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**From:** Thomas A. Frank [mailto:[mail@thomasafrank.com](mailto:mail@thomasafrank.com)]  
**Sent:** Thursday, April 19, 2012 3:05 PM  
**To:** Pelz, Zach  
**Cc:** Sonnen, John

**Subject:** Re: Project CUP 12-02: Lake Oswego, South Fork, West Linn IGA

Zach,

For the record, I viewed:

<http://www.lotigardwater.org/?p=library>

<http://www.lotigardwater.org/?p=project-information>

<http://www.lotigardwater.org/>

and downloaded the attached FAQ file.

# Library

## Background Info

- [Stewardship of Water Resources Frequently Asked Questions](#) (pdf 437 kb)
- [What to Expect During Construction](#) (pdf 1.2 mb)
- [Project Fact Sheet, updated March 2012](#) (pdf 655 kb)
- [Frequently Asked Questions updated January 2011](#) (pdf 250 kb)
- [History of Lake Oswego's Significant Water System Investments and Upgrades](#) (pdf 45 kb)
- [Focus Group Summary, February 2010](#) (pdf 257 kb)
- [Telephone Survey Summary, February 2010](#) (pdf 800 kb)
- [Water Supply Feasibility Project, 2005](#) (pdf 10 mb)

## Documents and Reports

- [Water Partnership Agreement \(\*Intergovernmental Agreement\*\)](#) (pdf 4.6 mb)
- [Supply Facilities Capital Improvement Program \(Exhibit 5\), 2010](#) (pdf 1.3 mb)
- [Lake Oswego Water Curtailment Plan](#) (pdf 115 kb)
- [Lake Oswego Water Cost-of-Service Rate Study](#) (pdf 10 mb)
- [Aging Facilities Conundrum](#) (pdf 259 kb)

## Water Treatment Plant

- [Robinwood Neighborhood Association Open House Presentation](#) - October 27, 2011 (pdf 12 mb)
- [Water Treatment Plant Good Neighbor Plan](#) (pdf 303 kb)
- [Mapleton Drive Properties - Frequently Asked Questions](#) (pdf 136 kb)
- Water Treatment Decision, Expert Panel Summary Reports
  - [Treatment Workshop 1 Summary](#) (pdf 236 kb)
  - [Treatment Workshop 2 Summary](#) (pdf 331)
  - [Treatment Workshop 3 Summary](#) (pdf 211)

## Water Savvy

*What you Need to Know About your Drinking Water; an accessible explanation of technical issues.*

- [Issue 1: Drinking Water Treatment Decision](#), March 2010 (pdf 1 mb)
- [Issue 2: Lake Oswego's Municipal Water Rights](#), March 2010 (pdf 1 mb)
- [Issue 3: Time to Prepare for the Future](#), April 2010 (pdf 1 mb)
- [Issue 4: Partnership Costs and Savings](#), June 2010 (pdf 762 kb)
- [Issue 5: The Pressing Need for Water Conservation](#), October 2010 (pdf 1 mb)
- [Issue 6: Experts Recommend New Drinking Water Treatment Method](#), October 2010 (pdf 2 mb)
- [Issue 7: A Close Look at Environmental Permitting](#), November 2010 (pdf 874 kb)

## Water Conservation Resources

- [Final Draft Update to the Lake Oswego Water Management and Conservation Plan](#), 2010 (pdf 4.5 mb)

- City of Tigard Water [Website](#).
- City of Lake Oswego Water Conservation [Website](#).
- Current Lake Oswego Weather Conditions [Website](#) (To guide you making good irrigation decisions).

### Hello LO Articles

- [December 2011, Water Treatment Plant Design Progresses](#) (pdf 60 kb)
- [October 2011, Plant and Pipelines Under Design](#) (pdf 108 kb)
- [April 2011, Good Neighbors Don't Just Happen](#) (pdf 181 kb)
- [March 2011, Water Facility Plan Adopted](#) (pdf 58 kb)
- [February 2011, Water Partnership Invites Independent Review](#) (pdf 259 kb)
- [January 2011, LO and Tigard City Councils Approve Water Partnership Capital Program](#) (pdf 89 kb)
- [2010 Hello LO Archive...](#)

### City of Tigard "Cityscape" Newsletter

- [February, 2012, 2012 Goals Accomplished](#) (pdf 515 kb)
- [January 2011, Water Billing Rate Changes go Into Effect January 1st](#) (pdf 585 kb)
- [November 2010, Closing in on a Secure Water Future](#) (pdf 652 kb)
- [October 2010, The Road to Secure Drinking Water Future](#) (pdf 629 kb)
- [September 2010, Tigard's Drinking Water Dilema](#) (pdf 629 kb)
- [August 2010, Water ... A Tale of Two Cities](#) (pdf 723 kb)
- [June 2010, Open House Announcement](#) (pdf 989 kb)
- [2010 Cityscape Archive...](#)

