Six Year Comprehensive



Water Program

2011-2016

Prepared for:

City Council

February 7, 2011



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Date Printed: January 25, 2011

I. Introduction

The City of Spokane Comprehensive Plan

The first planning activities of the City of Spokane (City) in the early 1900s were centered on parks and transportation. From these beginnings, planning in Spokane has continued to grow in significance and usefulness. In 1968, the City adopted the first land use plan as one element of the comprehensive plan. The *1968 Land Use Plan* was updated in 1983. Over the years, topics in the comprehensive plan have expanded to include parks and open spaces, bikeways, water and wastewater facilities, shorelines and individual neighborhoods.

In 1990, the State of Washington enacted the Growth Management Act (GMA) that established rules for communities (such as the City of Spokane) to accomplish community planning. The City's most recent planning effort, the 2000 Comprehensive Plan (adopted in 2001 and updated in 2006), complies with the GMA rules and consists of goals, policies, maps, illustrations, and implementation strategies that state how the City should grow physically, socially and economically. The City's planning effort is termed "comprehensive" because it identifies the community's long-range plans for growth. The 2000 Comprehensive Plan consists of over 30 official documents that encompass all aspects of city activities.

Importantly, the GMA includes two provisions to ensure that the City follows Comprehensive Plan directives:

- 1. The City must regulate land use and development consistent with the plan; the zoning code, subdivision code, environmental ordinances, and the building code must follow the plan's intent.
- 2. The City must make capital budget decisions and capital project investments in conformance with the plan.

These two GMA rules give the new *Comprehensive Plan* a much higher level of importance in managing and guiding the City's growth and development than previous editions of the plan.

Capital Facilities Planning

As defined in the *Comprehensive Plan*, capital facilities and utilities support the physical development and growth of the city. Section 1.1 of the Comprehensive Plan states that the

"...city must make capital budget decisions and capital project investments in conformance with the plan."

Further, it states,

"In addition to ongoing needs for repair and maintenance, these lists of capital facilities include the immediate improvements necessary to support growth, in conformance with the Comprehensive Plan."

The *Comprehensive Plan* strives to contain and manage sprawl, and encourages investment of infrastructure in support of the managed growth areas, including focusing high intensity growth in specified Centers and Corridors and infill development in other areas of the City. Chapter 5--Capital Facilities and Utilities (CFU) of the *Comprehensive Plan* is intended "to guide how these crucial services coordinate with and support the future growth and development of Spokane." Spokane Horizons volunteers identified <u>Visions and Values</u> as being important in relation to Spokane's current and future growth. Those visions and values identified in Chapter 5 concerning CFU are:

- Public facilities and utilities will be provided concurrently with a growing population to meet the safety, utility, transportation, educational and cultural needs of residents.
- Ensuring good parks, schools, libraries and streets in the neighborhoods.
- Providing services and facilities as growth occurs.

The City's capital facility programs are part of the City's overall planning efforts as described in the table below:

Summary of Planning Efforts - City of Spokane					
Planning Effort	Period	Description			
Six-Year Comprehensive Programs	6 Year	Prepared annually to support and coordinate with the other planning efforts.			
Infrastructure Financial Planning	20 Year	Updated annually by City Utility Departments to balance rates and fees with estimated costs for maintenance and new construction.			
City Comprehensive Plan	20 Year	Updated every 5 years (last update in 2006) this document is mandated by State law to direct growth, development and expansion.			
Strategic Infrastructure Planning	50 – 100 years	The City does not presently have a Strategic Infrastructure Plan (SIP). Once created, the SIPs are usually updated every 5-10 years. The SIPs are useful because much of the underground infrastructure has an expected 50-100 year life.			

Goals and Policies

Goals and policies in Section 5.4 of the *Comprehensive Plan* provide details for planning and decision-making. In order to fully comply with the *Comprehensive Plan*, capital sewer, water, and street facilities planning must acknowledge and address at least four simultaneous goals:

- 1st. Adequate infrastructure for infill development must be provided.
- 2nd. Facilities must be constructed within the Urban Growth Area (UGA),
- 3rd. Infrastructure not to the detriment or in lieu of other development that is supportive of and necessary for designated Centers and Corridors.
- 4th. Existing facilities and infrastructure must be maintained and upgraded as needed.

The Six-Year Comprehensive Programs

The City prepares and publishes six-year capital improvement programs annually for street, water, stormwater and sewer projects. They provide a blueprint for improving the City's infrastructure in a rational, coordinated, cost-effective manner. Each of the five distinct purposes of the Six-Year Comprehensive Utility Program is used as summarized in the table below:

Purposes of the City's Six-Year Utility Program						
Purpose	Description					
Efficiency	The City Utilities are "enterprise" activities that are managed like many successful businesses. A utility builds, operates and maintains infrastructure (pipes, buildings, pumps, etc.) to provide a service to customers. The fees charged to customers fund the utility activities, so that no City taxes are used to pay for utility operations. The Six Year Program provides the planning structure to construct and maintain the infrastructure in an orderly manner.					
Fiscal Prudence	The 20-year utility financial planning period and the Program are directly related in an attempt to promote a predictable and even cash flow for the Utilities. By matching improvement projects with cash flow and revenues, peak capital spending can be minimized; projects can be spread out to minimize costly short-term borrowing; and large fee increases can be avoided.					
Low-Cost Supplemental Funding	Grants and low interest loans are available from federal and state agencies for utility infrastructure improvements. These agencies require that projects proposed for funding are part of an approved capital improvement program, and the Program satisfies that requirement.					
Program Coordination	All Programs are closely coordinated with each other. This coordination allows efficient installation of utility improvements in conjunction with street projects and prevents costly multiple construction projects in the same area. In addition, each separate project is shared with Spokane County and state agencies to ensure that other public projects are consistent with City projects.					
Public Information	The Program is used by the public. Information contained in the Program supports redevelopment, private construction projects, and other City economic development activities.					

