

### ***CAPITAL IMPROVEMENT PROGRAM***

The 2011-2012 Capital Improvement Program (CIP) is funded at \$935,000 in 2011 and \$1,485,000 in 2012, and includes seven active projects. Six of the active projects are associated with the Lake Tapps system, which Cascade acquired from Puget Sound Energy in December 2009. The remaining project funds relatively minor capital improvements to the Bellevue-Issaquah Pipeline. Cascade's 2011-2012 CIP expenditures are funded by proceeds from bond debt issued in 2009.

The CIP summary table below displays the current seven-year CIP and the 2010 CIP.

<b>CIP Projects</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2011-2017 Total</b>
Flow & Water Quality Monitoring Equipment, USGS	\$ 495,000	\$ 44,000	\$ 44,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 88,000
Bellevue-Issaquah Pipeline Improvements	\$ 110,000	\$ 110,000	\$ 110,000	\$ 110,000	\$ 110,000	\$ -	\$ -	\$ -	\$ 440,000
Pow erhouse Bypass Valve Replacement	\$ -	\$ 275,000	\$ 1,320,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,595,000
Professional Services (Legal) - Construction Attorney	\$ -	\$ 11,000	\$ 11,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 22,000
Supervisory Control and Data Acquisition (SCADA)	\$ -	\$ 275,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 275,000
Fish Screen Modifications	\$ -	\$ 165,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 165,000
AECOM Operations Assessment, Phase 2	\$ -	\$ 55,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 55,000
Lake Tapps Improvements	\$ -	\$ -	\$ -	\$ 2,421,547	\$ 2,500,247	\$ 2,581,505	\$ 2,665,404	\$ 2,752,030	\$ 12,920,732
West LTP - Central Segment	\$ -	\$ -	\$ -	\$ 3,804,368	\$ 6,884,328	\$ 7,118,730	\$ 69,400,758	\$ 71,763,767	\$ 158,971,950
West LTP - North Segment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,740,074	\$ 4,958,734	\$ 5,127,573	\$ 12,826,380
West LTP - South Segment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,158,692	\$ 7,158,692
<b>Total CIP Projects</b>	<b>\$ 605,000</b>	<b>\$ 935,000</b>	<b>\$ 1,485,000</b>	<b>\$ 6,335,914</b>	<b>\$ 9,494,575</b>	<b>\$ 12,440,310</b>	<b>\$ 77,024,896</b>	<b>\$ 86,802,061</b>	<b>\$ 194,517,755</b>

The seven-year CIP includes projects that were planned in the 2004 Transmission & Supply Plan. When the 2010 Transmission & Supply Plan update is complete in early 2011, however, it is likely that there will be significant revisions to the seven-year CIP. In particular, Lake Tapps water treatment and transmission (pipeline) projects will probably be delayed into years farther into the future if Cascade secures extensions of existing water contracts with the cities of Seattle and Tacoma.

More detailed information for each project is shown in the tables that follow:



**Project Name: Flow & Water Quality Monitoring Equipment, USGS**

Project Location: Lake Tapps and White River  
 Program: Lake Tapps

Estimated Start Date: 2010  
 Estimated Completion Date: 2012

2011 Budget: \$44,000  
 2012 Budget: \$44,000  
 Total Project Budget: \$583,000

7-Year CIP	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2011-2017 Total</b>
	\$ 495,000	\$ 44,000	\$ 44,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 88,000

Project Description: In order for Cascade to operate the Lake Tapps system, hydrologic data (stream flow and lake level) and water quality data must be collected. Cascade has joint funding agreements with the United States Geological Survey (USGS) for the operation and monitoring of flow and quality gauges in the White River and in Lake Tapps. The Flow & Water Quality Monitoring Equipment, USGS project will fund the acquisition of monitoring equipment necessary to collect the required data.