### Media

- [Good neighbors?, West Linn Tidings](#), March 15, 2012
- [Pink tags mark inventoried trees in Gladstone's Meldrum Park](#), *Oregonlive.com*, January 22, 2012
- [Lake Oswego files court action against West Linn's opposed to water plant expansion](#), *LakeOswegoReview.com*, January 11, 2012
- [Clackamas River water intake facility could reopen this weekend after recent storm-related shut down](#), *Oregonlive.com*, January 4, 2012
- [WL taps into LO water after intake damaged](#), *West Linn Tidings*, January 5, 2012
- [Storm debris shuts down Clackamas River water intake, putting West Linn, Oregon City on backup water system](#), *Oregonlive.com*, December 30, 2011
- [Partnership files a pre-application for pipeline to cross the river to WL](#), *LakeOswegoReview.com*, December 22, 2011
- [Water treatment plant expansion a boon to West Linn or a bust?](#), *LakeOswegoReview.com*, December 22, 2011
- [Lake Oswego-Tigard Water Partnership officials propose streamlined water treatment plant upgrades to assure West Linn backup water source](#), *Oregonlive.com*, December 20, 2011
- [LOT submits pre-application for water plant pipeline](#), *West Linn Tidings*, December 15, 2011
- [Households to see surge in water rates in 2012](#), *Lake Oswego Review*, December 15, 2011
- [Plant expansion is a land use issue](#), *Lake Oswego Review*, December 15, 2011
- [West Linn to host meeting next week to discuss Lake Oswego, Tigard water partnership](#), *Oregonlive.com*, December 13, 2011

- [Water plant in West Linn gets no special treatment](#), *Lake Oswego Review*, December 8, 2011
- [Lake Oswego-Tigard water partnership official says project still on track for 2016 completion](#), *Oregonlive.com*, November 22, 2011
- ['Biggest issue next year'](#), *West Linn Tidings*, November 17, 2011
- [Sentiments on water treatment facility are becoming clear](#), *West Linn Tidings*, November 3, 2011
- [Lake Oswego smelly water 'not a health issue'](#), *KPTV, FOX 12*, October 10, 2011
- [Lake Oswego treats drinking water after taste, odor complaints](#), *Oregonlive.com*, October 10, 2011
- [Mini water plant to test huge new plant](#), *West Linn Tidings*, September 15, 2011
- [Water partnership makes sense](#), *Lake Oswego Review*, August 18, 2011
- [We must fund water conservation](#), *Lake Oswego Review*, August 11, 2011
- [Regardless of rain, city says, save water](#), *Oregonlive.com*, July 19, 2011
- [Two Oregon companies raise \\$500K each](#), *Portland Business Journal*, Jun, 28, 2011
- [Lake O residents urged to cut back water use](#), *KGW.com*, Jun 27, 2011
- [Lake Oswego to replace broken water pump that has cut peak water productivity](#), *Oregonlive.com*, Jun, 27, 2011
- [Tigard to end water contract with city of Portland](#), *The Times*, Jun, 23 2011
- [Water Pipeline plan hits a snag in West Linn Park](#), *The Lake Oswego Review*, Jun 23, 2011
- [Planning its own system, Tigard prepares to move away from Portland as its water source](#), *Oregonlive*, June 21, 2011
- [Clock delays council action](#), *Portland Tribune*, Jun, 9 2011
- [Lake Oswego, Tigard join forces to Beat the Peak](#), *Lake Oswego Review*, June 9, 2011
- [Tigard and Lake Oswego Team Up to Reduce Water Consumption this Summer](#), *The Portlander*, May 24, 2011
- [City of LO should treat neighbors better](#), *Lake Oswego Review*, March 3, 2011
- [LO takes step back on plan for WL plant](#), *West Linn Tidings*, February 24, 2011
- [Fighting for my neighborhood](#), *West Linn Tidings*, February 24, 2011
- [Revised reservoir options eyed by city](#), *Lake Oswego Review*, February 24, 2011
- [Tigard-L.O. water partnership contested by neighbors](#), *The Times*, February 10, 2011
- [Lake Oswego, Tigard officials attempt to ease West Linn concerns over plans to expand water treatment plant](#), *OregonLive*, February 7, 2011
- [Water treatment expansion plans hit hitch in West Linn](#), *Lake Oswego Review*, February 3, 2011
- [What does 2011 hold for Tigard?](#), *The Times*, January 5, 2011
- [2010 Media Archive...](#)

### Press Releases

- [Lake Oswego Water Supply System Showing Its Age - June 30, 2011](#)
- [Expert Panel Recommends New Water Treatment Process for Lake Oswego and Tigard - June 15, 2010](#)
- [Expert Panel Advises Water Treatment Decision for Lake Oswego, Tigard - April 16, 2010](#)
- [Lake Oswego/Tigard Water Partnership Program Management Contract Approved - November 19, 2009](#)

### Video (all links are to external websites)

- ["Lake Oswego and Tigard Seal the Deal"](#), August 2008, 10:30 min
- ["Water Partnership Introduction"](#), January 2010, 4:16 min

- "[Water Treatment Recommendation](#)" February 2010, 2:45 min
- "[July 24 Open House](#)", July 2010, 1:34 min
- "[Re-investing in Clean Water](#)", August 2011, 4:26 min
- "[Minuature Water Treatment Plant](#)", September 2011, 1:43 min
- "[Lake Oswego Tigard Water Partnership Feature - ICMA](#)", December 16, 2011, 5:24 min

## Maps

- Tigard [Water Service Area](#) (pdf 322 kb)
- Lake Oswego [Water Service Area](#) (pdf 497 kb)
- [Existing Infrastructure Map](#), February 2010. (pdf 957 kb)
- [Home](#)
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Water Treatment Plant  
Manager, Kari Duncan,  
tests water daily to  
ensure quality.

