in this table is smaller than in some other places. As shown in the table below, on average, state grants leveraged 70 percent of project funding from other sources over the five study years. Leveraging varied among programs with a high of 88 percent to a low of 36 percent.

Table 25: Grant Financing of Construction Projects

Infrastructure Type	Number of Grants	Amount		Percent of Total Project Cost ¹ Provided by State Grants
		State Grants	Total Project Cost	
Stormwater	2	State Grants	\$957,300	64%
		Total Project Cost	\$1,488,246	
Facilities ²	23	State Grants	\$14,091,902	41%
		Total Project Cost	\$34,606,794	
Water ²	107	State Grants	\$50,143,647	41%
		Total Project Cost	\$123,444,892	
Wastewater	44	State Grants	\$71,937,959	33%
		Total Project Cost	\$215,827,725	
Other ²	25	State Grants	\$54,291,040	25%
		Total Project Cost	\$220,249,127	
Multiple	18	State Grants	\$7,818,076	12%
		Total Project Cost	\$64,718,130	
Total:	219	State Grants	\$199,239,923	30%
		Total Project Cost	\$660,334,913	

¹ 12 of 17 grant programs reported total project costs. However, programs did not share a common definition of total project costs. Figures may report costs for a phase or component of a project (for example, design) versus the cost including design through construction for all project phases. Due to the number of multiple awards over several years to some projects, total project costs reported may be overstated.

² Water includes Drinking Water and Irrigation/Agriculture. Facilities include Buildings and Facilities and Community and Social Service Facilities. Other includes Transportation, Solid and Hazardous Waste, and Biofuels.

Another perspective on this type of leveraging is to evaluate the proportion of funds that come from loans, grants and private sector (municipal bond) financing. While many local governments also fund infrastructure through accumulated savings and the local contribution therefore should be adjusted significantly upward, these figures provide some relative sense of the proportion of long-term financing provided for public infrastructure. In the same five-year period, far more funding was provided through private lending (municipal bonds) than from state assistance. As summarized in Table 1, bond financing represented 70 percent of total long term construction financing (\$6.5 billion) followed by state loans (23 percent) and grants (7 percent). The relative proportion of public financing by type varied for different infrastructure systems with stormwater, water and sewer projects relying first on bonds and then on loans for funding. Buildings and facilities (primarily nonprofit) relied most heavily on grant funding and community and social service facilities (primarily local government) on bonds (see Table 11).

Tax Revenue Generation

A third method of looking at leveraging is to assess the amount of additional tax revenue that is generated by a public infrastructure investment. This assessment provides a picture of whether the project directly or indirectly supports construction or development that results in additional tax revenue to state and/or local government. This leverage measure may also be seen as one dimension of looking at return on state investment. If a project generates direct or indirect construction or development that results in significant additional tax revenue it may be seen as paying for all or a portion of itself in the short or longer term. The table below summarizes in a general way the tax revenue impacts of the 29 grant and loan programs.

Table 26: Leveraged Tax Revenue by Program

KEY

Direct
May Reduce Revenue

●
○

Indirect
No Relationship

○
-

	Program	State Tax Revenue					Local Government Tax Revenue						
		Sales Tax on New Construction	Business and Occupation Tax	Real Estate Excise Tax	Property Tax on New Construction	Utility Taxes	Sales Tax on New Construction	Real Estate Excise Tax	Property Tax on New Construction	Utility Rate Revenue	Utility Tax	Utility Capital Facility Charges	SEPA or GMA Fees
Totals	Direct	25	9	0	10	9	25	0	9	10	9	2	4
	Indirect	1	18	10	10	8	1	10	12	7	8	14	12
	May Reduce Revenue	0	0	0	0	1	0	0	0	1	1	0	0
	No Relationship	3	2	19	9	11	3	19	8	11	11	13	13
Site-specific	Bond Cap Allocation	●	●	-	●	●	●	-	●	●	●	-	●
	Building Communities Fund	●	○	-	●	-	●	-	●	-	-	-	-
	Building for the Arts	●	○	-	●	-	●	-	●	-	-	-	-
	CERB Job Development	●	●	-	●	-	●	-	●	-	-	-	-
	CERB Rural	●	○	○	○	○	●	○	○	○	○	○	○
	CERB Traditional	●	○	-	○	○	●	-	○	○	○	○	○
	Community Services Facilities	●	●	-	-	○	●	-	●	○	○	○	○
	Energy Freedom	●	●	-	●	○	●	-	●	-	○	●	●
	Rural Washington Loan Fund	●	●	-	●	○	●	-	●	●	○	-	-
	Youth Recreation Facilities	●	○	-	●	-	●	-	●	-	-	○	●
System-wide	Capital and Operating Budget	●	○	-	●	●	●	-	●	●	●	○	●
	Centennial Clean Water Fund ¹	●	○	○	○	●	●	○	○	●	●	○	○
	Clean Water Act, Section 319	●	○	-	●	-	●	-	-	-	-	-	-
	CDBG Community Investment	●	○	○	○	●	●	○	○	●	●	○	○
	CDBG General Purpose	●	○	○	○	●	●	○	○	●	●	○	○
	CDBG Housing Enhancement	●	○	○	●	●	●	○	○	●	●	●	○
	CDBG Imminent Threat	●	○	-	-	-	●	-	-	-	-	-	-
	CDBG Interim Financing	-	-	-	-	-	-	-	-	-	-	-	-
	Coordinated Prevention Grant	-	-	-	-	○	-	-	-	○	○	-	-
	Drinking Water State Revolving Fund	●	○	-	-	○	●	-	-	○	○	-	-
	PWAA Construction	●	○	○	○	●	●	○	○	●	●	○	○
	PWAA Emergency Loan	●	●	-	-	-	●	-	-	-	-	-	-
	PWAA Planning	-	●	-	-	-	-	-	-	-	-	-	-
	PWAA Pre-construction	●	○	○	○	●	●	○	○	●	●	○	○
	Safe Drinking Water Action Grant	●	●	-	-	-	●	-	-	-	-	-	-
	Local Infrastructure Financing Tool	●	○	○	○	○	●	○	○	○	○	○	○
	Water System Acquisition & Rehabilitation	●	●	-	-	-	●	-	○	○	-	○	-
Water Pollution Control Revolving Fund	●	○	○	○	●	●	○	○	●	●	○	○	
Watershed Plan Implementation	○	○	○	○	○	○	○	○	○	○	○	○	

¹ Policies are reflected in eligibility or rating criteria for awards.

Per Capita Funding Effort

Finally, leverage can be assessed on the basis of per capita contributions to total project funding. This method essentially calculates the per capita contribution to the non-state share of grant projects. Generally a smaller population jurisdiction will have a higher per capita share per million dollars of non-state financing (more leverage) than a larger population jurisdiction. This is especially relevant since the average grant size is approximately the same regardless of jurisdiction size (see table below).

Table 27: Largest, Smallest, and Average (Mean) Financing of Construction Projects by Jurisdiction Size¹

Cities and Towns, Counties, and Special Districts Only

Jurisdiction Size	Funding Type	Largest	Smallest	Average (Mean)
All	Combined	\$271,320,000	\$2,000	\$3,987,148
Large	Bond	\$271,320,000	\$10,000	\$31,224,397
	Grant	\$9,999,000	\$2,000	\$697,092
	Loan	\$73,237,895	\$113,334	\$4,508,389
Medium	Bond	\$127,770,000	\$30,361	\$5,782,599
	Grant	\$10,000,000	\$12,000	\$781,841
	Loan	\$20,359,763	\$67,417	\$3,022,791
Small	Bond	\$13,280,000	\$20,000	\$1,544,971
	Grant	\$5,425,000	\$3,000	\$703,307
	Loan	\$10,000,000	\$16,770	\$1,541,914

¹ Large jurisdictions include populations over 50,000, medium jurisdictions ranged from 10,000 to 49,999, and small jurisdictions include populations under 10,000.

Study Question 4

How much state funding for public infrastructure is needed over the next six years? What types of infrastructure need additional funding?

Defining Public Infrastructure Needs

Under current conditions, public infrastructure and associated funding needs are defined through various federal, state and local government efforts. As summarized below, these efforts are not part of an integrated statewide infrastructure needs and finance assessment, but instead represent the result of diverse mandates and strategies. In general, “needs” include public infrastructure that is required in order to meet a federal or state law and associated standards or to fulfill objectives relating to community development. Some public infrastructure efforts also address “gaps” which are defined as the difference between identified local and state funding and the actual cost of capital projects in local government capital facility plans.