Six-Year Programs Annual Update Process

The Six-Year Comprehensive Sewer, Water and Street Programs are updated annually. New projects are added and completed (or cancelled) projects are removed from the programs during the annual update. Projects are added based on a need identified by one or more of the following sources:

<u>Utility maintenance and operations staff</u> identify infrastructure needing immediate replacement or upgrade based on observed conditions.

Adopted facility and management plans list projects needed for continued system operation.

<u>Other City projects</u> (such as street or bridge work) create an opportunity for cost-effective upgrades or facility replacements.

<u>Planning documents</u>, such as the City Comprehensive Plan, provide guidance on expansion and growth related projects.

<u>Regulatory agencies</u> (such as the Washington Department of Ecology and the Department of Health) have ordered improvements to the infrastructure system for public health and safety.

Updating the Six-Year Comprehensive Programs is an annual activity that begins immediately after the most recent plan is adopted. The adoption of the utility programs update is scheduled to compliment the City's budget process. A summary of the process is provided below:

City of Spokane Six-Year Programs Schedule						
Activity	Street Program	Utility Programs				
Collect information from City staff & agencies	July-December	November-April				
Prepare rough draft (Draft 1) of Program for internal City review	January	May-June				
Prepare working draft (Draft 2) for coordination with budget; start environmental process (SEPA)	February-March	July				
Working draft presentations: Public Works Committee; Plan Commission workshop and hearing	April-May	August-September				
Pre-publication draft (Draft 3) is presented together with the Plan Commission recommendation to City Council	June	October				
Publish complete and approved Program	July	November				

<u>Note</u>: State law requires the six-year capital *street* program be completed by June 30 of each year.

Capital Projects

Criteria were established to distinguish maintenance projects from the capital projects included in the Six-Year Comprehensive Programs. Each project meets the following criteria:

- 1) The completed value of the project is at least \$70,000.
- 2) The expected useful life of the project is at least five years.
- 3) The completed project results in a physical fixed asset.

Further Information

For further information on the City's Six-Year Comprehensive Programs, please contact:

John Mercer, AICP, Manager, Capital Programs and GIS Engineering Services Department City of Spokane 808 W. Spokane Falls Blvd. Spokane, WA 99201-3334 (509) 625-6065 jmercer@spokanecity.org



RESOLUTION <u>2011-0008</u>

WHEREAS, pursuant to the requirements of WAC 365-195-315 (as authorized by RCW 36.70A.190, Laws of the State of Washington) the City of Spokane has prepared a revised and extended Six-Year Comprehensive Water Program for the ensuing six years, 2011 through 2016; and

WHEREAS, the Spokane City Plan Commission, on December 9, 2010, following a public hearing, found the 2011-2016 Six-Year Comprehensive Water Program to be in full conformance with the City's Comprehensive Plan; and

WHEREAS, the City of Spokane utilizes state and federal grants and low-interest loans as appropriate to supplement its financial resources and such anticipated funding is incorporated in the Six-Year Comprehensive Water Program, 2011-2016; and

WHEREAS, pursuant to the above law, the City Council of the City of Spokane, being the legislative body of the City held a public hearing on the Six-Year Comprehensive Water Program at 6:00 p.m., at City Hall in Spokane, Washington, on the 7th day of February, 2011.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Spokane that the revised and extended Six-Year Comprehensive Water Program 2011 through 2016 is hereby adopted; and

BE IT FURTHER RESOLVED, that a copy of the revised and extended Six-Year Comprehensive Water Program for the six years 2011 through 2016, together with a copy of this resolution, be filed with the City Clerk, City of Spokane; and

BE IT FURTHER RESOLVED, that City staff be authorized to apply for state and federal grants and low-interest loans in support of projects as identified in the Six-Year Comprehensive Water Program, 2011-2016.

Adopted this 7th day of February, 2011.

Terri Pfister, Qity/Clerk

Approved as to Form:

Assistant City Attorney





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CITY PLAN COMMISSION FINDINGS OF FACT, CONCLUSIONS, AND RECOMMENDATIONS ON THE 2011-2016 SIX YEAR WATER PROGRAM

A Recommendation of the City Plan Commission certifying that the 2011-2016 Six Year Water Program is in conformance with the City of Spokane's Comprehensive Plan.

FINDINGS OF FACT:

- A. In May 2001, the City of Spokane adopted its Comprehensive Plan under the Growth Management Act (Chapter 36.70A RCW or "GMA").
- B. The City's Comprehensive Plan is required to be consistent with the GMA.
- C. The GMA requires that the City's annual Six Year Water Program shall be in conformance with the City's Comprehensive Plan.
- D. This program is supported by the Comprehensive Plan Policy LU3.1, Coordinated and Efficient Land Use, which states, "Encourage coordinated and efficient growth in development through infrastructure financing and construction programs, tax and regulatory incentives and focus growth in areas where adequate services and facilities exist or can be economically extended."
- E. The 2011-2016 Six Year Water Program identifies capital project activity which has implications on the growth of the community. One public testimony was received concerning financing for the water program.
- F. The City Plan Commission held a workshop on November 10, 2010, and also held a public hearing on December 8, 2010, to obtain public comments on the 2011-2016 Six Year Water Program.
- G. The City Council must receive a recommendation from the City Plan Commission to certify that the 2011-2016 Six Year Water Program is in conformance with the City's Comprehensive Plan in effect on the day of certification.

