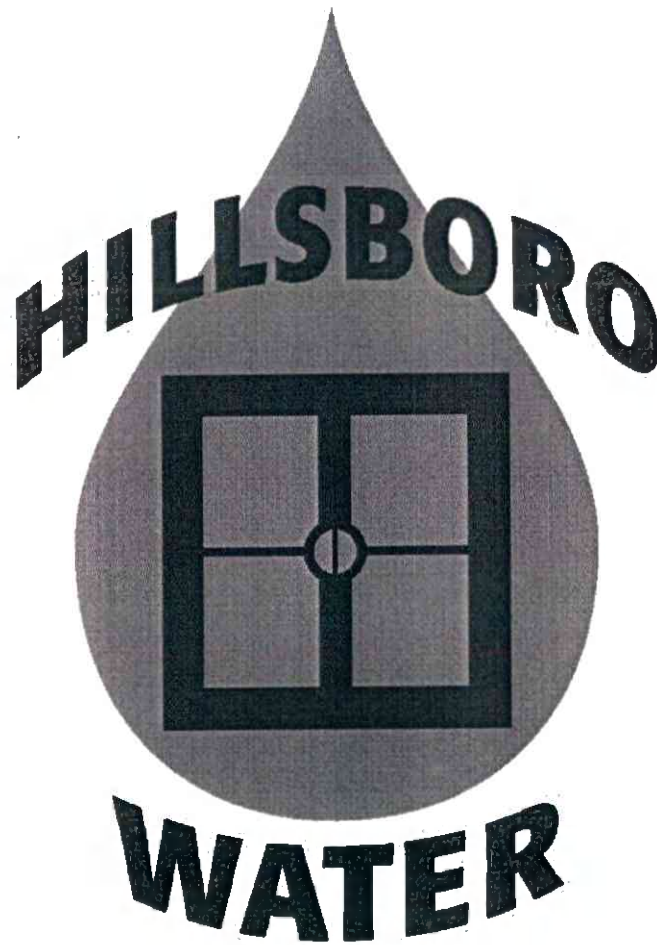


CITY OF HILLSBORO WATER DEPARTMENT



ANNUAL REPORT 2001-2002

For the year ending June 30, 2002

Department Overview

The City of Hillsboro Water Department operates under the Hillsboro Utilities Commission, with direction from the City Manager. The City of Hillsboro has been designated as the managing agency for the Joint Water Commission (JWC) and Barney Reservoir Joint Ownership Commission (BRJOC). The Water Department also operates under these Commissions with direction from the General Manager. The Commissions were composed of the following individuals on June 30, 2002.

Hillsboro Utilities Commission

William Crandall

Larry Soderholm

Shirley Huffman

Joint Water Commission

Hillsboro

William Crandall

Larry Soderholm

Shirley Huffman

Forest Grove

Nancy Spieler

Rod Fuiten

Carl Heisler

Beaverton

Forrest Soth

Rob Drake, Mayor

Jesse Lowman

Tualatin Valley Water District

Jim Doane

Jim Duggan

Greg DiLoreto

Barney Reservoir Joint Ownership Commission

Jim Duggan

Will Crandall

Rod Fuiten

Forrest Soth

Bob Cruz

Tualatin Valley Water District

City of Hillsboro

City of Forest Grove

City of Beaverton

Clean Water Services

Hillsboro City Manager/JWC & BRJOC General Manager

Tim Erwert

Hillsboro Water Department respectfully submits the Annual Report for fiscal year 2001-2002.