Federal initiatives and processes associated with the Federal Highway Administration, the Environmental Protection Agency and other federal programs delegate authority to states to carry out mandates and associated service delivery. Some of the federal programs require detailed periodic reports of infrastructure condition and need on a state by state basis.

State legislative initiatives, individual program planning and associated studies have also attempted to assess need. As previously discussed, in the past several decades the Legislature has commissioned several studies to examine public infrastructure needs. Each of these studies identified needs that exceeded identified funding capacity or could be addressed within the existing institutional framework. No comprehensive study of public infrastructure need is currently available for all or part of 2009 to 2015. In terms of program planning, most state infrastructure programs are not mandated to engage in long-term infrastructure needs and finance forecasting, nor do they have standard mechanisms in place to do so. Along with past studies, this analysis draws from the self-reported infrastructure and finance data from the study programs that provide grants or loans for public infrastructure (see Appendix B).

Local government planning efforts associated with the Growth Management Act (GMA). Local governments that are fully planning under the GMA are required to develop a 20-year capital facilities element of their comprehensive plan and a six-year capital facility plan that defines capital improvements and associated funding sources (RCW 36.70A.070). In addition, many jurisdictions develop separate, more detailed plans for transportation, utilities and parks. Because most public infrastructure is considered a local government capital facility, the local capital facilities plans and associated budgets include substantial information about local government's public infrastructure needs.

Public Infrastructure Funding Needs over the Next Six Years

Indications of public infrastructure needs over the next six years were defined by reviewing several data sets associated with federal, state, and local efforts summarized above. These data sets include:

- Projected appropriations (2009-2015) submitted by the study grant and loan programs;
- Estimated public infrastructure needs that the programs reported above the base appropriation;
- The number of qualified applicants and eligible projects that could not be funded by state programs because the request exceeded the resources available; and
- Actual and projected local government expenditures for public infrastructure.

Projected appropriations – Twenty-one out of 29 programs projected appropriations totaling \$2.13 billion, or an average of \$709 million per biennium from 2009-2015. Eleven of the programs defined appropriations that were equal to, or slightly lower, than 2007-2009 appropriations. The remaining eleven defined projected appropriations that were higher (see table below). Overall, the projected appropriations for 2009-2015 exceed the 2007-2009 appropriation levels by \$334 million. Of the total additional request \$107 million was for grants and \$227 million for loans. The eight programs that did not report projected appropriations have either been terminated, are in the process of defining future needs or do not typically develop projections (see Table 14, Appendix B).

Table 28: Projected Appropriations, 2009-2015
21 Programs Reporting Projected Appropriations¹
(See individual program narratives for additional detail)

Programs	Estimated Appropriations	Projected Appropriations				
		2007-2009	2009-2011	2011-2013	2013-2015	2009-2015 Totals
Grants	Building Communities Fund	n/a	\$31,600,000	\$31,600,000	\$31,600,000	\$94,800,000
	Building for the Arts	\$11,856,880	\$11,856,880	\$11,856,880	\$11,856,880	\$35,570,640
	Centennial Clean Water Fund ²	\$66,816,117	\$59,940,000	\$59,940,000	\$59,940,000	\$179,820,000
	Clean Water Act, Section 319	\$3,770,838	\$3,800,000	\$3,500,000	\$3,500,000	\$10,800,000
	CDBG General Purpose	\$19,500,000	\$24,000,000	\$24,000,000	\$24,000,000	\$72,000,000
	CDBG Housing Enhancement	\$1,900,000	\$2,000,000	\$2,000,000	\$2,000,000	\$6,000,000
	CDBG Imminent Threat	\$400,000	\$400,000	\$400,000	\$400,000	\$1,200,000
	CERB Combined (Rural & Traditional) ²	\$620,000	\$930,000	\$930,000	\$930,000	\$2,790,000
	Coordinated Prevention Grant	\$25,500,000	\$27,060,000	\$28,730,000	\$30,500,000	\$86,290,000
	Watershed Plan Implementation	\$11,704,000	\$15,750,000	\$15,750,000	\$15,750,000	\$47,250,000
	Youth Recreation Facilities	\$8,936,877	\$7,900,000	\$7,900,000	\$7,900,000	\$23,700,000
	Totals:	\$151,004,712	\$185,236,880	\$186,606,880	\$188,376,880	\$560,220,640
	Loans	Centennial Clean Water Fund ²	\$66,883	\$60,000	\$60,000	\$60,000
CDBG Interim Financing		\$32,000,000	\$24,000,000	\$24,000,000	\$24,000,000	\$72,000,000
CERB Combined (Rural & Traditional) ²		\$19,380,000	\$29,070,000	\$29,070,000	\$29,070,000	\$87,210,000
Drinking Water State Revolving Fund		\$107,378,035	\$63,201,000	\$69,118,000	\$75,035,000	\$207,354,000
Energy Freedom		\$0	\$0	\$25,000,000	\$25,000,000	\$50,000,000
PWAA Combined		\$327,000,000	\$421,000,000	\$456,000,000	\$494,000,000	\$1,371,000,000
Rural Washington Loan Fund		\$8,079,002	\$0	\$4,000,000	\$4,000,000	\$8,000,000
Water Pollution Control Revolving Fund		\$140,000,000	\$116,202,937	\$110,348,718	\$106,169,469	\$332,721,124
Totals:	\$633,903,920	\$653,533,937	\$717,596,718	\$757,334,469	\$2,128,465,124	

¹ Includes grants and the face value of loans. Loans must be repaid, most with interest.

² Centennial Clean Water Fund and CERB Rural provide both grants and loans. These tables separate their projected total aid based on the ratio of grants to loans for the past five years.

Estimated Needs Above Base Appropriations – Eleven programs estimated a total of \$10.3 billion in public infrastructure assistance need beyond the base appropriations projected for 2009-2015 (see table below). The types of public infrastructure that are served, in part, by these 11 programs include: drinking water systems; wastewater, stormwater, and nonpoint source projects; and capital improvements to increase instream flows.

Table 29: Additional Future Need
Eleven Programs Reporting Funding Needs Beyond Existing Programs by Infrastructure Type¹
 (See individual program narratives for additional detail.)

Infrastructure Type	2009-2011 Loans/Grants	2011-2013 Loans/Grants	2013-2015 Loans/Grants	2009-2015 Totals
Wastewater	\$1,771,521,878	\$1,794,719,331	\$1,817,916,784	\$5,384,157,993
Non-Point Source Projects²	\$1,186,470,982	\$1,186,470,982	\$1,186,470,982	\$3,559,412,946
Stormwater	\$80,000,000	\$160,000,000	\$320,000,000	\$560,000,000
Drinking Water	\$126,780,170	\$138,773,175	\$150,766,180	\$416,319,525
Transportation	\$61,895,804	\$68,041,819	\$74,187,833	\$204,125,456
Multiple	\$39,497,000	\$37,248,000	\$34,075,000	\$110,820,000
Community/Social Service Facilities	\$8,000,000	\$8,000,000	\$8,000,000	\$24,000,000
Totals:	\$3,274,165,834	\$3,393,253,307	\$3,591,416,779	\$10,258,835,920

¹ Figures by infrastructure type are combined from all programs.

² See Department of Ecology program narratives for definition of non-point source projects.

Of an estimated \$10.3 billion in public infrastructure need projected by programs for 2009-2015, approximately 87 percent or \$8.94 billion in public infrastructure need was defined for wastewater and non-point source projects. Drinking water needs assessments have not been completed and are not included. The vast majority of requests were for grants (84 percent, \$7.5 billion) and the balance for loan programs (16 percent, \$1.44 billion). It is important to note that of the 29 state grant and loan programs reviewed, the wastewater and nonpoint source programs were determined to be one of the few programs with a relatively complete method of assessing future infrastructure needs (see Table 30 below).