CONCLUSIONS:

- A. The 2011-2016 Six Year Water Program has been prepared in full consideration of the City's Comprehensive Plan.
- B. The 2011-2016 Six Year Water Program has been reviewed by the City Plan Commission and found to be in conformance with the goals and policies of the City's 2001 Comprehensive Plan.

RECOMMENDATIONS:

- A. The Spokane City Plan Commission concludes that the 2011-2016 Six Year Water Program is in full compliance with the existing Spokane Comprehensive Plan as required by RCW 36.70A and RCW 35.77.010 and is recommended for adoption by the Spokane City Council.
- B. By a vote of 6 to 2, the Plan Commission recommends the approval of these amended documents by the City Council with the understanding that the 3.75 percent rate increase recommended by the Water Department be approved by City Council to maintain a balanced budget.

Emmo Vichard

Michael Ekins, President Spokane Plan Commission

12/9/2010

Date

II. Environmental Evaluation

Each project in this program has been evaluated for its environmental impacts, and an appropriate environmental classification has been given each item. The initial environmental assessment was made on the effect of the project to the local area and to the general public, taking into account such considerations as right of way acquisition, effect of clearing and grading, changes in natural drainage and possible disruptions to neighborhoods. Proposed projects have been indicated as having a "Not significant" environmental effect (designated by "CE" or "NS") or of requiring additional study (marked "ES" or "EA"). These projects for which additional study is indicated will be reviewed with particular attention to the sensitive areas at the time of preliminary design. At that time, a further declaration may be made before proceeding with the project.

For projects requiring an environmental impact statement, a formal inter-disciplinary team will be appointed. A hearing or advertising for hearing interest is required along with a community involvement plan. Items with state or local funds are classified in accordance with the SEPA Guidelines.

CE <u>Categorically Exempt</u> indicates that the proposal is not environmentally sensitive and no further action need be taken.

NS <u>Non-Significant</u> indicates the proposal will not have a significant adverse effect upon the quality of the environment, and an environmental-impact statement and a public hearing are not required. No further environmental documentation is required.

EA <u>Environmental Assessment</u> indicates that the proposal may or may not have a significant adverse effect on the quality of the environment and that further environmental investigation is needed.

ES <u>Environmentally Significant</u> indicates the proposal will have a significant adverse effect upon the quality of the environment. It is expected that additional documents will be needed that address environmental impacts.

If a program has been determined not to have a significant adverse impact upon the environment, a <u>Declaration of Non-Significance</u> is made, and an environmental impact statement is not required under RCW43.21C.030(2)(c). This decision is made after review of a completed environmental checklist and other information on file.

III. How to Use This Document

When a new project is added to the six-year program, it is assigned a unique tracking number. Once assigned, this tracking number stays with the project for its life, even if other project numbers are subsequently assigned for billing and internal tracking purposes. The tracking numbers are of the form:



IV. Project Reconciliation

As part of the Six Year Program update, the status of each project is reviewed. At times, various factors will cause delay in construction or require rescheduling of the project. Occasionally, a project will be rescheduled beyond the six year programming window. The Project Reconciliation is an attempt to resolve the scheduled construction and account for projects both removed and added to the program.

Completed and In Use

W00T15 — Wellesley Avenue from Driscoll to Assembly (with Street Project)

W07B08/W08C02 — North Five Mile Prairie Reservoir & Booster

W08P01 — 37th Ave. from Perry to Grand (with Bond Project)

Construction Underway in 2010

W08P01 — 2nd Ave. – Howard to Cedar (with Bond Project)

W09T01 – Hartson-11th Avenue from Havana to Sherman

Canceled Projects—Removed From The Capital Program

W09B02 - Hoffman Well Switchgear Upgrade (To Maintenance Fund)

W08P01 - Street Bond Infrastructure Upgrade

W00T15 – Miscellaneous Rehabilitation

2010 Projects Not Constructed—Rescheduled 2011 to 2016

W07T01 – Division, 8th & 9th (construction in 2012)

W09B09 – Plains System New Booster (construct in 2013)

W09F02 - Upriver Dam Spillway - Concrete Rehabilitation (construction in 2014)

Projects In Design Phase Accelerated Project

W09B11 - Garden Park Booster Station Rehabilitation (construction accelerated for 2012)

W10B01—Lincoln New Booster Station & Piping (construction accelerated for 2011)

Future Projects--Scheduled Beyond 2016

W07B01 – Parkwater Station Upgrade

W00B07 – Shawnee Booster Sta.