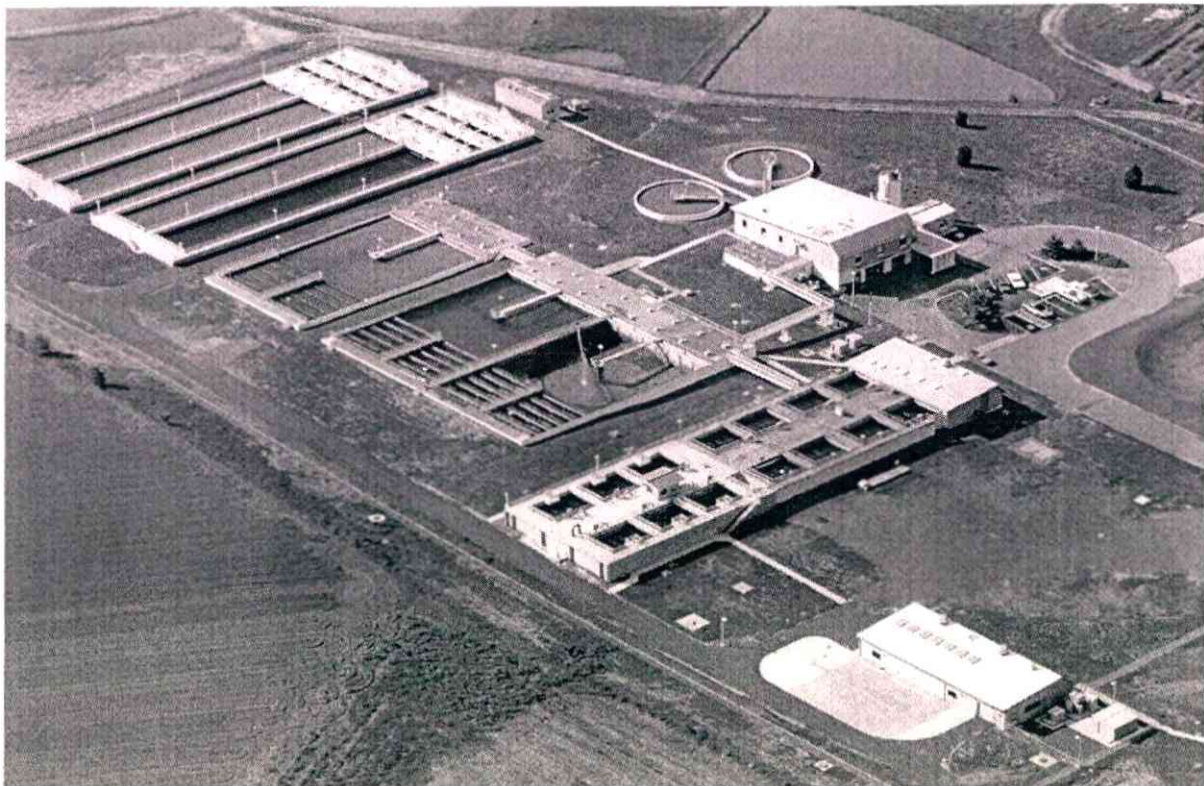
Joe Thompson

Water Department Director

Our Commitment

For the last two years, the Water Department has had a commitment to provide safe high quality water, in adequate supply, for all our customers. We are proud of our history of quality service and strive to continue our leadership role in the water industry.

To maintain our commitment, our treatment operators routinely collect and test water samples for purity from various points throughout the entire system. Our treatment plants are constantly maintained, evaluated and upgraded to stay abreast of the latest advancements in technology, health science and government regulations. Due to foresight, planning, and operation efficiency, we are able to provide high quality drinking water at an economical price.