Table 30: Methods for Assessing Future Infrastructure Need

	Program	Description of Methods for Assessing Future Need
Full Method	Centennial Clean Water Fund	1) Clean Watersheds Needs Survey every four years, required by Environmental Protection Agency, 2) Results of local total maximum daily load planning, 3) demand from past cycles
	Clean Water Act, Section 319	
	Water Pollution Control Revolving Fund	
	Drinking Water State Revolving Fund Program	Drinking Water Needs Survey every four years, required by EPA
	Water System Acquisition and Rehabilitation	Past trends plus a study that was mandated by ESSB 6340
Partial Method	Building for the Arts	Demand from previous cycles
	CDBG General Purpose, Housing Enhancement, Interim Construction Financing	1) Trend data from applications; 2) annual public hearing; 3) review of local government needs assessments (e.g., Association of Washington Cities, CTED Housing Division)
	CERB Rural and Traditional	Assess amount of funding awarded in current biennium and projected projects in development as reported by CTED's regional services staff.
	Community Services Facilities	Demand from previous cycles
	Coordinated Prevention Grant	Legislatively mandated 10-year Model Toxics Control Act finance report (per HB 1761)
	Safe Drinking Water Action Grant	
	Rural Washington Loan Fund	CTED's regional services managers assess.
	PWAA Construction	Demand from previous cycles
	Watershed Plan Implementation	Each biennium the program requests preliminary proposals from local governments and uses the data to project need.
	Youth Recreation Facilities	Demand from previous cycles

¹ Programs not reporting a method to assess future infrastructure needs are not included.

As reported in the program summaries for water quality programs, these programs are federally mandated to complete a comprehensive survey every four years that require project and cost data collected from reliable and verifiable source documentation such as local government comprehensive plans, capital facility plans, system plans, engineering reports and associated estimates of water quality infrastructure needs (see individual program templates, Appendix B).

Conversely, because only five of the 29 programs were determined to have a relatively complete and standardized method for assessing the public infrastructure needs associated with their grant or loan program, the \$10.3 billion in estimated needs for 2009-2015 may not include many needs. This is because, in most cases, state grant and loan programs are not mandated to estimate future infrastructure needs associated with their programs.

Estimating Statewide Infrastructure Need and State Funding Requirements

It is unclear what the relationship is between need and a state share of that need as reported by individual programs. If the full six year public infrastructure expenditure need is represented by the reported \$7.5 billion in grant program requests then another way to look at the state share is to compare past state and local contribution rates to future need (approximately 26 percent for the state and 74 percent for local government across all infrastructure categories). Water, stormwater and wastewater programs have provided grants for 18 percent of past public infrastructure expenditures. Applying this benchmark ratio to \$7.5 billion in need would result in a state grant share of \$1.35 billion over six years. Base appropriations assume a \$560 million funding level, leaving a \$790 million state funding gap.

Loans have made up a larger proportional share of state assistance to local government for the study programs. State loans have been provided for approximately 40 percent of total financing. Again, using past state contribution rates as a benchmark, 40 percent of \$7.5 billion in additional infrastructure investment would represent \$3 billion in loan financing over six years. Loan programs requested \$2.1 billion in base appropriations and \$1.23 billion in additional funds for the same period.

The *Growth Management Effectiveness Study* evaluated need and state contribution to that need by comparing actual expenditures and historically identified capital facility requirements by infrastructure type. This evaluation resulted in a gap between what is being expended toward the identified needs and the current level of local and state funding (see table 31).

Table 31: Alignment of State Grant and Local Funding¹ with Local Infrastructure Requirements

	Six Year Requirements 2004-2009	Annual Average Requirements	2005 Local Infrastructure Expenditures²	2005 State Grant Funding³
Roadways	\$10.64 billion	\$1.77 billion	\$703 million	\$148.3 million
Water	\$1.58 billion	\$260 million	\$170 million	\$2 million
Sewer	\$3.36 billion	\$560 million	\$159 million	\$20.9 million
Parks	NA	NA	\$249 million	\$58.9 million
Stormwater³	\$360 million	\$60 million	\$51 million	0
Other	NA	NA	NA	\$22 million

Notes:

¹ State programs include only those grant programs that funded \$5 million or more per biennium from state dollars

² Cities and Counties (does not include special districts)

³ Includes all jurisdictions

⁴ Stormwater expenditures are included at times in sewer and roadway projects

Qualified Applicants Denied Funding – Each of the study programs was asked to report on the number of qualified applicants that were not funded in their most recent funding round. Some consider this information a measure of “unmet need”. Twenty-three programs reported 275 qualified, eligible applicants, representing \$475 million in need that could not be funded because the requests exceeded available funds. The programs that reported the highest amounts not funded and the number of applicants denied are as follows: Clean Water Act Section 319 (52); CERB Job Development (52); the Centennial Clean Water Fund (47); Public Works Construction (34); and Watershed Plan Implementation (34) (Table 17, Appendix B, see also individual templates for each program). It was not possible to assess which, if any, of these applicants had applied to another state program and, although denied by one program, may have been approved by another.

Actual local government expenditures and associated capital facility plans provide another indication of public infrastructure need. Based on the most recent expenditure data available, local governments are estimated to use local funds for approximately 74 percent of their public infrastructure expenditures on core capital facilities and to have spent \$1.33 billion, or three times the amount of state and federal grant funding used, during the same year.¹⁵

Despite this significant local government investment, a past review of actual and projected expenditures indicated an estimated infrastructure funding “gap” of \$7.58 billion from 2004-2009 (Table 32).

Table 32: Local Infrastructure Funding Needs and Estimate of Actual Expenditures 2004 – 2009

(Dollars in Billions)

Infrastructure Type	Total Funding Needs	Actual Expenditure 2004 - 2006	Estimated Expenditure 2007-2009	Six - Year Total Estimated Expenditure	Funding Gap	Percent Funding Gap
Domestic Water	\$1.58	\$0.49	\$0.49	\$0.98	\$0.60	37.97%
Sanitary Sewer	\$3.36	\$0.55	\$2.25	\$2.80	\$0.56	16.67%
Storm Sewer	\$0.36	**	**	NA	NA	NA
Roadways/Bridges	\$10.64	\$2.11	\$2.11	\$4.22	\$6.42	60.34%
Total	\$15.94	\$3.15	\$4.85	\$8.00	\$7.58	47.55%

Notes:

Assumes King County's \$1.7B Brightwater project is fully funded through rates and bond financing.

Utility numbers are based on 10 of 39 counties and 163 of 281 cities; 15 ports, 18 PUDs and 61 water and sewer districts

** Stormwater capital is reported with Roadways/Bridges.

Source: Meeting the Growth Management Challenge in Growing Communities, November 2008, CTED page 27 used the following data sources:

Actual expenditure data - Local Government Financial Reporting System and Legislative Evaluation and Accountability Program, BARS 594 and 595.

Funding requirements data - *Washington REALTORS Local Government Infrastructure Study*, Bill Freund and Michael Luis, January 2006 and *2003 Public Works Board Local Infrastructure Database*.

¹⁵ *Meeting the Growth Management Challenge*, Appendix D, p. 233.

The \$7.58 billion estimated funding gap from 2004-2009, as summarized above, is a conservative estimate because it includes only construction related costs associated with the project (e.g., design and construction) and does not include the long-term financing interest costs stemming from bond and loan repayments.

If a similar scale gap plus inflation exists for the six years 2009 to 2015, funding requirements for water, stormwater and wastewater without state or local identified funding sources (unfunded gap) would be \$2.8 billion at a 16 percent per year construction inflation rate. This figure is on top of base expenditures by both local and state government.

Benchmarking a state grant share at 18 percent would yield \$504 million in additional funding beyond traditional appropriation levels. Additional loan financing would total \$1.12 billion using the same method. State loan programs requested an additional \$1.23 billion for the same six year period.

Evidence of funding gaps is further noted by a sample review of 29 local government comprehensive plan capital facilities elements. The review found that 85 percent of the jurisdictions identified needs or projects with no specific funding source in their plan. In addition, survey results from 86 growing communities planning under GMA found that 53 percent of the jurisdictions stated they have included unfunded projects in their capital facilities plans. Along with unfunded projects, local governments may define state grant or loan programs as funding sources when, in fact, the sources are not viable because statewide needs exceed the amount of grants or loans available from the programs. It was not possible to assess or quantify this occurrence because there is no system in place to compare the statewide total amount/type of state grants or loans that local governments plan to rely on (as defined by their capital facilities plan) with the actual amount of funding available from the state grant or loan program.

Study Question 5

Are there any key points from the analysis of state programs that can be used as guidance or considerations in the restructuring implementation plan?

The restructuring implementation plan considers various organizational structures that further streamline all or selected functions related to the grant and loan programs covered in this study. The analysis of current programs does not directly suggest or conclude that specific organizational structures are preferable. However, the analysis does identify potential opportunities, priorities and challenges. These are summarized as follows.