W05B01 – Hoffman Well Rehabilitation

W09B04 – Central Ave. Station 2nd Well Rehabilitation

W09B08 – Indian Trails Area New In Line Booster

Future ProjectsScheduled Beyond 2016 (continued)
W09B15 – West Supply Well
W05S03 – Beacon Hill Reservoir
W09S03 – Plains System Third Reservoir
W09S06 – Shade Additional Reservoir
W09T01 – 57 th Ave, Regal to Glenrose Road
W09T03 – Regal, 37 th to 57th
W09T06 – Hayford Road and Highway 2 to Craig Road and McFarlane
W09T08 – Fiske Street, Lincoln Heights Reservoir to 29 th Avenue
W09T10 – Glenrose Road, 57 th Ave to 37 th Avenue
W11T01 – 37 th Avenue Water Main
W10B02 - Woodland Heights In-Line Booster
Projects In Design Phase Accelerated Project
W09B11 - Garden Park Booster Station Rehabilitation (construction accelerated for 2012)

W10B01—Lincoln New Booster Station & Piping (construction accelerated for 2011)

V. Financial Information

Water Department Estimated Fund Balance 2011 Through 2016

	2011 Budget	2012 Estimate	2013 Estimate	2014 Estimate	2015 Estimate	2016 Estimate
Revenues	Duuget	Estimate	Lounde	Lounde	Estimate	Louinate
Rate Revenues	28,128,740	29,629,486	30,892,738	32,209,858	33,583,140	35,014,983
Rate Stabilization	3,507,021	3,638,534	3,774,979	3,916,541	4,063,411	4,215,789
Misc Revenues	4,438,178	4,537,783	4,645,028	4,525,861	4,512,267	4,499,258
Total Operating Revenues	36,073,939	37,805,803	39,312,745	40,652,259	42,158,818	43,730,030
Expenses						
Operations & Maintenance	22,512,672	23,381,123	24,138,725	26,407,887	27,200,124	28,016,127
State Taxes	1,652,338	1,734,395	1,807,634	1,880,426	1,956,314	2,035,428
Subtotal	11,908,929	12,690,286	13,366,386	12,363,946	13,002,381	13,678,475
Other Expenses						
Deht Service PWTE	1 110 580	1 049 973	1 037 474	910 420	880 523	784 616
Fourinment renlacement	1 500 000	1 500 000	1 500 000	1 500 000	3 500 000	3 500 000
City Taxes	6.741.899	7.076.104	7.393.010	7.683.753	7.986.803	8.302.678
Subtotal - Other Expenses	9,352,479	9,626,077	9,930,484	10,094,173	12,367,326	12,587,294
Excess / (Deficiency) of Revenue						
over Expenditures	2,556,450	3,064,209	3,435,902	2,269,773	635,055	1,091,181
Beginning Fund Balance	16,458,439	12,084,889	10,094,098	6,494,000	574,773	-4,754,172
Excess / (Deficiency) from Operations	2,556,450	3,064,209	3,435,902	2,269,773	635,055	1,091,181
Capital Projects	-6,930,000	-5,055,000	-7,036,000	-8,189,000	-5,964,000	-5,568,000
Ending Fund Balance	12.084.889	10.094.098	6.494.000	574.773	-4.754.172	-9.230.991

PROGRAM SUMMARY

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VI. Program Summary

The Six-Year Comprehensive Water Program (Program) provides a blueprint for improving the Water Department's infrastructure in a coherent, coordinated, and cost-effective manner. The Program is prepared in support of the City's overall planning efforts. All projects in the Program are intended to serve both the current and future needs, and they are programmed to provide a service life of 50 to 100 years. The Department's comprehensive maintenance program keeps the infrastructure operating at optimal levels and extends useful life. Planning for the future has proven to be a financial benefit for the citizens of the City.

The Program is organized into four elements: source well and booster pump stations, storage system improvements, distribution and transmission mains, and facilities and operations. Each element is described below. Projects within these elements are divided into individual and continuing projects. Projects that are individual and specific to one site are listed separately from continuing maintenance projects. While on-going maintenance projects with large capital expenditures are included in the Program, minor maintenance work is completed under the utility's operation budget and will not be found in this document.

- <u>Source Well and Booster Pump Stations</u>: Source wells extract water from the Spokane Valley Rathdrum Prairie Aquifer, the City's sole source for drinking water. Booster pump stations move the water across distances and to storage facilities at higher elevations providing service throughout the City.
- <u>Storage Systems Improvements</u>: The City's water system has several varieties of tanks and reservoirs that provide water storage. These facilities are located throughout the City, and they serve the dual purposes of balancing customers supply needs and fire protection. Well and booster pump stations keep the tanks full and full tanks supply emergency storage. In addition tanks help equalize the water pressure in the entire system.
- <u>Distribution and Transmission Mains</u>: Pipes deliver water from the Aquifer to water customers. Large diameter pipes that transport water across the city to storage facilities are called transmission mains. Smaller diameter pipes that carry water to residences and businesses are called distribution mains.
- <u>Facilities</u>: In addition to operating and maintaining the water system, the City's Water Department is responsible for several facilities, including the Upriver Dam.

Water Department

The City of Spokane's Water Department is one of the best water utilities in the Pacific Northwest. It has a Class 1 fire rating, the highest possible, and the Water Department also has the highest possible operating rating. The City of Spokane has some of the highest quality and lowest cost drinking water in the state. The Water Department is an enterprise fund, which provides goods or services to the public for a fee and makes the entity self-supporting. The Water Department has an annual operating budget of over \$30 million with the major source of revenue coming from water sales. The 20 percent utilities tax is a major source of revenue to the City's general fund.