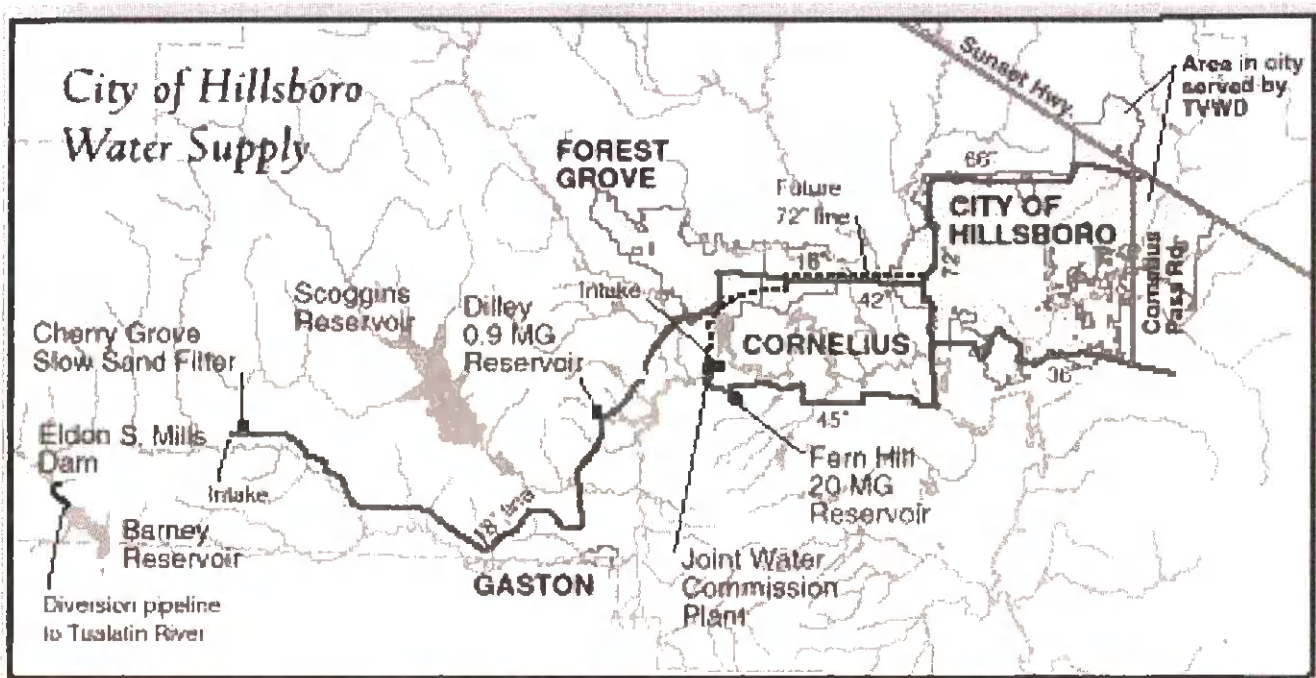
Joint Water Commission Water Treatment Plant

Where Does our Water Come From?

All of the water that runs through your tap is treated surface water, which means it comes out of a river or reservoir. Our water source originates in the Coast Range and flows into the upper Tualatin River. Summer flows are augmented by winter water from the Trask River, which is impounded in the Barney Reservoir for storage and then diverted into the Tualatin River during the summer months. Summertime flows are also supplemented by stored water in the Scoggins Reservoir.

Water is drawn out of the upper Tualatin River for filtration and treatment at either the Cherry Grove Slow Sand Filter Plant (SSF) or the Joint Water Commission (JWC) Treatment Plant. Both plants operate 24 hours per day, 365 days per year. The SSF Plant can treat up to three million gallons per day (MGD). The JWC plant is the second largest water treatment plant in Oregon, with a peak treatment capacity of 70 MGD. The City of Hillsboro typically uses 10 MGD, but summertime peak can push that demand over 20 MGD.