Lake Oswego Tigard Water Partnership | [Page Top ↑](#)

For more information call (503) 697-6502

## Project Information

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- [Project Fact Sheet](#)
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**Partnering:**  
A "win-win-win" for three communities

- When Lake Oswego and Tigard faced the prospect of aging infrastructure and rising water costs, they met the challenge by partnering.
- Tigard and Lake Oswego are working together to share costs and resources, and both will have an ownership share in a clean, dependable, and affordable water source.
- Lake Oswego's water treatment plant provides West Linn's only backup water supply. Through the Partnership's investment, this emergency supply will be available year-round, even on hot summer days.

Find out more about how the partnership benefits you at [lotigardwater.org](http://lotigardwater.org).

**Lake Oswego • Tigard Water Partnership**  
Sharing water. Connecting communities.

### Introducing the Partnership

In August 2008, the cities of Lake Oswego and Tigard formally endorsed a partnership agreement for sharing drinking water resources and costs. Lake Oswego's water supply system is near capacity, and key facilities need expansion and upgrades. Tigard residents need a secure, dependable water source. Both cities want to keep water affordable for their customers and sharing the cost of new infrastructure to serve both communities does that.

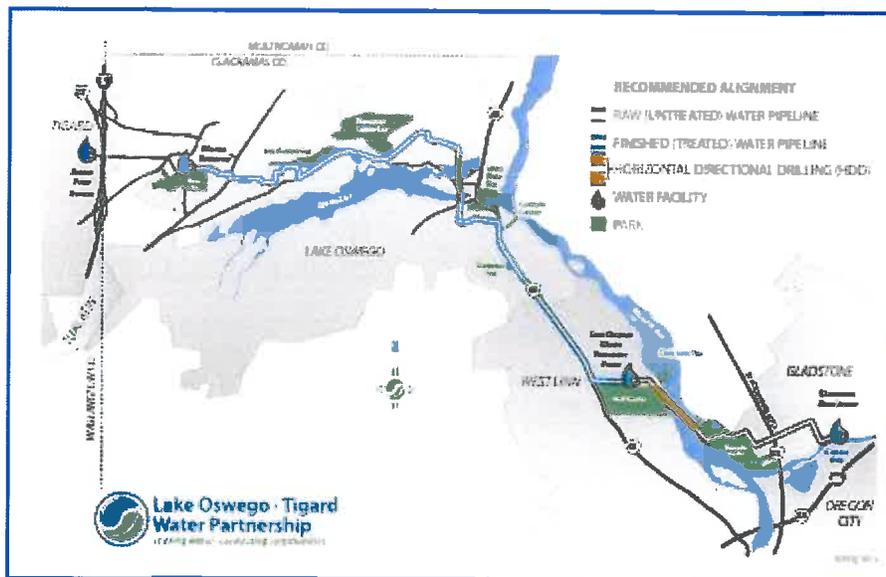
Conserving water is the first and most important supply option for the Lake Oswego Tigard partnership. Effective conservation measures alone, however, won't be enough to meet the two cities' needs.

This regional collaboration isn't new. Lake Oswego and Tigard have benefitted from a water supply relationship dating back to the 1970s – Lake Oswego as the seller of water, Tigard as the buyer. The Oregon Department of Water Resources and the conservation community encourage regional water supply planning and collaboration between multiple communities as a smart way to manage water needs.

- [Meet the project team](#)
- [Click here to download](#) the **project fact sheet**. (PDF 656 kb)

### Recommended Facilities Map

The map below shows recommended facilities.



*The partnership will upgrade, upsize and expand Lake Oswego's existing drinking water facilities – at or near their current locations – to serve the needs of Lake Oswego and Tigard customers.*

[Click to download a larger version of the existing facilities map. \(pdf, 302 kb\)](#)

## Water System Improvements

The Lake Oswego Tigard Water Partnership expands Lake Oswego's existing drinking water infrastructure so that it can serve both communities. Lake Oswego currently withdraws water from the Clackamas River in Gladstone as it has been for about 40 years. This water travels through a large pipe under the Willamette River to a facility in West Linn where it is finished to safe drinking water standards. The finished water is then pumped through another large pipeline to Lake Oswego and the Waluga Reservoir near the City's western boundary. From there, water goes through pipes to Lake Oswego customers and to Tigard's Bonita Road pump station.

The partnership project will upgrade, upsize and expand six existing facilities:

1. The river intake in Gladstone
2. The pipeline that conveys raw water to the water treatment facility
3. The [water treatment facility](#) in West Linn
4. The pipes that convey finished water to Lake Oswego and Tigard
5. The Waluga Reservoir in Lake Oswego that provides water storage for Lake Oswego and needed capacity to provide water to both communities
6. The Bonita Road pumping station in Tigard.