Time to Assemble Public Infrastructure Financing

The primary challenge facing the state, as identified in the analysis, is how to decrease the cost of public infrastructure through reducing the time needed to execute projects. Particularly in the infrastructure areas of wastewater, drinking water and stormwater, existing grant and loan program operating methods lengthen project timelines because of the logistics required to assemble a project's funding package (see Tables 16 and 17). Typically, the 10 primary programs that fund these three categories of public infrastructure provide partial funding commitments sequentially, over two-to-five years or more from initial request. Recipients assemble pieces of financing over a series of funding cycles (usually one year apart) until an adequate funding package is available – signaling a go ahead to begin construction. Recipients reported in the focus groups that they typically applied two or more times before receiving initial funding. Analysis of multiple award projects (concentrated in

water, wastewater and stormwater programs) showed that multiple awards were typically received in years two and three after initial award.

In addition to the cost to recipients, assembly of funding packages over a number of years through accumulation of multiple grant and/or loan awards creates efficiency and effectiveness issues for state assistance programs. It is inefficient to hold the initial funding award for a project for two to four years prior to its use by a recipient, as they try to assemble additional funds. Record keeping and reporting become difficult and more expensive.

Programs can not be as effective because project delay often results in project cost increases proportionately reducing the benefit the grant or loan is providing to the recipient.

Examples Public Infrastructure Projects with Multiple Funding Sources

Wastewater Project in a Small Jurisdiction

A rural town applies initially in 2002 and receives a Public Works Assistance Account Pre-construction loan in 2004. The town receives interim financing from the Community Development Block Grant Interim Financing program and a grant from the Community Development Block Grant Community Investment program in 2006, a loan and a grant from the Department of Ecology's wastewater programs in 2007, and issued two bonds in 2007 to repay portions of the loans and cover remaining construction costs. The project is still under construction.

Years from application to final funding	6
State programs providing funding	5
Number of transactions	7

Wastewater Project in a Medium Size Jurisdiction

A city in a growing urban county and a sewer district serving the city apply initially in 2003 for PWAA Pre-construction loans. In 2005 the city receives one and the sewer district receives two loans for the maximum amount allowed. Both jurisdictions secure large PWAA Construction loans, one in 2006 and one in 2007. In 2008 both jurisdictions receive second PWAA Construction loans in the maximum amount allowed. The sewer district receives another Pre-construction loan and a large Water Pollution Control Revolving Fund loan in 2008. The project is scheduled to be completed in 2010.

Years from application to final funding	7
State programs providing funding	3
Number of transactions	9

How does time delay effect project costs? Over the last 10 years on average, for every 12 months of construction delay (the equivalent of most grant and loan program’s annual funding cycles) construction costs have increased an average of 16 percent.¹⁶

For public infrastructure projects that are financed, typically over 20 years, this means that an initial project cost of \$10 million and a total financed cost of \$21 million (project cost plus 20 years of interest) would increase by \$1.6 million in project cost per 12 months of delay plus financing costs (total interest payments) of another \$1.75 million – for a total one-year increase of \$3.35 million. With a two-year delay, a \$10 million project’s overall cost would go up by \$6.7 million to \$27.7 million. Reducing project cost escalation by just 12 months has a significant impact on the ultimate cost of public infrastructure.

To put these numbers into perspective, if state grant and loan programs were able to reduce the time to assemble financing packages from a range of two-to-five years to a range of one-to-three years, the cost savings per \$1 billion in projects could be as high as \$670 million or an amount roughly equivalent to all state grant awards over the last five years. Part of the savings is in basic project costs and part in avoided interest payments.

Access to Lower Cost, Long-Term Financing for Smaller Projects

A second challenge that was identified relates to access to lower-cost public infrastructure long-term financing for smaller local governments and sometimes smaller projects of any jurisdiction. Larger state grant and loan recipients have more options for long-term financing of public infrastructure and have relied heavily on municipal bond financing. Smaller recipients (and sometimes smaller projects) have fewer options and limited access to the bond market. Smaller recipients rely on a few local banks and state loan programs for long-term financing. Private financing is more expensive for smaller recipients than large recipients. The state has been providing the only source of lower-cost long term financing.

The de-facto state role of “bank” for smaller borrowers of public infrastructure financing highlights the higher transaction and delay costs to small borrowers. Smaller borrowers more often have to assemble multiple sources of financing for their projects with attendant costs per application. Reliance on state funding means that assembly time is often greater (increasing costs) than those jurisdictions that have historically been able to borrow “on demand” in the private market to complete their funding packages.

Coordinated Implementation of Statewide Policies and Priorities

A final challenge identified by the analysis relates to the implementation of state policy goals and priorities. The current system of grant and loan programs is decentralized into five “pools” or “administrative groups” of programs that have shared or common elements within each group (see Table 5). One group administers programs that relate to buildings and facilities (primary clients are nonprofit organizations); three groups administer programs that primarily fund water, wastewater and stormwater projects (majority of clients are local governments) and one group primarily administers programs that fund site-specific infrastructure focused on facilitating economic development (majority of clients are organizations furthering economic development).

¹⁶ Trends in Highway Material Costs web site, Washington Department of Transportation, <http://www.wsdot.wa.gov/biz/Construction/constructioncosts.cfm>.

Unique to each group are award procedures and decision making, legislative approval/oversight, policy board oversight, capital and operating budget recommendations, and needs assessment and accountability measures. The majority of multiple awards and the majority of *state* water and water quality funding is concentrated in two groups: one that includes Public Works Board programs and Department of Health drinking water programs, and a second group that includes Department of Ecology water quality programs.

There is no statewide coordination procedure in place across one or more of the five groups either by infrastructure system or as a whole. Coordination can be achieved in a number of ways ranging from structural change to interagency agreement to interagency work groups. Potential points of coordination fall into roughly three categories.

Potential Cross Group **Policy** Coordination

- Statewide infrastructure investment planning, including routinely assessing statewide public infrastructure needs and identification of desired measurable policy-based improvements.
- Statewide budget decisions/oversight, including strategic investments to further statewide priorities.
- Statewide infrastructure system planning (e.g., wastewater or stormwater).
- Statewide infrastructure system budget decisions/oversight.
- Routine grant and loan program statutory policy goal review.

Potential Cross Group **Administrative** Coordination

- Loan program financial policies and interest rates.
- Award criteria and weighting.
- Funding application and award procedures.
- Award contract administrative procedures.
- Data collection and reporting.
- Infrastructure system-based needs assessment.
- Infrastructure system-based performance measures.
- Statutory change recommendations to streamline or coordinate administration.

Potential Cross Group Business **Process** Improvement

- Identification of business process improvement targets.
- Approval of implementation measures to achieve targets.
- Measurement of success.
- Determining ongoing adjustments.

Potential Best Practices

This study did not specifically seek or evaluate best practices among the 29 study programs. However, the inventory and analysis did highlight practices that are potential best practice candidates. Best practices are program operating procedures that achieve outcomes either more efficiently or effectively than prevailing or standard practices. Best practices are typically evaluated for replication in other organizations in order to improve operations. Potential best practices that were described in the inventory of grant and loan programs include:

- Interagency contracting between the Public Works Board and the Department of Health to administer selected portions of Department of Health drinking water grant and loan programs.
- Each of the five groups jointly-administer grant and loan programs consolidated or used common practices for different aspects of program operations. The extent, methods and outcomes that resulted varied from group to group. Potential best practices may be discovered as a result of comparing each group's practices with each other or with joint administrative practices of transportation grant and loan programs.
- Five programs have comprehensive statewide public infrastructure needs assessment methods in place (See table 22).
- Three programs have clearer and more concise alignment between policy goals, award criteria and performance measures (Drinking Water programs and Watershed Plan Implementation program).
- Some administrative groups of programs have common definitions, data and reporting systems that better facilitated reporting and comparison across programs with similar clients or infrastructure systems (Programs administered by Public Works Board and programs related to facilities administered by CTED) .
- Some programs fund local initiatives that reduced the demand for, and future cost of, public infrastructure that may serve as models or best practices (Coordinated Prevention Grants, Centennial Clean Water Fund and Drinking Water State Revolving Fund).
- One state loan program (Water Pollution Control State Revolving Fund) indexes the state loan interest rate to bond market rates creating a defined level of benefit regardless of market conditions. This also allows the program to lend a larger proportion of funds when competition for funding is highest (high interest rate environment).