Program Element Summary

An	Amounts are shown in thousands of doulars (x1,000)								
Project	2011	2012	2013	2014	2015	2016	Total		
Source Well and Booster Pump Stations	2,450	1,036	756	835	800	200	6,077		
Storage System Improvements	100	230	1,900	3,900	316	2,600	9,046		
Distribution and Transmission Mains	2,980	2,389	2,980	2,554	4,448	2,368	17,719		
Facilities and Operations	1,400	1,400	1,400	900	400	400	5,900		
Total All Elements	\$ 6,930	\$ 5,055	\$ 7,036	\$ 8,189	\$ 5,964	\$ 5,568	\$ 38,742		

Comprehensive Water Program 2011-2016



Distribution and Transmission Mains

SOURCE WELL AND BOOSTER PUMP STATIONS



VII. Source Well and Booster Pump Stations

The Source Well and Booster Pump Stations program element contains projects that supply water from the Aquifer to the water system throughout the City's water service area.

Source Well and Booster Pump Station Summary

Project	2011	2012	20	013	2	014	2	015	20	016]	Total
W07B02 - Well Electric Station Upgrade				10		200						210
W07B07 - Beacon Hill Booster Station		210										210
W08B02 - Central Avenue Station 1st Well Rehabilitation								600				600
W09B05 - Lincoln Heights Building Rehabilitation	2,200											2,200
W09B09 - Plains System New Booster		51		500								551
W09B11 - Garden Park Booster Station Rehabilitation	50	575										625
W10B02 - Woodland Heights In-Line Booster				46		435						481
Continuing Maintenance and Rehabilitation Projects												
W09B14 - Pump Maintenance and Repair	200	200		200		200		200		200		1,200
Yearly Totals	\$ 2,450	\$ 1,036	\$	756	\$	835	\$	800	\$	200	\$	6,077

Amounts are shown in thousands of dollars (x1.000)



Source Well and Booster Pump Stations **Project Details**

Project	Project Description					
W07B02 - Well Electric Station Upgrade	This 1925 well station is located at 2701 N. Waterworks Street, near the Upriver Dam. This project will upgrade the existing station pumps and motors to provide more pumping capacity (for system redundancy) and to improve the efficiency of the pump motors. Two of the original four pump and motors have already been replaced. This project will replace the remaining two pumps and motors					
	System	Environmental	Design by			
	2014	North Hill	CE	Water		
	Construction Budget CM Budge		Design Budget	Property		
	\$183,000	\$27,000	\$10,000	Acquired		

W07B07 - Beacon Hill Booster Station	This project will construct a new booster station in the vicinity of Wellesley and Havana to provide for new development within the northeast portion of the City. The booster station will be located adjacent to the North Hills Reservoir. This project is being constructed as a shared interest between developers in the area and the Water Department. The developer will design and construct the pump station building and yard piping. The City will design and construct the pumps, motors and motor control centers. Eunding reflects only the City's portion of this project				
	Construction Starts	System	Environmental	Design by	
	2012	EA	Engineering		
	Construction Budget	CM Budget	Design Budget	Property	
	\$210,000			Acquired	

W08B02 - Central Avenue Station 1st Well Rehabilitation	Central Avenue Well Station has two wells at opposite corners of the site located at Central Avenue and Normandie Street. The Number 1 well station will be upgraded, overhauled, rehabilitated, and modernized with new pumps and motors to provide more pumping capacity and to improve the					
	Construction Starts	Environmental	Design by			
	2015	North Hills	CE	Water		
	Construction Budget	CM Budget	Design Budget	Property		
	\$480,000	\$72,000	\$48,000	Acquired		

Source Well and Booster Pump Stations Project Details (continued)

Project		Project Description					
W09B05 – Lincoln Heights New Booster and Yard	The Lincoln Heights Booster Station was built in 1931, with upgrades in 1953 and 1963. The buildings, pumps, motors and controls, and the on-site piping are all reaching the end of their useful life. In order to increase the efficiency and reliability, a new booster station will be built on the same site. After this new station is completed, the existing station will be taken off line.						
Piping	Construction Starts	System	Environmental	Design by			
	2011 High CE H						
	Construction Budget	CM Budget	Design Budget	Property			
	\$176,000	Acquired					

W09B09 - Plains System New Booster	A new booster station will be constructed in the West Plains area. The new booster station will improve water service to the Plains Pressure System by providing redundancy and better water pressure. The exact location of this booster station has not been determined, but is needed in the vicinity of Highway 2 and Hayford Road. This booster station will fill a new reservoir in the same vicinity.					
	Construction Starts	System	Environmental	Design by		
	2012	Plains	EA	Engineering		
	Construction Budget	CM Budget	Design Budget	Property		
	\$435,000	\$65,000	\$51,000	Needed		

W09B11 - Garden Park Booster Station Rehabilitation	The Garden Park Booster Station, located at 2403 East 37 th Avenue, was built in 1963. To continue providing reliable service, rehabilitation of the station is necessary. The project will upgrade, overhaul, rehabilitate, and modernize the booster station with new pumps and motors to improve efficiency and to keep the water system operating at optimum performance. The project will also include a				
renacintation	new bunding.				
	Construction Starts	System	Environmental	Design by	
	2012	Тор	CE	Water	
	Construction Budget	CM Budget	Design Budget	Property	
	\$500,000	\$75,000	\$50,000	Acquired	

	A new booster station will be constructed in the Woodland Heights area to improve water service to the Woodland Heights Pressure				
	System of wall of inor	and cumply to the		votom hv	
	System, as wen as more	ease supply to the	e SIA Pressure S	ystem, by	
	providing more efficien	nt water delivery	and higher press	ure. The	
W10B02 – Woodland	exact location of this booster station has not been determined.				
Heights In-line Booster	Construction Starts	System	Environmental	Design by	
	2012	Woodland Heights	CE	Engineering	
	Construction Budget	CM Budget	Design Budget	Property	
	\$378,000	\$57,000	\$46,000	TBD	