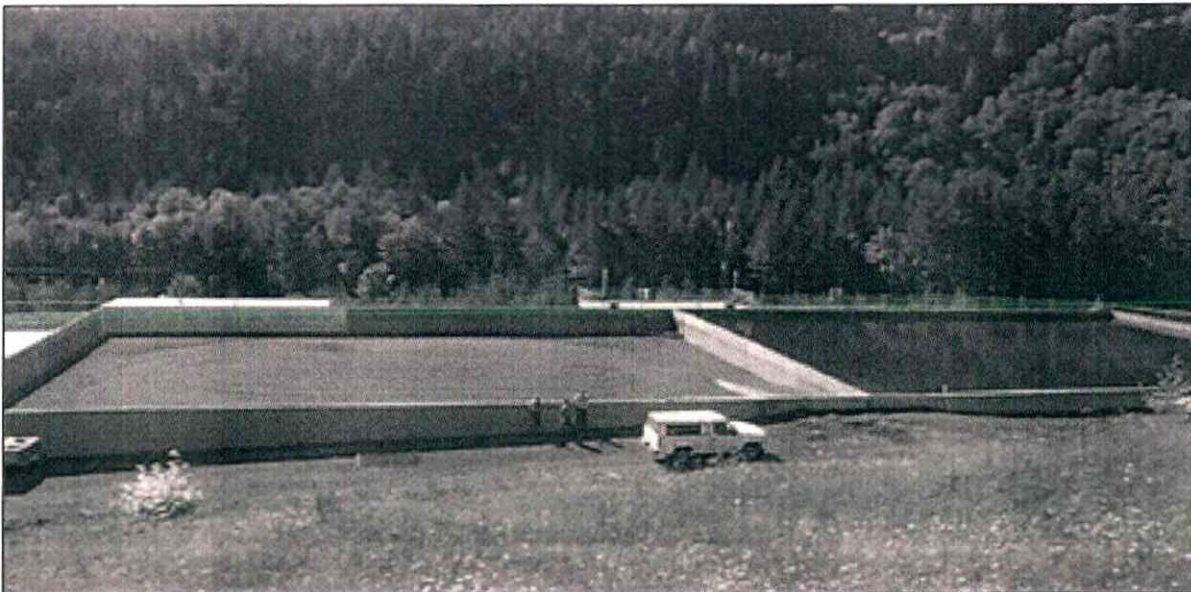
After treatment, SSF water is transmitted through an 18-inch line to the City of Cornelius, and along the way it serves Cherry Grove, the City of Gaston, the L.A. Water Cooperative (Co-op), and the Dilley area. A 45-inch line transmits the treated water from the JWC plant to south Hillsboro. A 42-inch intertie connects the 45-inch line south of Hillsboro to a 72-inch line, which carries water to the north end of town. There are approximately 275 miles of distribution lines that run under the City of Hillsboro and tie into the transmission lines. These lines provide water to over 18,000 business and residential connections.



Our Customers

The City of Hillsboro owns and operates a municipal water system that serves nearly 50,000 customers (or 19,000 connections) in Washington County, Oregon. This includes both partial and full ownership of facilities that provide direct and wholesale delivery of water. The City's service territory is broken into two main parts; with one part serving a portion of the City's own municipal territory and the other part serving more than 600 direct service connections in rural Washington County, along with wholesale service to the Cities of Gaston, Cornelius, and the LA Water Cooperative.

As a member of the Joint Water Commission (JWC), the City has partial ownership in various JWC facilities. These include raw water storage in both Scoggins and Barney Reservoirs; treatment capacity in the JWC's plant located along the Tualatin River south of the City of Forest Grove; and various transmission capacities in the associated JWC transmission mains that serve the Cities of Forest Grove, Hillsboro, and Beaverton and the Tualatin Valley Water District (TVWD). In addition, the City owns its own slow sand filter plant located along the Tualatin River near Cherry Grove and Haines Falls. The water from the slow sand filter facility is used to serve wholesale water to the Cities of Gaston and Cornelius and the LA Water Cooperative; along with retail service to more than 600 rural Washington County residents located in and around the unincorporated areas known as Dilley, Cherry Grove, and Laurelwood. The City also presently owns 31.5 MGD of installed treatment capacity in the current JWC plant.



Cherry Grove Slow Sand Filter

Our Department and Staff



Members of the Water Department Staff enjoy the Annual Employee-Recognition Potluck.

Hillsboro

40-Year Water System Master Plan

In December of 1998, the Hillsboro Utilities Commission made a request for proposal for the preparation of a comprehensive Master Plan of the Hillsboro water system. The new plan was to include the period of years 2000 to 2040. This plan was completed and adopted in January.

Water Storage Tanks

Future capital improvement requirements to Hillsboro's water system are identified in the newly adopted 40-year Water System Master Plan. This includes over \$36 million in water distribution system and storage facility improvements inside the city limits of Hillsboro and another \$51 million for Hillsboro's share of JWC projects. These improvements are necessary to ensure Hillsboro's ability to meet future demand.