ANALYSIS CONCLUSIONS AND RECOMMENDATIONS

Investment in Local Public Infrastructure

What's Working

- Communities across the state, together with state government, invested \$9.1 billion in local roadways, water, sewer and drainage systems between 1998 and 2006.¹⁷
- Of the \$9.1 billion spent on public infrastructure, the state and federal government provided 26 percent of the resources (GMA Study, Nov. 2008).
- Local public infrastructure investments in water, sewer, stormwater, solid waste and buildings over a five-year period were financed through a combination of local funds often from utility rate revenue, municipal bonds (\$4.6 billion), state low-interest loans (\$1.7 billion) and state grant programs (\$659 million). Bonds and loans are repaid with interest, generally over 20 years, from local sources.
- The state of Washington's combined local public infrastructure revolving loan programs are large (current portfolio of outstanding loans is \$3.3 billion at an average interest rate of 1.38 percent). The size of the portfolio is growing as loans are repaid and additional capital comes into the loan programs.
- The State of Washington uses federal private activity bond authority to further economic development projects and finance supporting public infrastructure at tax-exempt bond interest rates through the state's Bond Cap Allocation Program. An estimated \$385 million in tax-exempt bond authority was used over five years for local public infrastructure related investments by private sector firms and economic development entities.

What Could Be Improved

Significant confusion appears to exist regarding about how much funding actually goes to local governments and other recipients of state assistance. Loan principal amounts are reported as "awards" or "state assistance," which can lead to an incorrect perception that much more state funding is going to local government than is really being received. Loans are repaid to the state with interest from local tax or ratepayer revenue, and the typical "benefit" to local government is the difference between what would have been paid in private borrowing interest costs and state loan interest costs. The state is not funding the initial cost of the project (for example, a \$30 million sewer treatment plant). Instead, the state is reducing long-term financing costs (for example, reducing 20 years of interest from 4.5 percent interest rates to 0.50 percent interest rates).

Recommendations

Consider a reporting standard for state loans (and other interest rate buy-down programs) that is defined as the value of lower-than-market-interest payments rather than the face value of the loan, to clarify for everyone the value created to local governments and other loan recipients of state loan programs.

¹⁷ *Meeting the Growth Management Challenge.*

Implementation of State Policy Goals

What's Working

- Some general progress based on individual project outcomes is being made toward statutory legislative policy goals established for the 29 state grant and loan programs related to water, wastewater, stormwater, solid waste and buildings administered by the state departments of Ecology; Health; and Community, Trade and Economic Development.
- Most of the 29 programs are aligned with one or more umbrella state policies (the Growth Management Act, the State Economic Development Plan, climate change initiatives or Puget Sound Partnership).
- Programs (approximately one third) that are required to comply with federal policy or administrative direction have integrated that federal direction into all elements of their programs.

What could be Improved

- The inventoried 29 state grant and loan programs are guided by a wide, sometimes inconsistent, array of stated and unstated policy goals. Some programs have too many policy goals to reasonably attain.
- Nearly all of inventoried state grant and loan program's award systems explicitly emphasize alignment with stated policy goals in their point system and/or eligibility criteria. One quarter of awards meet 74% or less of possible award points. Programs with awards receiving the least points included Building for the Arts, Youth Recreation Facilities, Local Infrastructure Financing Tool, CERB Job Development, Community Development Block Grant, Centennial Clean Water Fund and Water Pollution Control Revolving Fund. Eleven programs have no point rating system, including Capital and Operating Budget Special Projects.
- The state does not have a method for routinely reviewing and adjusting public infrastructure policy goals for individual programs over time.
- The state does not have a method in place for aligning state grant and loan programs to support statewide objectives either within an infrastructure system (e.g., water programs) or across infrastructure systems (e.g., growth management). Any adopted method should include clear articulation of statewide policy goals and identification of progress benchmarks in order to provide consistent statewide direction.
- There is not a strong connection between state policy goals, state infrastructure assistance programs and local government capital facility financing plans required by state law. Local plans identify infrastructure capacity issues that are required to be addressed in order to support statewide growth management and economic development objectives.
- The state does not have a process in place that facilitates prioritization of public infrastructure investments.
- Local reliance on state grants and loans, as reflected in projected funding in capital facilities plans, exceeds availability of actual funding. This is in part because there is no way of knowing how much funding will be available from the state. Without accurate information

on funding, it is difficult for local governments to know the magnitude of adjustments that need to be made to land use plans or other strategies and policies.

- Returns expected from state investment are not clearly identified across programs. Potential returns could include:
 - Expected incremental statewide policy benefits or outcomes.
 - Leveraging of non-state project funding adjusted based on community means.
 - Direct or indirect growth multiplier in state and/or local tax revenue.
 - Economic multipliers that could include both construction and permanent employment.
 - Avoided future public infrastructure costs as a result of demand or resource management initiatives.
- State assistance decisions and overarching state policies such as growth management or Puget Sound Water Quality are not aligned. Better alignment could potentially occur by emphasizing the relative contribution a project makes to meeting state or local policy goals in addition to whether or not a local entity complies with related state regulations.

Recommendations

- Create a coordinated state plan that includes statewide policy goals, defines expected statewide incremental policy outcomes, needs/gap analysis and a statewide financing plan. This plan would need to be updated at least every 10 years or whenever major changes are made in regulatory programs effecting infrastructure investment.
 - As part of the state plan, determine the types of measures of return on investment (ROI) to the state that are of the greatest value given the state's policy objectives. Use these measures for reporting and, when appropriate, in evaluating projects or statewide investment priorities.
 - Periodically review each grant and loan program for consistency with, and adjustment to, the statewide plan. Adjust the number or focus of program policy goals as appropriate.
- Consider developing a single or consistent state process or budget mechanism that provides a method for statewide prioritization of public infrastructure assistance.

Definition of Public Infrastructure Needs and Funding Gap

What's Working

- Five of 29 state grant and loan programs reported a method for assessing public infrastructure funding needs statewide.
- Nearly all local governments planning under the Growth Management Act define public infrastructure requirements with a multi-year funding plan and update these plans on a regular schedule.¹⁸
- Most special districts operating water and sewer utilities are required to define public infrastructure requirements in facility master plans submitted to the state.¹⁹

What Could Be Improved

- Very few inventoried programs have a method of determining statewide need and the statewide funding gap for the public infrastructure they fund that goes beyond estimating the number of unfunded applications.
- Assessments of statewide public infrastructure need and the statewide funding gap have historically been undertaken about once every 10 years with varying degrees of success. A current assessment of 2009 to 2015 public infrastructure need is not available.
- Various methods of estimating additional state funding needs for the study programs beyond existing appropriation levels show a range of potential additional grant funding. State grant funding estimates vary from \$790 million to \$504 million for six years based on a historical benchmark of 18% state contribution to public infrastructure construction and limited infrastructure needs data. Additional loan funding estimates vary from \$1.12 billion to \$1.23 billion (face value of loans) using a historical benchmark of 40% state loan financing for public infrastructure construction.
- The gap between funding needs and local and state funding availability is growing, especially in the areas of roadways and drinking water.²⁰
- Public infrastructure capacity issues are the most acute for cities in transportation, parks and water and for counties in transportation, public safety, sewer or parks.²¹
- Special districts' concerns focus on the cost of compliance with state and federal standards.²²

Recommendations

- Establish a registry of current local capital facility and financing plans to provide continuous information on need and the basis for 10-year state plans.
- Require inclusion of the number and cost of projects completed in the last local planning cycle in local capital facility plans to provide local and state method of gauging progress.

¹⁸ *Meeting the Growth Management Challenge.*

¹⁹ *Ibid.*

²⁰ *Ibid.*

²¹ *Ibid.*

²² *Infrastructure Programs, Part III.*

- Consider allocation of a larger proportion of state public infrastructure assistance to initiatives, programs or projects that reduce the longer-term cost of public infrastructure by reducing demand or creating more sustainable resources.
- Consider allocation of a larger proportion of state public infrastructure assistance to encouraging new or expanded regional public infrastructure solutions that take advantage of scale and reduce the overall public cost of infrastructure.

Grant and Loan Program Accountability, Efficiency and Effectiveness

What's Working

- Most of the 29 grant and loan programs have at least four out of the five program accountability elements outlined in this legislative study proviso in place, an improvement since 2005.
- Significant integration and consolidation between programs has already occurred through joint administration, joint or common state assistance applications, single state board oversight of related programs, and interdepartmental contracting.
- Over the last five years state grant and loan programs have helped to reduce the future cost of public infrastructure by funding a small number of local initiatives to improve the sustainability of water resources or reduce demand for expansion of infrastructure capacity.
- The 29 state grant and loan program review identified some potential best practices that may be helpful in improving the performance of the entire system.