Source Well and Booster Pump Stations <u>Project Details</u> Continuing Maintenance

Project	Project Description.				
W09B14 - Pump	The booster and well pumps operate on a continual basis motors require routine maintenance to operate efficiently smoothly. This project provides for the maintenance an existing pumps within the water system.				
Maintenance and Repair	Construction Starts	System	Environmental	Design by	
	Ongoing	All	CE	Water	
	Construction Budget	CM Budget	Design Budget	Property	
	\$1,200,000			N/A	



STORAGE SYSTEM IMPROVEMENTS



VIII. Storage System Improvements

The Storage System Improvements element contains projects related to water storage, such as tanks and reservoirs. Storage supplies water and maintains system pressure.

Storage System Improvements Summary

						• • • • •			
Project	2	2011		2012	2013	2014	2015	2016	Total
W02S02 - Northwest Terrace Reservoir				130	1470				1600
W09S01 - Plains System Second Reservoir					330	3800			4130
W09S02 - High System Additional Storage							216	2500	2716
Continuing Storage System Improvement Projects									
W05S02 - Tank and Reservoir									
Painting		100		100	100	100	100	100	600
Yearly Totals	\$	100	\$	230	\$1,900	\$3,900	\$ 316	\$2,600	\$ 9,046



Storage System Improvements <u>Project Details</u>

Project		Project Des	cription		
W02S02 - Northwest Terrace	This project will construct a new reservoir within the Northwest Terrace Pressure Zone (location not yet determined). When constructed, this 1,000,000 gallon reservoir will reduce the need to rely solely on pressure reduction from higher pressure zones to provide water to this area.				
Reservon	Construction Starts	System	Environmental	Design by	
	2014	NW Terrace	EA	Engineering	
	Construction Budget	CM Budget	Design Budget	Property	
	\$1,278,000	\$192,000	\$130,000	Needed	

W09S01 - Plains System	This project will construct a new reservoir in the vicinity of Highway 2 and Hayford Road. An exact location has not been determined. The purpose of this project is to provide storage to the western portion of the Plains Pressure System, enhancing redundancy and providing additional capacity for increased water service to the West Plains.					
Second Reservoir	Construction Starts	System	Environmental	Design by		
	2012	Plains	EA	Engineering		
	Construction Budget	CM Budget	Design Budget	Property		
	\$3,304,000	\$496,000	\$330,000	Needed		

	This project will constr	uct an additional	reservoir in the H	igh Pressure			
	System. An exact location has not been determined. The purpose of this						
	capacity for increased y	vator sorvice to t	he High Pressure	System			
W09S02 - High System	capacity for increased v	capacity for increased water service to the High Flessure System.					
Additional Starage	Construction Starts	Construction Starts System		Design by			
Additional Storage	2013	High	EA	Engineering			
	Construction						
	Budget	CM Budget	Design Budget	Property			
	\$2,174,000	\$326,000	\$216,000	Needed			

Project Details for Continuing Maintenance

Project	Project Description					
	This on-going project repaints selected tanks and reservoirs as needed.					
W05802 Tank and	Construction Starts	System	Environmental	Design by		
Reservoir Painting	2010	All	CE	Water		
	Construction Budget	CM Budget	Design Budget	Property		
	\$600,000			N/A		



TRANSMISSION AND DISTRIBUTION MAINS



IX. Transmission and Distribution Mains

Transmission and distribution improvements include the large diameter pipes (transmission) and smaller diameter pipes (distribution) that carry water from wells, booster stations and reservoirs to the water user.

Transmission and Distribution Mains Summary

	Amounts are in thousands of dollars $(x1,000)$							
Project	2011	2012	2013	2014	2015	2016	Total	
W00R08 - Euclid/Mayfair Transmission Mains	82	950		308	3,560		4,900	
W00R09 - Mission Transmission Main, Phase II	2,700						2,700	
W00R10 - 14th Avenue Main Replacement			25	250			275	
W07T01 – Division from 8th & 9th Avenue	98	1,137					1,235	
W09T04 - Manito Blvd, 14th to 33rd			110	1,246			1,356	
W09T07 - Crestline, 37th to 57th Avenue						110	110	
W09T09 -Perry St/33rd Avenue to Regal St/57th Avenue		204	2,345				2,549	
W09T12 - Eljin Rd. from Garland Ave. to Shadle Reservoir					40	408	448	
W09T13 - 6th Avenue, Bishop Court to Sunset Blvd					98	1,100	1,198	
W10T01 - Green Street Bridge Crossing Replacement		48	450				498	
Continuing Distribution and Transmission Main Projects								
W00C08 - Water Main Upsizing Fund	100	50	50	50	50	50	350	
W00R13 - Pipe Replacement	0	0	0	700	700	700	2,100	
Totals All Projects	\$ 2,980	\$ 2,389	\$ 2,980	\$ 2,554	\$ 4,448	\$ 2,368	\$ 17,719	



Distribution and Transmission Mains <u>Project Details</u>

Project	Project Description					
	This project will replace about 2.9 miles of old (about 1 inch steel transmission main with 30-inch ductile iron p will coordinated with the City's Street Bond.					
W00108 - Euclid/Mayfair	Construction Starts	System	Environmental	Design by		
I ransmission Mains	2012	North Hill	CE	Engineering		
	Construction Budget	CM Budget	Design Budget	Property		
	\$3,922,000	\$588,000	\$390,000	Right-of-way		