The most immediate improvements recommended in the plan are more finished water storage facilities in town. In response, staff was authorized to purchase a 6.1 acre parcel from the Intel Foundation to use as a site for the construction of a new 15 million-gallon reservoir. The department anticipates having a new storage tank in service by October of 2003. The new site construction will be followed immediately by the rehabilitation of our existing 6 million-gallon reservoir, which is projected to be completed in FY 04-05. The Commission authorized staff to receive bids for both the 15 MG Reservoir and the rehabilitation of the 6 MG Reservoir.

Operations and Maintenance

SE 7th Avenue Waterline Replacement

This waterline project is located on SE 7th Avenue between Oak Street and Baseline Street. It will require installation of 470+/- LF of 8" ductile iron pipe to replace an existing 4" OD steel waterline.

New Witch Hazel Elementary School

The Water Department participated in a off-site waterline improvement that was required on SW 247th Avenue for the new Witch Hazel Elementary School.

NW Bailey Avenue CDBG & Waterline Replacement

This waterline replacement was made between West Main Street and NW Rachel Street.

Joint Water Commission

Transmission Lines

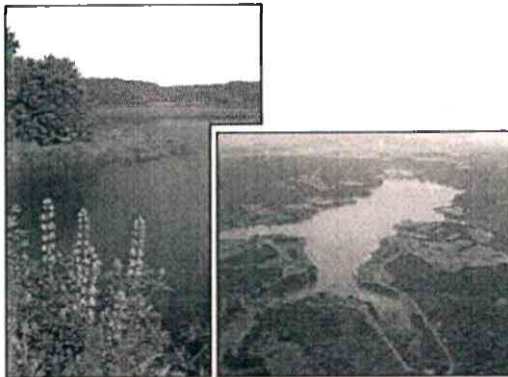
NTL Phase 2A has been substantially completed, with the installation of over 77% of the 72" diameter pipeline. The project runs along T.V. Highway from the west end of Hillsboro to the center of Cornelius. The project also included replacement of the Cornelius' old 18" steel line, which has been leaking for many years and causing traffic delays, service interruption and countless scars in the asphalt. Additionally, Phase 2B, which consists of an additional 20,000 feet of pipe, is under contract and construction will begin in the next few weeks. Approximately 23% of the street construction work for the City of Forest Grove has been completed. Installation of 2,601 feet of the 14" sanitary force main for Clean Water Services has been completed as well.



Planning for our Future

In-Town Finish Water Storage Facilities

The City is currently facing a shortage in storage volume and will be significantly deficient by the year 2040. Recommendations were made within the Water System Master Plan to increase present storage from a total of 15 Million Gallons (MG) to 54 MG over the next 40-years. Along with the plan to rehabilitate the existing 6 MG, NE 24th Avenue Reservoir; construction of a new 15 MG reservoir near the high tech corridor; a new 10 MG Parkwood Reservoir; and participation in any new JWC reservoirs will be included to meet our future water storage demand of three (3) average days supply.



Exploration of Additional Water Source

The City of Hillsboro is participating in the Tualatin Basin study to determine the best method of obtaining additional raw water storage for the region. The City of Hillsboro is looking to provide for future water needs while maintaining a balance between supply, demand and environmental stewardship.

Joint Water Commission - Finished Water Storage

The members of the JWC own a single 20-MG reservoir located approximately ½ mile east of the JWC treatment plant atop Fern Hill. The facility, known as the Fern Hill Reservoir, provides equalization and storage for the JWC members. The City owns 45 percent of the volume stored at this location, equating to 9 MG of municipal storage. The site atop Fern Hill also contains room for the placement of an additional 20-MG reservoir to be built as part of a planned potential expansion of the JWC facilities.