What Could Be Improved

- Policy makers and applicants perceive that the current public infrastructure grant and loan system requires applicants (and policy makers) to “hunt” through an overly complex system of potential funding sources to provide the “package” of financing needed to execute public infrastructure projects – at a significant cost in time and money to tax payers.
- Funding is not readily available to meet project construction schedules in order to minimize costs to the public that can occur with delay and longer project completion times. Delay of two years in assembling project “funding packages” for each billion dollars in public infrastructure was found to cost as much as the total of study program state grant assistance for five years (\$670 million).
- The number and cost of applications/awards of state assistance for the same project is inefficient for recipients and the state. This is especially true for small jurisdictions with limited resources in the infrastructure categories of water and wastewater where multiple awards are most frequent.
- Programs could be consolidated even further by building on the progress that has already been made and the models that are being used to consolidate grant and loan program administration through contracting between departments and pooling or joint administration of programs.

- Most programs have four of five accountability elements requested by the Legislature in place (policies directing award criteria, award criteria, performance measures, feedback on policy implementation, and needs assessment). The pieces that are the least developed or consistent with policy direction are: performance measures, feedback and needs assessment.
- Legislative proviso projects in the capital and operating budgets have increased over time to represent the largest grant “program” among the 29 programs reviewed. These projects as a whole were subject to the least number of accountability elements (state policies directing award criteria, application of award criteria, performance measures, feedback on state policy implementation, and needs assessment).
- Statewide performance tracking by system (in contrast to individual program) is weak. Among the things we don’t know:
 - Number of public infrastructure projects completed on time as outlined in local capital facility plans supporting growth management and economic development;
 - Public infrastructure investment that allows or facilitates growth outside urban growth areas (UGAs) with state dollars;
 - How much funding is going to designated high-priority geographic areas for investment;
 - Return on investment indicators tracked and aggregated.
- It is unclear whether best practices are identified and used to make system improvements. Potential best practices that were identified include:
 - Methods of sharing administrative costs within individual departments;
 - Statewide needs assessment methods;
 - Award systems with a clear policy focus;
 - Policy goal related performance measurement;
 - Common project data and definitions to facilitate reporting and comparison within and across programs.
- With a few notable exceptions, regional projects that serve multiple jurisdictions are subject to the same funding maximums as an individual jurisdiction, which provides a disincentive to regionalize.

Recommendations

- Determine methods of reducing real costs of program participation to recipients. Target issues that increase overall project costs the most, such as expanded project execution timelines and long-term financing costs.
- Continue program consolidation and contracting efforts among programs and across departments. Target programs making the most multiple awards.
- Revise funding systems to provide incentives (or at least eliminate disincentives) for regional and consolidated provision of local government services.
- Address the weakest program accountability elements for existing grant and loan programs: performance measures tied to policy goals and needs assessment.

- Improve statewide performance reporting by infrastructure system.
- Use best practices within and across departments to inform efforts to improve grant and loan program outcomes.

Funding Local Public Infrastructure

Study Question 6

Should there be a change in the proportion of state assistance provided by grant, loan or bond support based on the relative cost/benefit of each to the state or to various types of local governments?

Financial Comparison

Appendix C contains a financial comparison that was developed by Seattle-Northwest Securities (financial advisor to the state) with input from Foster Pepper PLLC (bond counsel to the state), as facilitated by the Office of the State Treasurer. The financial comparison analyzes the relative costs/benefits to the state and to various sizes of local governments of traditional municipal bond financing, grants, low interest state loans and two types of state sponsored municipal bond programs. This analysis looks only at the financial aspects of these programs and does not factor in the government policy costs/benefits or the value of the nature of various streams of financing. For example, the relative value to local governments of continuing access to low-interest loans in a revolving-loan program which allows the same funding to be used repeatedly over time is not factored into the comparison.

Impact of Changes in Worldwide Financial Markets

The financial comparison was completed at a time (October 2008) of tremendous turmoil in worldwide financial markets, including the municipal bond market. The comparison does not assume or predict how the municipal bond market will look or behave in the short or longer term. Instead, the comparison is built on historical information – five to 10 years of historical data (that does not include 2008) and 20-year financial indexes.

There are a number of recent events that may shift or modify the historical behavior of the municipal bond market as it applies to Washington local governments into the future. The assumptions in the comparison therefore will need to be evaluated in light of any changes that may occur. For example, over the five years prior to 2008, 40 percent of local government bond issues (mostly issuers whose underlying credit was A or lower level Aa) in Washington were insured by bond insurance to increase their creditworthiness and reduce interest rates. Recently the number of AAA bond insurers has decreased dramatically, which essentially makes bond insurance unavailable to many issuers. Whether similar credit support will be available in the future or whether the current credit rating system will be modified and result in changes in the historical cost of municipal bonds remains to be seen.

Why Was the Financial Comparison Done?

The proportion of total public infrastructure state assistance that is provided by loan, grant, bond interest rate subsidies or other credit support has been determined over time by a series of independent decisions which have accumulated into the system we have today. The state has not

evaluated, like an individual investor might evaluate their investment portfolio, the overall system to determine whether the state may be able to get better “value” by allocating the same money it is investing in public infrastructure in a different way. Just like an investment portfolio, value and risk can be judged in a number of different ways considering both financial (cost/benefit) parameters and desired policy outcomes. Only the financial parameters are considered here and need to be balanced with risk and desired policy outcomes in decision making.

The study proviso specifically asked for a financial analysis that addressed:

- Whether the cost of private market borrowing can be reduced for jurisdictions with higher cost.
- Identification of the benefits from state grants and interest rate subsidies to rate payers and local tax payers.
- A comparison of the terms of a sample of low-interest loans provided to public infrastructure projects with the terms of private market borrowing that the jurisdictions would have been able to obtain. The sample of loans should include different types and sizes of projects and jurisdictions.

In order to answer these questions, the financial comparison in Appendix C was structured to evaluate the cost/benefit of various types of state assistance and compare them to the cost/benefit of standard private market borrowing (long-term municipal revenue bonds) for three sizes of jurisdictions. Municipal bond financing was therefore compared to existing state assistance programs (grants and low-interest loans) and generic forms of state assistance that are being piloted in Washington (bond interest rate buy-downs) or operated in other states (municipal bond banks). The costs/benefits to the state *and* to local governments (including their utility rate and tax payers) were analyzed. A “financial efficiency factor” was developed for each type of assistance that depicts the relationship between the cost to the state of a given option and the benefit to a given size local government and its tax/utility ratepayers.

Instead of using a small sample of state assistance provided to various size jurisdictions, the data from five years of bond, grant and loan transactions was analyzed to determine the typical size loan or grant (and bond issue) for three sizes of jurisdictions: local governments of 50,000 population or greater, local governments of 50,000 to 10,000 population and local governments of less than 10,000 population.

The types of financing for public infrastructure that are evaluated can be defined as follows:

Municipal Revenue Bonds: Long-term borrowing to finance the construction of capital improvements backed by local government revenue usually collected monthly or quarterly from utility ratepayers or other types of fee-for-service clients. Local governments generally pay equal payments of interest and principal over a set number of years. Interest is generally at a fixed rate for the entire borrowing period.

State Low Interest Loans: Long-term contract loans made by the state to local governments to finance the construction of capital improvements. The interest rate is fixed for the loan period (usually 18 to 30 years) at a level that is below the interest rate that would be paid in the municipal bond market. The state’s largest loan program has three standard rates: 2 percent for larger borrowers, 1/2 of 1 percent (0.05%) for medium-size borrowers and 1/4 of 1 percent (0.025%) for smaller borrowers.

Payment schedules emphasize maximizing the early payment of principle to further minimize interest costs.

State Grants: State grants are payments to local governments made by the state to offset a portion of a capital project's total cost. The grant recipient signs a grant agreement or contract and as a part of the agreement pays the balance of the cost of the project from other sources. The recipient is not required to repay the grant unless they violate the contract.

The majority of state grant resources in the 29 programs covered by this study come from the issuance of state of Washington long-term bonds. The cost to the state of the grants therefore includes both the face value of the grant and the interest payments on the bonds issued to make the grant payments.