Click [here](#) to visit our water facilities page.

To learn even more about the project, read Water Savvy, the project's technical newsletter. You can find copies for download in the [project library](#).

## Project Schedule

The project started in December 2009 and continues through 2016. Work occurs in four overlapping phases. As these phases progress, a detailed schedule will be made available.

During Project Definition, a drinking water treatment recommendation was made by a panel of experts brought in to consult on the project. [Click here](#) to learn more.

| Phase                     | Anticipated Duration          |
|---------------------------|-------------------------------|
| Project Definition        | December 2009 - December 2010 |
| Pre-Design and Permitting | July 2010 - February 2012     |
| Design                    | March 2011 - October 2013     |
| Construction              | March 2012 - June 2016        |

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## Project Benefits Both Cities

The partnership is the culmination of Tigard's 15-year search for a stable source of water. Tigard customers benefit by finally obtaining a secure, dependable, affordable drinking water source. Lake Oswego water customers benefit by sharing the costs for needed upgrades to the community's water system.

To learn more, read Water Savvy, [Issue 3: Time to Prepare for the Future](#), April 2010 (pdf 1 mb)

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## Environmental Protection

Lake Oswego and Tigard are committed to protecting and enhancing water quality and fish habitat in the Clackamas River, and are already working with Clackamas River Water Providers, Clackamas River Basin Council, US Geological Survey, and Clackamas County Water Environment Services to improve watershed conditions.

Extensive federal and state environmental permit processes are in place to protect the Clackamas River and other natural resources. The project must meet all requirements of the agencies that hold permitting/approval authority.

To learn more, read Water Savvy, [Issue 7: A Close Look at Environmental Permitting](#), November 2010 (pdf 874 kb)

## Program Costs

Project costs are allocated under a partnership agreement between the two cities. The capital cost split is based on preliminary calculations that take into account the peak water capacity each community will receive from the upgraded system. A preliminary estimate indicates total capital costs would be allocated 46.5% to Lake Oswego and 53.5% to Tigard. As more information is known about what repairs, replacements and expansions are needed at the water intake, water pipelines, water treatment plant, reservoirs and pump stations, the split will be adjusted.

For more detailed information on the updated cost estimate please [click here](#).

To learn more read [Water Savvy, Issue 4 Project Costs and Savings](#), June 2010 (pdf 762 kb).

## Focus on the Bottom Line

The Partners are working to ensure that the program delivers the most value for the dollars spent. During design, the program team will ensure that every construction project is right sized and cost-effective. The team will focus on the bottom line by:

- Conducting a value planning process early in 2011. Value planning is an engineering audit conducted by independent experts looking for further design efficiencies and cost savings.
- Selecting top-notch design consultants. Pre-qualified design teams will be selected this month to compete for contracts to design facility plans. In early 2011, these firms will offer their best thinking about improving the program while saving money.
- Packaging individual construction projects. Facilities will be packaged and scheduled to take full advantage of the favorable bidding climate.
- Forming a design oversight committee. Proposed design changes will be reviewed to control scope and budget.
- Implementing improved business practices in the water utility to increase efficiency and maintain strong credit ratings. Monitoring capital debt markets. Optimally timed debt issues will ensure the lowest rate increases over time.

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## Facts and Figures

|  | Lake Oswego     | Tigard                              |
|--|-----------------|-------------------------------------|
| Population Served                          | 34,000          | 57,000                              |
| Peak demand<br>(million gallons per day)   | 15              | 13                                  |
| Future demand<br>(million gallons per day) | 19-24           | 16-20                               |
| Current primary water<br>source            | Clackamas River | Portland/Bull Run &<br>Groundwater  |
| Future primary water<br>source             | Clackamas River | LO/Clackamas River &<br>Groundwater |

|                              | Lake Oswego                           | Tigard                                |
|------------------------------|---------------------------------------|---------------------------------------|
| Future back-up water sources | Portland/Bull Run & Washington County | Portland/Bull Run & Washington County |

### How the Partnership Works

Under the partnership agreement, the City of Lake Oswego will manage and build the water system improvements. An Oversight Committee provides leadership and guidance, with representatives from Lake Oswego and Tigard City Councils. A technical team includes staff from both cities.

Costs will be allocated to Lake Oswego and Tigard. For more information, read the [Partnership Agreement](#) between the two cities. Funding sources will likely include revenue bonds repaid by customers' monthly water charges.

Public agencies typically sell bonds to fund large capital projects. Both cities will need to increase water rates to pay back the principal and interest on bonds.

### History

- 1925** The City of Oswego purchased a water system from Oswego Light and Power in 1925. The system consisted of 50,000 feet of pipe and one reservoir (10th Street). The water sources for the system were groundwater wells and a connection to Portland's Bull Run source.
- 1965** Poor well water quality and the desire to own a source of water led Lake Oswego to consider other source options. The Oswego City Council initiated a study of new water source options. They considered Bull Run, Tualatin, Willamette, and Clackamas Rivers as sources. The Oswego Council selected the Clackamas over Bull Run in spite of its higher cost of development. Ownership and control of the system outweighed cost considerations.
- 1966-1969** Oswego acquired water rights on the Clackamas and designed the system still in use today.
- 2005-2006** In September 2005, the cities of Tigard and Lake Oswego completed the Water Supply Feasibility Project study. In March 2006, the two cities funded the Joint Water Supply System Analysis. This analysis investigated the technical, financial and legal issues around the potential partnership. Ultimately, the planning concluded that each city would benefit from jointly expanding the Lake Oswego water system.