**Project Name: Bellevue-Issaquah Pipeline Improvements**

Project Location: Bellevue and Issaquah  
 Program: Bellevue-Issaquah Pipeline

Estimated Start Date: 2008  
 Estimated Completion Date: 2014 (ongoing)

2011 Budget: \$110,000  
 2012 Budget: \$110,000  
 Total Project Budget: \$586,862

7-Year CIP	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2011-2017 Total</b>
	\$ 110,000	\$ 110,000	\$ 110,000	\$ 110,000	\$ 110,000	\$ -	\$ -	\$ -	\$ 440,000

Project Description: Cascade has a contractual agreement with Bellevue and Sammamish assigning the utilities responsibility for operating the Bellevue-Issaquah Pipeline (BIP) and conducting any water quality monitoring associated with operating the pipeline. The BIP Improvements project corrects BIP deficiencies and installs improvements as needed and as determined by Cascade.



**Project Name: Powerhouse Bypass Valve Replacement**

Project Location: Lake Tapps Powerhouse  
 Program: Lake Tapps

Estimated Start Date: 2011  
 Estimated Completion Date: 2012

2011 Budget: \$275,000  
 2012 Budget: \$1,320,000  
 Total Project Budget: \$1,595,000

7-Year CIP	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2011-2017 Total</b>
	\$ -	\$ 275,000	\$ 1,320,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,595,000

Project Description: The Powerhouse Bypass Valve Replacement project is to install a higher-capacity bypass valve at the Lake Tapps Powerhouse. The Dam Safety Office requires a bypass valve with 900 cfs capacity in place to provide relief in case of lake overflow. The current bypass valve has a capacity of only approximately 500 cfs.

**Project Name: Professional Services (Legal) - Construction Attorney**

Project Location: Various  
 Program: Lake Tapps, TCP, and BIP

Estimated Start Date: 2011  
 Estimated Completion Date: 2012

2011 Budget: \$11,000  
 2012 Budget: \$11,000  
 Total Project Budget: \$22,000

7-Year CIP	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2011-2017 Total</b>
	\$ -	\$ 11,000	\$ 11,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 22,000

Project Description: The Professional Services (Legal) - Construction Attorney project provides funding to provide legal support for various CIP projects in 2011 and 2012 associated with Lake Tapps and the Bellevue-Issaquah Pipeline.



**Project Name: Supervisory Control and Data Acquisition**

Project Location: Lake Tapps System  
 Program: Lake Tapps

Estimated Start Date: 2011  
 Estimated Completion Date: 2011 or later

2011 Budget: \$275,000  
 2012 Budget: \$0  
 Total Project Budget: \$275,000

7-Year CIP	2010	2011	2012	2013	2014	2015	2016	2017	2011-2017 Total
	\$ -	\$ 275,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 275,000

Project Description: The Supervisory Control and Data Acquisition (SCADA) project will design and install infrastructure to accomplish the transition of the Lake Tapps SCADA system from Puget Sound Energy PSE to Cascade. Consultations in 2011 with PSE managers and operators, and with information technology consultants will determine the extent of system upgrades and replacements that will be required for the transition to Cascade. The 2012 funding amount shown above is an estimate of assessment, design, and implementation costs.

**Project Name: Fish Screen Modifications**

Project Location: Fish Screen Facility  
 Program: Lake Tapps

Estimated Start Date: 2010  
 Estimated Completion Date: 2011

2011 Budget: \$165,000  
 2012 Budget: \$0  
 Total Project Budget: \$165,000

7-Year CIP	2010	2011	2012	2013	2014	2015	2016	2017	2011-2017 Total
	\$ -	\$ 165,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 165,000

Project Description: The Fish Screen Modification project will repair and modify the Lake Tapps flowline fish screen facilities to the standards required by the National Marine Fishery Service (NMFS). The modifications will also permit efficient operation of the fish screens during lower flows through the Lake Tapps diversion flow line. Modifications to the fish screens will allow automated operation as originally intended but never adequately achieved.



**Project Name: AECOM Operations Assessment, Phase 2B**

Project Location: Lake Tapps System  
 Program: Lake Tapps

Estimated Start Date: 2011  
 Estimated Completion Date: 2011

2011 Budget: \$55,000  
 2012 Budget: \$0  
 Total Project Budget: \$55,000

7-Year CIP	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2011-2017 Total</b>
	\$ -	\$ 55,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 55,000

Project Description: The Operations Assessment Phase 2B project follows phases 1 and 2A and completes assessment and documentation of operations, controls, and safety protocols of the Tapps system following acquisition from Puget Sound Energy in December 2009.