	This project will replace about 1.5 miles of aging (about 100 years old) 30- inch diameter transmission main in the northeast portion of the City. Construction will coordinated with the City's Street Bond.				
W00T09 - Mission	Construction Starts	Environmental	Design by		
Transmission Main, Phase II	2011	Low	EA	Engineering	
	Construction Budget	CM Budget	Design Budget	Property	
	\$2,160,000	\$324,000	\$216,000	Right-of-	
	$\psi 2,100,000$	φ <i>32</i> 4 ,000	φ210,000	way	

W00T10 - 14th Avenue Main	This project will replace old sections of transmission main in 14th Avenue. Originally, relining the existing transmission main was proposed; however, a more cost effective construction method of replacement was determined to be feasible.					
woorro - 14th Avenue Man	Construction Starts	System Environmental		Design by		
Replacement	2014	High	CE	Water		
	Construction Budget	CM Budget	Design Budget	Property		
	\$217,000	\$33,000	\$25,000	Right-of-		
	φ217,000	\$33,000	Ψ23,000	way		

	This project will replace three 24-inch and larger diameter old pipes located					
	under a hospital between 8th Avenue and 9th Avenue near Division Street.					
W07T01 Division from 9th	A new pipe will be route	A new pipe will be routed around the hospital.				
W0/101 - D1V1S101 IFOIT 8th	Construction Starts System Environ			Design by		
& 9th Avenue	2013	Intermediate	CE	Water		
	Construction Budget	CM Budget Design Budget		Property		
	\$989,000	\$148,000	\$98,000	Right-of-way		

	This project replaces about 1.3 miles of 24-inch steel transmission main				
	with 24-inch ductile iron pipe. The pipe route follows Manito Boulevard				
	from 33rd Avenue to 21	st Avenue, throug	gh Manito Park to 17t	h Avenue,	
	and in Tacoma Street to	14th Avenue. Th	ne steel pipe has reach	ned its useful	
W09T04 - Manito Blvd. from	service life and will be r	eplaced as a part	of preventive mainter	nance.	
14th to 33rd Avenue	Construction Starts	System	Environmental	Design by	
	2014	High	CE	Engineering	
	Construction Budget	CM Budget	Design Budget	Property	
	\$1.083.000	\$163,000	\$110,000	Right-of-	
	\$1,085,000	\$105,000	\$110,000	way	

Distribution and Transmission Mains <u>Project Details</u> (continued)

Project	Project Description					
Weerror of the orth	This project replaces about 1.3 miles of 24-inch steel transmission main with 24-inch ductile iron pipe in Stone Road from 37th Avenue to 39th Avenue to Lee Road to Thurston Avenue to Crestline Road to 57th Avenue. The steel pipe has reached the end of its useful service life and will be					
$W09107 - Crestline, 37^{m}$ to 57th	Construction Storts System Environmental Design by					
57th	2017	Top	EA	Engineering		
	Construction Budget	CM Budget	Design Budget	Property		
	\$935,000	\$165,000	\$110,000	Right-of- way		

W09T09 -Perry St/33rd	This project replaces about 2.5 miles of 18-inch and 24-inch steel transmission main with 24-inch ductile iron pipe in Perry Street from 33rd Avenue to 53rd Avenue, in an easement to 57th Avenue to Regal Street. The steel pipe has reached its useful service life and will be replaced as a part of preventive maintenance.				
Avenue to Regar St/37th	Construction Starts	System Environmental		Design by	
Avenue	2013	Тор	CE	Water	
	Construction Budget	CM Budget	Design Budget	Property	
	\$2,039,000	\$306,000	\$204,000	Right-of- way	

W09T12 - Elgin Rd. from	This project replaces approximately 2,250 feet of 24-inch steel transmission main with 24-inch ductile iron pipe in Elgin Street from Garland Avenue to the Shadle Reservoir located at Wellesley Avenue and Belt Road. The steel pipe has reached its useful service life and will be replaced as a part of preventive maintenance				
Reservoir	Construction Starts	System	Environmental	Design by	
	2016	Low	CE	Engineering	
	Construction Budget	CM Budget	Design Budget	Property	
	\$355,000	\$53,000	\$40,000	Right-of-way	

W09T13 - 6th Avenue,	This project replaces approximately one mile of 30-inch steel transmission main with 30-inch ductile iron pipe in 6th Avenue from Bishop Court to Sunset Boulevard. The steel pipe has reached its useful service life and will be replaced as a part of preventive maintenance.				
Bishop Court to Sunset Blvd	Construction Starts	System	Environmental	Design by	
	2014	Low	CE	Engineering	
	Construction Budget	CM Budget Design Budget		Property	
	\$957,000	\$143,000	\$98,00	Right-of-way	

Distribution and Transmission Mains <u>Project Details</u> (continued)