- 2007** Representatives from each of the two cities formed a work group to further explore the water partnership. The Cities of Tigard and Lake Oswego and the Intergovernmental Water Board entered into a Memorandum of Understanding (MOU) developed by the work group in December.
- 2008** At a signing ceremony on August 6, 2008, Tigard Mayor Craig Dirksen and Lake Oswego Mayor Judie Hammerstad officially signed a water partnership agreement between the two cities.
- 

## Learn More

[Click here](#) to download the project fact sheet. (PDF 655 kb)

[Click here](#) to download frequently asked questions. (pdf 250 kb)

For more information about the Lake Oswego Tigard Water Partnership contact:

### [Jane Heisler](#)

Communications Director  
City of Lake Oswego, Oregon  
503-697-6502

### [Dennis Koellermeier](#)

Public Works Director  
City of Tigard, Oregon  
503-718-2596

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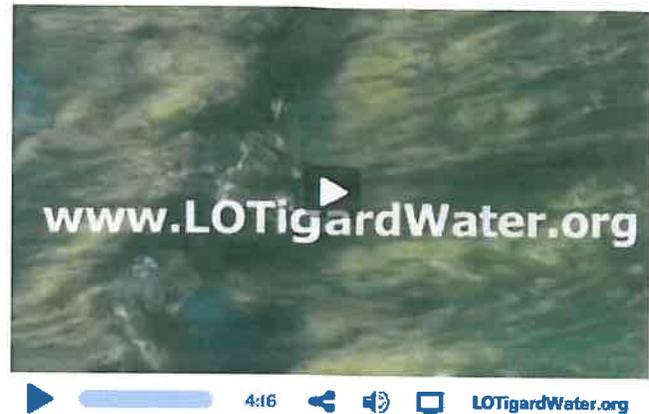
*Wafuga Reservoir*

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## What is this Project?

This project increases system capacity to deliver high-quality drinking water from the Clackamas River to the communities of Lake Oswego and Tigard. Together these two communities can secure long-term access to clean, safe water for less than it would cost them to do it alone.



## Project News

West Linn Staff Recommends Land Use Approval

Monday - April 16, 2012

The City of West Linn Planning Commission will hold its first public hearing on the Partnership's Water Treatment Plant expansion and upgrade at a meeting of the Planning Commission this Wednesday night. West Linn's staff found "sufficient grounds for approval" of the Partnership's plans with several conditional requirements. The Partnership is supportive of the staff decision.

"The proposal includes sustainable development techniques, such as green street design, permeable surfaces, green roofs, compact site design, and minimal driveways. The upgraded facility is expected to be safer and more efficient than the current one due to modernization of the operations utilizing the latest technologies and compliance with the current codes from outside agencies."

### Upcoming meeting:

West Linn Planning Commission  
Wednesday, April 18th at 7:30pm  
City Hall Council Chambers

Materials for the upcoming Planning Commission meeting, including the staff report, can be found on the [City of West Linn's website](#).



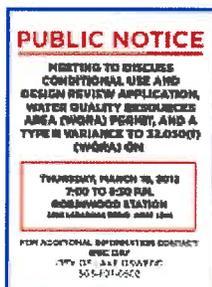


The Lake Oswego Tigard Water Partnership is hosting an Open House to update residents and businesses on the planned construction of a new drinking water pipeline in Gladstone. The new pipeline will be routed through public streets in Gladstone and through Meldrum Bar Park (see map to the right) and construction is scheduled to begin in Summer 2013.

**Thursday, March 22**  
**6:30 to 8:00 p.m.**  
**Gladstone Senior Center**  
**1050 Portland Ave., Gladstone ([directions](#))**

Public Meeting in West Linn on March 15

Wednesday - March 14, 2012



The Partnership held a public meeting on the proposed water pipeline in the Robinwood neighborhood in West Linn. Citizens made comments/suggestions regarding the plans before a formal application is provided to the City of West Linn for a conditional use permit.

You can find a copy of the presentation [here](#). PDF 754kb

**Thursday, March 15, 2012**  
**7:00 to 8:30 pm**  
**Robinwood Station**  
**3706 Cedar Oak Drive, West Linn ([directions](#))**

Work in your area and Waluga Reservoir Good Neighbor Plan Meeting #4

Wednesday - February 29, 2012

A work crew from the Lake Oswego Tigard Water Partnership will be at the existing Waluga Reservoir at the end of Parkhill tomorrow morning to take height measurements. The work will involve a bucket truck and a small crew.

Survey crews on foot will be in Waluga Park tomorrow to conduct further tree inventory as well.

Also, our next Good Neighbor Plan (GNP) Meeting is tomorrow evening at 7:00 p.m. at the West End Building. The GNP, developed with your input, will document the Partnership's commitment to being a good neighbor during design, construction, and ongoing operations of the reservoir.