Interest Rate Buy-downs: The generic state interest rate buy-down program that is used in the analysis is drawn from a pilot project being conducted at the request of the Legislature by the Public Works Board. A select number of loan applicants that are not able to be funded through the Public Works Assistance Account loan programs are provided a one-time contract payment. The amount of the payment is based on the difference in interest cost to the local government between a Public Works Board loan and the interest rate they are able to obtain in the municipal bond market. Accordingly, if the local government's bond interest rate is 4.5 percent and its loan interest rate would have been 0.5 percent, then the value of the 4 percent difference in interest payments is paid up front to the local government to reduce the ultimate cost of borrowing. The local government is, in essence, able to make a larger "down payment," which reduces the annual borrowing cost to level it would be if the interest rate on borrowing the full amount would have been 0.5 percent.

State Bond Bank: State bond banks operate in a number of states in the United States and in countries around the world. Washington does not have such a program at present. The general concept is to assemble groups of small local government borrowers who may not have low-cost access to the municipal bond market, and issue larger bond issues on the group's behalf to increase access and reduce the cost of borrowing for participants. States vary in the level of credit enhancement (guarantees or various forms of credit backing) that are provided to the bond bank. The example evaluated for Washington backs the bond bank's obligations with a limited pre-funded reserve for debt service payments but does not back the bond bank's obligations with the State of Washington's full faith and credit (agreement to pay debt service from state taxes). The state may or may not commit to replenish the reserve if it is drawn down to cover a default by a borrowing jurisdiction. When the bond bank is backed by a reserve without a replacement commitment, it is assumed that the bonds issued would likely not be included as part of the fixed calculation of the state's credit limit. If the state were to commit to replenish reserve fund draws, there would be an increasing possibility that the state has backed the bond bank with the state's credit (albeit indirectly). How to fund the debt service reserve is a policy decision.

Costs and Benefits

Relative to municipal bonds, the financial comparison ranks the five types of state assistance in the order of financial efficiency (state costs compared to local benefits) for each \$1 million dollars of state assistance. Below is a discussion of the outcome of the financial evaluation by jurisdiction size.

Large-size jurisdictions (50,000 population or more) receive the most financial benefit from a grant followed by a low-interest loan or an interest rate subsidy (about equal). A bond bank would not

increase access to private markets for most jurisdictions in this group and creates the least benefit among the options evaluated. State costs are the highest for large jurisdictions when grants are used as assistance, followed by low-interest loans and interest rate subsidies. Interest rate subsidies are less costly to the state for this group when low interest loan interest rates are at 2 percent. If low-interest loan rates are fixed at 2.28 percent below market rates (4 percent in the evaluation instead of 2 percent), then the state cost for low-interest loans would be significantly less (\$200,000 per million versus \$460,000 per million).

Among the programs evaluated for this group, efficiency is highest for an interest rate subsidy program when loan rates are at 2 percent. When loan rates are at 4 percent (2.28 percent, or roughly 33 percent below the private market) efficiency becomes higher for low-interest loans.

Medium-size jurisdictions (50,000 to 10,000 populations) receive the most financial benefit from a grant followed by a low-interest loan or an interest rate subsidy (about equal). A bond bank would not increase access to private markets for many jurisdictions in this group and creates the least benefit among the options evaluated. State costs are the highest for medium-sized jurisdictions when grants are used as assistance, followed by low-interest loans and interest rate subsidies. Interest rate subsidies are less costly to the state for this group when low-interest loan rates are at 2 percent. The state cost declines if low-interest loan rates are fixed at a higher level. Among the programs evaluated for this group, efficiency is highest for an interest rate subsidy program when loan rates are at 2 percent. When low-interest loan rates are at 3.5 percent (roughly half of market rates), the low-interest loan program becomes more efficient than interest rate subsidies.

Small-size jurisdictions (less than 10,000 populations) are generally unrated and have limited access to the municipal bond market. Small jurisdictions receive the largest number of individual grants and loans among all three groups. Small jurisdictions receive the most financial benefit from a grant followed by a low interest loan or an interest rate subsidy (about equal). However, interest rate subsidies are not generally effective for small borrowers because they have limited access to the municipal bond market. The size of the low-interest loan benefit relative to private borrowing is larger for this group than the other two and since access to municipal bonds is limited state programs provide the primary source of borrowing for small jurisdictions. A bond bank would increase access to private markets for many jurisdictions in this group and creates some benefit among the options evaluated, however not as great as grants or loans. State costs are the highest for small jurisdictions when grants are used as assistance and the lowest for a bond bank program. The cost to the state for low-interest loans is higher than interest rate subsidies but again few small jurisdictions have access to the market. Among the programs evaluated for this group efficiency is highest for grants followed by loans and a bond bank (about equal). When low-interest loan rates are at 2 percent (current rates are 0.25 percent) the low-interest loan program becomes more efficient than grants for small jurisdictions.

Table 33: Financing of Small Construction Projects¹ by Jurisdiction Size²

All Jurisdiction Types

	Jurisdiction Size	Bond (>\$1,500,000)	Grant (>\$1,500,000)	Loan (>\$1,500,000)	Total (>\$1,500,000)	Overall Total	Percent Small (>\$1,500,000)
Number	Large	14	300	38	352	580	61%
	Medium	23	114	76	213	392	54%
	Small	81	180	236	497	651	76%
	Total	118	594	350	1,062	1,623	65%
Amount	Large	\$11,161,639	\$121,320,036	\$30,644,477	\$163,126,152	\$4,460,252,617	4%
	Medium	\$13,030,341	\$44,146,050	\$53,485,261	\$110,661,652	\$1,197,211,819	9%
	Small	\$47,816,185	\$66,445,509	\$116,485,091	\$230,746,785	\$811,085,654	28%
	Total	\$72,008,164	\$231,911,595	\$200,614,829	\$504,534,588	\$6,468,550,090	8%

¹ Smaller projects (under \$1,500,000) with limited access to other forms of financing.

² Large jurisdictions include populations over 50,000, medium jurisdictions ranged from 10,000 to 49,999, and small jurisdictions include populations under 10,000.

Potential Changes to the State Public Infrastructure Investment Portfolio

Currently state policy objectives and any policy conflicts are balanced or resolved at the program level and implemented through individual program decisions. The Legislature influences funding allocations for individual programs using a number of methods with no uniform oversight process.

The state’s current public infrastructure investment portfolio for the 29 study programs emphasizes decreasing the cost of recipient borrowing through low-interest loans. Fifty-eight percent of state public infrastructure resources are focused on loans and 24 percent on grants. The final 18 percent is invested in other ways – reducing bond interest rates for private sector investment in infrastructure or leveraging tax revenue to finance infrastructure.

Small local governments (population less than 10,000) are the largest client group of the study programs and are more likely than other groups to have multiple awards for the same project (21 percent, see Table 17). These local governments have the least access to borrowing through municipal bonds and have the highest proportion of fiscal stress.

Changes to the existing investment portfolio for the 29 study programs could take a number of forms:

- Revision in the relative amount of assistance provided by loan versus other means.
- Revision in the proportion of assistance provided various size jurisdictions.
- Revision in the cost to the state of providing assistance.
- Revision in the amount of benefit provided to local jurisdictions.
- Potential changes in the amount or type of assistance in the event credit markets reduce access or increase the cost of borrowing for jurisdictions that heavily rely on municipal bonds for long term public infrastructure financing.

Proportion of Loans Versus Other Forms of Assistance

Very-low-interest loans are the primary method of assistance provided by the 29 study programs. Loan programs are the most effective when there is an ongoing stream of revenue available for repayment of the loan, as is the case for many local utilities. The efficiency of state loan programs (state cost relative to local benefit) can be improved by increasing loan interest rates relative to municipal bond market rates for large and potentially medium-size jurisdictions. Grants and interest rate subsidies are the most efficient assistance programs. However, these programs' resources are not renewed over time, as is the case with revolving loans. Increasing the proportion of the state's investment portfolio that is provided by grants or interest rate subsidies would be dependent on available resources or the willingness of the state to convert renewable loan resources to one-time grants or interest rate subsidies.

Jurisdiction Size

Over the five-year study period, a larger proportion of the dollar amounts of state grants and loans have gone to larger jurisdictions (38 percent) than to medium (31 percent) and small jurisdictions (31 percent). Since small jurisdictions are more dependent on the state for long-term public infrastructure financing, providing state assistance to small jurisdictions prior to offering financial assistance to jurisdictions with access to other financing should be considered.

How policy benefits are weighed will need to be determined, but when policy benefits are equal, providing assistance to small jurisdictions would help equalize access to and the cost of long-term financing across the state. An alternative may be to increase access to private markets for small jurisdictions through a state bond bank program.