**Project Name: Lake Tapps Improvements**

Project Location: Lake Tapps System  
 Program: Lake Tapps

Estimated Start Date: 2013  
 Estimated Completion Date: 2023 (ongoing)

2011 Budget: \$0  
 2012 Budget: \$0  
 Total Project Budget: \$31,416,281

7-Year CIP	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2011-2017 Total</b>
	\$ -	\$ -	\$ -	\$ 2,421,547	\$ 2,500,247	\$ 2,581,505	\$ 2,665,404	\$ 2,752,030	\$ 12,920,732

Project Description: The Lake Tapps Improvement project funds capital improvements associated with the Lake Tapps reservoir and associated properties, except as provided for in other specific CIP projects listed separately. Examples may include dam & dike improvements, milfoil eradication, and security and control infrastructure.



**Project Name: West Lake Tapps Pipeline - Central Segment**

Project Location:  
 Program: Lake Tapps

Estimated Start Date: 2013  
 Estimated Completion Date: 2017

2011 Budget: \$0  
 2012 Budget: \$0  
 Total Project Budget: \$87,208,184

7-Year CIP	2010	2011	2012	2013	2014	2015	2016	2017	2011-2017 Total
	\$ -	\$ -	\$ -	\$ 3,804,368	\$ 6,884,328	\$ 7,118,730	\$ 69,400,758	\$ 69,400,758	\$ 87,208,184

Project Description: The West Lake Tapps Pipeline - Central Segment is part of a pipeline envisioned to transmit water from Lake Tapps to the Bellevue-Issaquah Pipeline. The Central Segment would extend from the Tacoma Public Utilities Second Supply Pipeline to the Seattle Public Utilities Cedar Pipeline. The West Lake Tapps Pipeline was included in Cascade's 2004 Transmission & Supply Plan and remains in the CIP pending completion of the 2010 Transmission & Supply Plan update in early 2011. It is likely, however, that the pipeline will not actually be built until several years later than indicated above. No funds are expected to be expended in 2011 or 2012 for any segments of the West Lake Tapps Pipeline.

**Project Name: West Lake Tapps Pipeline - North Segment**

Project Location:  
 Program: Lake Tapps

Estimated Start Date: 2015  
 Estimated Completion Date: 2019

2011 Budget: \$0  
 2012 Budget: \$0  
 Total Project Budget: \$114,492,071

7-Year CIP	2010	2011	2012	2013	2014	2015	2016	2017	2011-2017 Total
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,740,074	\$ 4,958,734	\$ 5,127,573	\$ 12,826,380

Project Description: The West Lake Tapps Pipeline - North Segment is part of a pipeline envisioned to transmit water from Lake Tapps to the Bellevue-Issaquah Pipeline. The North Segment would extend from the Seattle Public Utilities Cedar Pipeline to the Bellevue-Issaquah Pipeline. The West Lake Tapps Pipeline was included in Cascade's 2004 Transmission & Supply Plan and remains in the CIP pending completion of the 2010 Transmission & Supply Plan update in early 2011. It is likely, however, that the pipeline will not actually be built until several years later than indicated above. No funds are expected to be expended in 2011 or 2012 for any segments of the West Lake Tapps Pipeline.



**Project Name: West Lake Tapps Pipeline - South Segment**

Project Location:

Program: Lake Tapps

Estimated Start Date: 2017

Estimated Completion Date: 2021

2011 Budget: \$0

2012 Budget: \$0

Total Project Budget: \$218,964,719

7-Year CIP	2010	2011	2012	2013	2014	2015	2016	2017	2011-2017 Total
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,158,692	\$ 7,158,692

Project Description: The West Lake Tapps Pipeline - South Segment is part of a pipeline envisioned to transmit water from Lake Tapps to the Bellevue-Issaquah Pipeline. The North Segment would extend from Lake Tapps to the Tacoma Public Utilities Second Supply Pipeline.

The West Lake Tapps Pipeline was included in Cascade's 2004 Transmission & Supply Plan and remains in the CIP pending completion of the 2010 Transmission & Supply Plan update in early 2011. It is likely, however, that the pipeline will not actually be built until several years later than indicated above. No funds are expected to be expended in 2011 or 2012 for any segments of the West Lake Tapps Pipeline.