At our last meeting in January, we presented the second half of the GNP Draft and gathered neighbor feedback. At tomorrow's meeting, we will review neighbor input and share information regarding access ways through the WR2 property.

This is your chance to be involved with the process. You are invited to review and discuss the GNP which was created using neighbor input from personal interviews and past meetings.

For more information about the Lake Oswego Tigard Water Partnership, please call 503-697-6502.

**This is your chance to be involved with the process. You are invited to review the GNP and discuss issues surrounding a pathway through the property. The GNP will guide future:**

- **Design**
- **Construction practices**
- **Ongoing operations: after the new facility is built**



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*Wafuga Reservoir*

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# Lake Oswego · Tigard Water Partnership

*sharing water · connecting communities*

## Frequently Asked Questions

### The Drinking Water Partnership

#### ***What is the Lake Oswego Tigard Water Partnership? How does the Partnership benefit the two communities and their water customers?***

In August 2008, the cities of Lake Oswego and Tigard formally endorsed a partnership agreement for sharing drinking water resources and costs. Lake Oswego's water supply system is near capacity, and key facilities need expansion and upgrades. Tigard residents need a secure, dependable water source. Both cities want to keep water affordable for their customers and sharing the cost of new infrastructure to serve both communities does that.

Tigard customers benefit by gaining a long-term, affordable drinking water source. Lake Oswego customers benefit by sharing the costs for needed upgrades to the community's water system.

#### ***Are there other benefits of the partnership for the two cities, beyond a secure drinking water source for the future?***

Lake Oswego customers will save millions of dollars by sharing water system improvement costs with Tigard. Tigard customers save money, too, by lowering future rate increases needed to purchase water from other suppliers. Tigard ratepayers will become "owners" of their water supply rather than continuing to "rent" someone else's system to meet their water supply needs. Planned improvements to Lake Oswego's water system will also address current reliability, capacity and operational problems and link Lake Oswego to other water sources, providing emergency and supplemental sources of supply.



*Planned improvements to Lake Oswego's existing water treatment plant will address reliability, capacity and operational problems.*

#### ***What other options were considered? (For Lake Oswego? For Tigard?)***

The cities of Lake Oswego and Tigard completed a comprehensive study in 2007 to evaluate possible formation of a joint water supply system to serve the two communities. The evaluation compared financial and other impacts of different water supply options for each city – from Lake Oswego "going it alone", to fully developing Lake Oswego's Clackamas River water rights in partnership with Tigard. In a follow-up study in 2008, Tigard also considered other water supply options including the Tualatin Basin Water Supply Project, the Willamette River Project, and continuing to purchase water from the City of Portland.

The studies identified the partnership approach as the preferred supply option for both cities based on a variety of factors: cost, permitting, governance, design and financing.

To learn more about the options considered read Water Savvy 4: Partnership Costs and Savings. Find it at [lotigardwater.org](http://lotigardwater.org)

***Why do Lake Oswego's existing facilities need improvement?***

Lake Oswego's key water supply facilities – the water intake on the Clackamas River and the water treatment plant in West Linn – are more than 40 years old. Over the years the City of Lake Oswego has continued to invest in its water supply system through upgrades, replacements, and maintenance to defer major capital investment in new facilities.

Now, despite past investments and ongoing maintenance, most facilities are nearing the end of their expected life. Lake Oswego's water facilities are too old and undersized to continue to reliably and economically serve the community's needs.

To learn more about Lake Oswego's existing water system, read Water Savvy 3: Time to Prepare for the Future. Find it at [lotigardwater.org](http://lotigardwater.org)

***Under the partnership agreement, who is in charge? Who will own key facilities?***

An Oversight Committee provides leadership and guidance, both during construction and for ongoing water system operation. The Oversight Committee has representatives from Lake Oswego and Tigard City Councils. Under the partnership agreement, the City of Lake Oswego will manage and build the water system improvements. The water facilities – except for the Bonita Road Pump Station that only serves Tigard – will be jointly owned by Lake Oswego and Tigard.

**Water Source: the Clackamas River**

***The future drinking water source for Lake Oswego and Tigard under the partnership arrangement will be the Clackamas River. Is this a reliable, high quality drinking water source?***

The Clackamas River is one of Oregon's high-quality drinking water sources and is afforded special protection under state law. The 950-square mile Clackamas River watershed currently provides drinking water for Lake Oswego and other communities in North Clackamas County.

***Does Lake Oswego have enough Clackamas River water available to serve both communities? Will Lake Oswego run out of water if it shares with Tigard?***

The City of Lake Oswego holds water rights that authorize the use of water from the Clackamas and Willamette Rivers and three groundwater sources. Lake Oswego's Clackamas River water rights provide enough water to meet Lake Oswego's needs for the foreseeable future and Tigard's needs for the next 20 years. Lake Oswego's water rights will continue to belong solely to the City of Lake Oswego but are committed for

Partnership use. To learn more about Lake Oswego's Water Rights, read Water Savvy 2: Lake Oswego's Municipal Water Rights. Find it at [lotigardwater.org](http://lotigardwater.org)



*The Clackamas River is the high quality drinking water source that will serve Lake Oswego and Tigard.*

### ***How secure are Lake Oswego's water rights?***

Lake Oswego is seeking approval to fully develop its City's Clackamas River water rights to serve the future needs of both communities. Lake Oswego has two water rights on the Clackamas, one for 32.3 million gallons per day (mgd) and one for 5.8 mgd.