Reducing the Cost to the State of Infrastructure Assistance

Reducing the overall cost to the state of providing assistance to recipients could be best accomplished by one or more of the following:

- Reducing the proportion of assistance provided by grants,
- Increasing interest rates charged on state low interest loans,
- Providing a larger proportion of state assistance through interest rate subsidies,
- Increasing the proportion of assistance going to projects that directly or indirectly increase tax revenue to offset a portion of state costs.

Based on the financial comparison, decreasing the cost of program administration has a relatively small impact on the state's overall costs.

Study Question 7

Should the state consider providing credit enhancement for local public infrastructure bonds or a method of pooling bond issues to reduce the cost of borrowing for all local governments or local governments with specific characteristics?

As discussed above, considering a state bond bank to increase access to the private bond market may benefit small jurisdictions that are currently dependent on state loan programs for long-term public infrastructure financing. The state's low-interest loan programs assist smaller jurisdictions to reduce the relative cost of borrowing. Smaller jurisdictions pay approximately \$88,000 more per

million dollars of private borrowing (in present value terms) than larger jurisdictions when bond financing is available. Public Works Board low-interest loans reduce borrowing costs by \$597,000 per million dollars.

A bond bank, as assumed in the financial comparison, would provide a reserve fund to back debt service payments in order to improve the credit worthiness of bond bank debt. The reserve fund would likely be capitalized by state revenue. Some states provide additional types of credit backing to bond bank debt, including the “full faith and credit of the state.” In Washington, a state credit backing that included the “full faith and credit of the state” would mean that the debt issued by the bond bank would be counted toward the state’s debt limit and may require a constitutional amendment. It was therefore assumed that only a reserve fund would be established to back the bond bank’s debt in addition to the obligations of the local governments to pay debt service from utility rate or tax revenue.

At this writing, municipal bond insurance is no longer readily available to Washington local governments. Over the five study years, 40 percent of all local government bond issues for purposes covered by this study obtained bond insurance to reduce interest costs. Bond insurance is considered a credit enhancement. It is unclear whether like types of credit enhancements will be available in the private market in the foreseeable future. The state may wish to explore at a future date providing a substitute credit enhancement program through Public Works Board resources if such enhancements would benefit the state’s municipal revenue bond issuers.

Study Question 8

Should the state consider issuing bonds against a portion of its loan fund capital in order to make additional assistance available for public infrastructure?

Using debt to increase available capital is a common method of increasing funds available for the capital improvement requirements of governments and private corporations. The state of Washington has several large pools of outstanding loans made to local governments over the last 20 or more years to pay for public infrastructure (see table below).

Table 34: State of Washington Public Infrastructure Loan Portfolio, 2008

Program	Outstanding Loans	Percent of Total Outstanding Loans	Average Loan Interest Rate
Public Works Board ¹	\$2,147,156,000	65.2%	0.94%
Drinking Water State Revolving Fund ¹	\$226,004,000	6.9%	1.82%
Water Pollution Control State Revolving Fund ²	\$879,028,000	26.7%	2.3%
Community Economic Revitalization Board ³	\$39,508,679	1.2%	2.4%
Outstanding Loan Total	\$3,291,696,679	100%	1.38%

¹ As of July 10, 2008, face value of loans outstanding.

² As of September 30, 2008, face value of loans outstanding.

³ As of September 2008, face value of loans outstanding.

Note: The Rural Washington Loan Fund was also covered by this study but is not included in the table. As of June 30, 2008, face value of outstanding loans to private business for operations totaled \$4.9 million at an average interest rate of 6.37 percent. Generally these loans do not finance public infrastructure.

All states have revolving loan funds similar to Washington's Drinking Water and Water Pollution Control revolving funds that were started years ago using federal funds. Nationally, according to the federal Environmental Financial Advisory Board in a study published in 2006, 27 of 50 states issued bonds against at least part of their clean water state revolving fund capital, and 20 states issued bonds against at least part of their drinking water state revolving fund capital. States that have used bond financing have been able to lend from 35 percent to 160 percent more than states that do not issue bonds. When bonds are issued against a portion of the fund assets, the resulting market interest rate has to be absorbed into the balance of the fund. This increases the overall borrowing costs to lenders and/or requires that a portion of the fund assets are invested at rates above lending rates but below the bond interest rate to comply with federal arbitrage requirements. So if direct loans are made at an average interest rate of 2.3 percent and interest rates on the bonds issued on part of the fund capital are at 4.5 percent, then new loans would have to be made at a higher rate, less investment income, in order to pay off the bonds in the long run. Therefore, while more funds are available, the average loan interest rates may be marginally higher. In addition, both of these federal programs contain requirements that the loan funds be sustainable. Sustainability means that all costs, including administrative, must be covered by loan earnings in order to preserve fund equity at the same or higher levels in future years.

In order to implement this option in Washington, the loan funds' statutory language would need to be amended to add or authorize bond financing. All loan funds could participate, including the Public Works Assistance Account. Conservative use of bond financing in all revolving loan funds (35 percent level) is estimated by this study's staff to generate approximately \$500 million in additional loan assistance over 10 years.

Funding Conclusions and Recommendations

What's Working

- Under normal market conditions, municipal bond financing at tax exempt interest rates is readily available to local governments with credit ratings that are equal to or higher than AA. These interest rates are generally below what a private business would pay for a long term loan. Sixteen percent of local government capital projects (194 out of 1,213) that were financed with bonds, state loans or grants fell in this category during the five-year study period.
- Until 2008, municipal bond financing has also been readily available for local governments with credit ratings lower than AA to finance \$1.5 million or larger projects through the use of bond insurance. Sixty seven percent (\$3 billion) of the \$4.6 billion in bond issues during the five-year study period were insured.
- The majority of state low-interest loans went to local governments with strong management practices and resources. These elements are also considered by bond rating agencies and are required for bonds with higher credit ratings.
- For smaller capital projects (less than \$1.5 million), long-term financing is available only to creditworthy issuers through a small number of state banks and state low-interest loans. Smaller capital projects represented 65% of all capital projects over the study period.

- Thirty five percent of the total number of state grants and loans in the last five years have gone to fiscally distressed local governments. About 60 percent of all local governments in Washington are classified as fiscally distressed.

What Could Be Improved

- Local governments do not have a reliable private sector mechanism for financing public infrastructure projects needing \$1.5 million or less in financing.
- Local governments with bond ratings lower than AA may not have a reliable mechanism for reducing the cost of bond financing for projects over \$1.5 million since the viability of bond insurance is in question.
- Many states across the country have accelerated the availability of lower-interest state loans for public infrastructure through issuing bonds against a portion of their loan portfolios. This method of raising loan capital has not been used or evaluated in Washington.
- Washington has a successful program of pooling equipment and real estate financing for local and state government to gain better interest rates and market access. This same concept has not been evaluated for small public infrastructure projects in Washington.
- The state public infrastructure financing system is relatively inflexible and does not adjust as municipal bond market conditions or interest rates change.

Recommendations

- Prior to adoption of the first state public infrastructure plan, and as part of the planning process, align the emphasis of state *grant* programs and state policy goals so that state assistance goes first to:
 - smaller projects with limited access to other forms of financing,
 - communities of limited means,
 - projects required of communities of all sizes to meet newer environmental standards, and
 - projects that emphasize demand or sustainable resource management.
- Prior to adoption of the first state public infrastructure plan, and as part of the planning process, consider aligning state *loan* programs and state policy goals so that state assistance goes first to:
 - smaller projects with limited access to other forms of financing,
 - communities of limited means,
 - projects required of communities of all sizes to meet new environmental standards,
 - projects that significantly or strategically further statewide public infrastructure, growth management or economic development goals,
 - projects that support new or expanded regionalization,
 - projects that implement capital components of demand or sustainable resource management initiatives.

- Evaluate and, if feasible, implement through changes in state statute, accelerating the availability of lower-interest state loans for public infrastructure through issuance of bonds against a portion of existing loan portfolios.
- Evaluate creating a state program that strengthens access to the municipal bond market at lower interest rates for local government borrowers. Such an initiative could be patterned after the state's current local government equipment borrowing pool. Instead of the general tax authority of the state, the pool could be backed by Public Works Assistance Account reserves. The pool may be even more effective if it is coupled with an expanded municipal bond interest write-down program for smaller borrowers.
- Provide a method (statutory and/or structural) of reviewing and adjusting, if necessary, state loan terms and policies when private borrowing conditions significantly change.