Project			Pr	oject Desc	ription	
	The water line contained within Green Street Bridge is suspected to be					
	leaking. A ne	ew water m	ain wi	ll be const	ructed to replace the	existing main.
W10T01 – Green Street	Constructio	n Starts	S	ystem	Environmental	Design by
Bridge Crossing Replacement	2014	1		Тор	EA	Engineering
	Construction	n Budget	CM	Budget	Design Budget	Property
	\$391,0	00	\$3	59,000	\$48,000	Right-of-way
	This fund pay	s for up-size	zing no	ew distribu	tion mains installed	by developers
WOOTO8 Water Main	to the sizes needed for future transmission capacity purposes as identified in					
Upsizing Fund	the Water Comprehensive Plan.					
Opsizing Fund	Start Year	System	m	Use	Environmental	Design by
	2011	All		Distr	CE	Water
	This on-going	g project is	an eff	ort to repla	ce pipe that has reac	hed the end of
	its useful life and may included steel pipe or galvanized steel (Kalamein)					(Kalamein)
W00T12 Ding Doplocement	pipe and other in the City. Ductile iron pipe will be installed to replace the					
w 00115 - Pipe Replacement	outdated pipe					
	Start Year	Syster	m	Use	Environmental	Design by
	2011	All		Distr	CE	Water



FACILITIES AND OPERATIONS



X. Facilities and Operations

The Water Department is responsible for several facilities including the Upriver Dam and the Upriver Facility. On-going Operating Projects are necessary to keep the system running smoothly.

Facility Projects Summary

Amounts are in thousands of dollars (x1,000)

Project	2011	2012	2013	2014	2015	2016	Total
W09P02 - Upriver Dam							
Spillway Concrete				500			500
Rehabilitation							
W09F03 - Upriver Facility							
Remodel	1,000	1,000	1,000				3,000
	Continuin	g Facilities	s and Opera	tions Proje	ects		
W00F04 Water Operations							
Facility Upkeep	100	100	100	100	100	100	600
W07F05 - Remote Meter							
Reading Upgrades	300	300	300	300	300	300	1,800
Totals	\$ 1,400	\$ 1,400	\$ 1,400	\$ 900	\$ 400	\$ 400	\$ 5,900



Facilities and Operations <u>Project Details</u>

Project	Project Description					
	The concrete in the Upriver Dam spillway is deteriorating due to age. This project will repair the existing concrete at the spillway.					
W09F02 - Upriver Dam	Construction Starts	Environmental	Design by			
Rehabilitation	2014	Facility	EA	Water		
	Construction Budget	CM Budget	Design Budget	Property		
	\$500,000			Acquired		

W09F03 - Upriver Facility Remodel	The Upriver Facility, wh water and hydroelectric the 1920's, and much of architecture is still intac since then other than sm renovation project woul operational needs - inclu for visitors, an interpreti conference center to ser building infrastructure a	hich houses the op systems, was con the original Vict t and historically all, piecemeal, and update the facil uding new office twe center, and dis ve all City users; nd energy system	perations center for the istructed from the late orian Romanesque Ro significant. It has no nd disjointed projects. ity to meet current an spaces; improved acc splays; a large meetin dramatic improvements; and preserve, feature	ne City's e 1800's to evival t been altered . This d future ommodations g and nts to ure and
	Construction Starts	Use	Environmental	Design by
	2011	Facility	CE	Water
	Construction Budget	CM Budget	Design Budget	Property
	\$2,400,000	\$360,000	\$240,000	Acquired

Project Details for Continuing Maintenance

Project	Project Description					
	This on-going project provides needs for office, warehouse, shop and yard					
W00F04 Water Operations	facilities.	facilities.				
Facility Upkeep	Start Year System Use Environmental I					
	2011	All	Operation	CE	Engineering	
	This on-going project provides for modern upgraded equipment so meter					

W07F05 - Remote Meter	readers can obtain water usage data in the most efficient manner possible.				
Reading Upgrades	Start Year	System	Use	Environmental	Design by
	2011	All	Operation	CE	Water



XI. Planning and Support Projects

These programs and studies are important to the capital projects in the six year program; however they do not meet the criteria for capital improvements.

Project	Description				
W04R01 - Strategic Infrastructure Planning	The Strategic Spokane's abi demands of ou growth as guid an action plan population gro Components of infrastructure department wi major infrastru Service Area i consultant und	Infrastructure Planning lity to provide utility i ar existing infrastructu ded by the City's Com to address the impacts owth, and densification of the study will includ coordinated with trans ill fund a portion of the acture improvements v n the next 50 years?" ler the direction of Cit	g Study will analyze the nfrastructure to support re and infrastructure ne prehensive Plan. The s of infrastructure replate n for a 50-year plannin le water, wastewater and sportation planning effort e study. The Study with will be necessary to sen This work will be con y staff.	ne City of rt both future eeds of future Study will develop acement, g horizon. nd stormwater orts. Each Il answer "What rve the City's entire npleted by a	
	Start Year Project Duration Annual Budget Total B				
	2012	2 years	\$100,000	\$200,000	

	This is an on-going project to implement a computerized system to improve			
W00C01 - Infrastructure	maintenance management and inventory.			
Management System	Start Vear	Project Duration	Annual Rudget	Total Budget
Wanagement System	Start I car	1 I Ujece Duration	Annual Duuget	Total Duuget

	This project provides for the on-going protection of the Aquifer at wellhead locations as mandated by the Federal and State governments.			
W07P01 - Wellhead				
Protection Program Start Year Project Duration Annua				Total Budget
	2011	6 years	\$150,000	\$900,000

W07P04 - Water	This on-going project supports implementation of the City's Water Stewardship Program in accordance with State conservation guidelines and requirements.				
Conservation Program	Start Year	Project Duration	Annual Budget	Total Budget	
	2011	6 years	\$150,000	\$900,000	