Half of Lake Oswego's larger water right is "certificated" – meaning it has completed the state permitting process and is considered a property right that can't be revoked. The other half is still in the permit development process. The 32.3 mgd water right is considered reliable because water flow records show there should be enough water in the river even during a drought year for the City to withdraw its full amount. Lake Oswego's 5.8 mgd water right is not currently used and is also in the permit process.

### ***Can water conservation meet Lake Oswego's future water needs?***

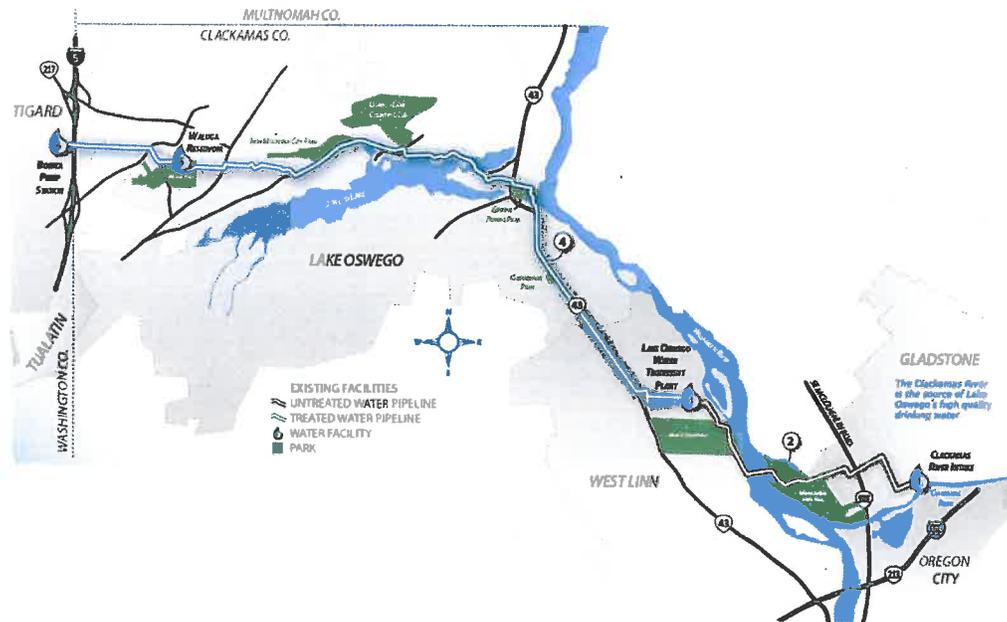


*During hot summer days, Lake Oswego's key water facilities operate 24 hours per day at maximum capacity. Pictured: the Clackamas River intake.*

Conserving water is the first and most important supply option for the Lake Oswego Tigard Water Partnership. Both communities have adopted comprehensive water-saving measures to encourage water conservation. But conservation alone cannot meet the long-term water supply needs for the City of Lake Oswego.

During hot summer days, Lake Oswego's key water facilities, including the water treatment plant, operate 24 hours per day at maximum capacity (16 mgd). Every pump is running round-the-clock to keep up with demand. There is no more treatment capacity available in the summer to cover additional demand. The system is also aging and cannot continue to function without significant upgrades.

## Planned System Improvements



### ***Where are key Partnership water facilities located, and how will they be affected?***

The Lake Oswego Tigard Water Partnership expands Lake Oswego's existing drinking water infrastructure so that it can serve both communities.

1. Lake Oswego withdraws water from the Clackamas River in Gladstone as it has done for over 40 years
2. This water travels through a large pipe under the Willamette River to the water treatment plant in West Linn.
3. In West Linn, the water is treated to safe drinking water standards.
4. The treated water is then pumped through another large pipeline to Lake Oswego.
5. Water is stored in the Waluga reservoir near the city's western boundary.
6. From there, water goes through pipes to Lake Oswego customers and to Tigard's Bonita Road pump station. (See the Planned System Improvements map).

The partnership project will upgrade, upsize and expand these six existing facilities.

### ***How much will water production expand and which city will receive the water?***

The Partnership plans to expand the water treatment plant capacity from 16 mgd to 32 mgd and ultimately to 38 mgd if the need arises. Successful water conservation would postpone future expansion. After system expansions are complete a total of 18 mgd would be guaranteed for Lake Oswego and 14 mgd for Tigard. If the plant is expanded in the future to treat all of Lake Oswego's 38 mgd water rights, Lake Oswego will receive the additional 6 mgd capacity.

### ***Why such a large project for what seems like a small increase in drinking water capacity for Lake Oswego?***

Lake Oswego's current system is capable of delivering 16 million gallons per day of drinking water—not enough to serve the community during summer peak use. The system is also aging and cannot continue to function without significant upgrades. The Partnership allows Lake Oswego to address service, capacity and reliability issues and deliver a total of 18 mgd per day in addition to 14 mgd for Tigard. This offers Lake Oswego significant cost savings over making upgrades alone and builds in capacity to serve anticipated needs into the future.

### ***Is Lake Oswego's water system being expanded to serve the Stafford area?***

Lake Oswego has no plans to serve the Stafford area, but must take into account that possibility in planning for drinking water over the next 50 years. The additional capacity Lake Oswego receives from the partnership will not serve the Stafford area.

In February 2010, the Metro Council voted to add the Stafford area to the region's urban reserve. This designation means the land can be considered for expansion into urban growth boundaries over the next 50 years. It is anticipated this 13,660-acre unincorporated area located north and south of I-205 will eventually be designated for urban development and served by existing cities: Tualatin, Tigard, Lake Oswego, West Linn and Wilsonville. A number of steps are required before Stafford area development can proceed in the future. Any annexation of land to Lake Oswego outside Lake Oswego's current Urban Service Boundary must be approved by voters before water service is extended.

***Will the improvements introduce new water treatment technology? How does this benefit water customers?***

A panel of national experts in drinking water treatment and public health recommended in June 2010 that Tigard and Lake Oswego pursue conventional filtration plus ozone treatment to best protect public health in the long term.



The use of ozone treatment offers multiple benefits:

- ✓ Provides an additional treatment barrier to protect public health
- ✓ Consistently produces water that is pleasant tasting, year-round.
- ✓ Reduces the amount of chlorine needed for disinfection.
- ✓ Is capable of meeting emerging concerns for pathogens, algal toxins, disinfection by-products, pharmaceuticals and personal care products.
- ✓ Represents proven technology, with the number of ozone installations increasing in Oregon and across the U.S. due to its ability to provide multiple water quality benefits.

To learn more about the water treatment recommendation and ozone, read Water Savvy 6: Experts Recommend New Water Treatment Method. Find it at [lotigardwater.org](http://lotigardwater.org)

***What is the schedule for making these improvements?***

The project started in December 2009 and will continue through 2016. Work occurs in four overlapping phases.

*A new treatment method is needed to meet regulations and satisfy customers' needs.*

Project Definition: *December 2009 – December 2010*

- ✓ Water Treatment Recommendation – *July 2010*
- ✓ Capital Improvement Plan– *November/December 2010*

Pre-design and Permitting: *July 2010 – February 2012*

Facilities Design: *March 2011 – October 2013*

Construction: *March 2012 – June 2016*

## **Anticipated Project Costs**

### ***How much will the Partnership improvements cost? What will be the impact on ratepayers in Lake Oswego and Tigard?***

Project costs for the joint water system improvements are being refined along with facilities planning. A project budget is anticipated early 2011, when planning for the upgraded water system is completed.

Funding sources for the Partnership project will likely include bonds issued by Lake Oswego and Tigard to be repaid over the years by customers' monthly water charges. Cities typically sell bonds to fund large capital projects. Both Lake Oswego and Tigard are increasing water rates to repay the principal and interest on bonds, and to operate and maintain the joint water supply system.

### ***How will costs be allocated between Lake Oswego and Tigard? How was this allocation decided? Are both cities paying their fair share?***

Project costs are allocated under the partnership agreement between the two cities. The capital cost split is based on preliminary calculations that take into account the peak water capacity each community will receive from the upgraded system. A preliminary estimate indicates total capital costs would be allocated 43% to Lake Oswego and 57% to Tigard. As more information is known about what repairs, replacements and expansions are needed at the water intake, water pipelines, water treatment plant, reservoirs and pump stations, the 43%/57% split will be adjusted.

Costs to operate and maintain (O&M) the Partnership's joint water facilities will also be split by Lake Oswego and Tigard. Fixed O&M costs – costs that do not change with water flow – will be allocated to each city based on its share of total capacity. Variable O&M costs – those related to flow – will be allocated based on each city's actual water consumption. Tigard will also pay Lake Oswego for the replacement cost of existing water system facilities (taking into account the facilities' reduced value due to wear and tear) that have capacity available to serve Tigard.

To learn more about cost sharing, read Water Savvy 4: Partnership Costs and Savings. Find it at [lotigardwater.org](http://lotigardwater.org)

## **Stay Informed**

### ***How can I find out more about the Partnership, ask questions, or get involved?***

For more information, visit the project website at [lotigardwater.org](http://lotigardwater.org). A good way to stay involved is to join the project email list (you can do this on the website) or follow us on Twitter or Facebook. You can also call the Water Hotline anytime at (503) 697-6502.

*Find it on the website [lotigardwater.org](http://lotigardwater.org)*

- Project Fact Sheet
- Informative Videos
- Comment Form
- Water Savvy Issues
  - Issue # 1: Drinking Water Treatment Decision
  - Issue # 2: Lake Oswego's Municipal Water Rights
  - Issue # 3: Time to Prepare for the Future
  - Issue # 4: Partnership Costs and Savings
  - Issue # 5: The Pressing Need for Water Conservation,
  - Issue # 6: Experts Recommend New Drinking Water Treatment Method
  - Issue # 7: A Close Look at Environmental Permitting