Water Conservation

The City and Community Doing their Part

In the past fiscal year, the City of Hillsboro has participated in many conservation efforts to educate the community as to the importance of water conservation. This was accomplished through the following achievements:

- ◆ Billboards were posted throughout Western Washington County encouraging conservation. (Cost: \$1500 to design; produced for free; paid \$895 for three boards, but received free added display time at additional locations.)
- ◆ Radio conservation tips began airing on June 13th and continued through the fiscal year on multiple area radio stations. The tips ran in conjunction with traffic reports during peak driving hours and gave credit to individual agencies with the tag line, "One of your Westside water providers". (Cost: Total \$21,600 for 12 weeks of paid ads at 40 per week, but received approximately 20 free bonus spots per week.)
- ◆ From June 2001 to September 2001, the Argus ran a weekly status graphic and "tip of the week". Both the Oregonian and Argus ran stories on the water situation throughout the summer and asked people to conserve. (Cost: Free)
- ◆ Agencies partnered with Kaady Carwash to encourage the use of water-efficient carwashes that recycle their water. Coupons were handed out for 50% off. (Cost: Free)
- ◆ Staff worked at various community events, such as the Tuesday Market, the Tualatin Watershed Festival, and the Washington County Fair. They distributed information and water efficient devices. (Cost: Small costs for booth space at Fair and Taste; agencies donated handouts.)
- ◆ Westside Water Providers are collaborated with Clean Water Services on an improvisational water show for Middle-schoolers. The program is called

“Fish out of Water”. Shows began in winter 2002 and were held at every middle school in the City of Hillsboro. (Cost: \$15,335 for development, \$225 per show.) Hillsboro Water is also sponsoring shows at Hillsboro Elementary Schools, including the “Where’s Rosie?” a puppet show for lower elementary.

- ◆ Westside agencies are partnering with Community Action to provide conservation information to low income customers. (Cost: Staff time and give-aways.)
- ◆ Hillsboro and TVWD partnered with Hillsboro Parks and Recreation to install a weather station in Hillsboro that will be accessible to commercial and residential customers wishing to irrigate using evapotranspiration information. This system continues to be implemented throughout the City of Hillsboro parks. (Cost: \$15,000)
- ◆ 1200 4th-6th grade students and teachers attended the Ninth Annual Clean Water Festival and learned about clean water and watershed in a fun, interactive manner.

In addition to the previous items, The Regional Water Providers Consortium, which the City of Hillsboro Water Department is a member of, also put together a year end report that included water conservation. The report is as follows.

Conservation

This was the first year that the Consortium has had paid, dedicated staff to support the conservation program. Rebecca Geisen has spent 50% of her time implementing conservation programs on behalf of the Consortium Conservation Committee (CCC). She was assisted by a part-time administrative assistant (.25 FTE). The primary responsibility of staff in 01-02 was to implement and manage the summer marketing campaign and do all contract administration. Water provider staff has continued to provide volunteer staffing at a reduced level. A full time Program Coordinator has been hired and will begin working in October 2002. A new Conservation Committee Chair was also appointed. Judi Ranton of Portland was nominated by the Conservation Committee as the new Chair. Kim Swan left the post after serving for three years. The following is a summary of the conservation program by activity.

Marketing Campaign

The summer 2001 marketing campaign was similar to the previous two years. The objectives of the campaign were to increase awareness about water conservation and educate customers how to conserve water. The creative theme, “Water. Be Resourceful With It.” was carried over from the previous years. The campaign featured television, radio, billboards and transit. The Consortium paid \$77,000 for media and received over \$319,000 worth of media in “added value” (free) through Public Service Announcements, TV interviews,

gratis billboards, radio on-air mentions and promotions. In total, there were 466 TV spots, 333 radio spots, 11 billboards and 10 posters and 337 bus sides and interior transit cards. Several articles were written in the local press about water conservation and the efforts of the Consortium. The Consortium also sponsored 5 landscape workshops during the summer. There were also various TV interviews on local stations. KPTV taped a segment with Mike Darcy at TVWD's demonstration garden. AM Northwest interviewed Chris Totten at the Portland Nursery about water conservation. Kim Swan and Rebecca Geisen were interviewed on Fox 49 News Extra. More information about the campaign can be found in Ant Hill's 2001 Summer Campaign Evaluation.

The contract with Ant Hill Marketing ended in November 2001. Consortium staff and the CCC prepared an RFP, reviewed proposals and selected the firm of Dodge, Schmitgall, inc. (DSi) to develop the 2002 summer campaign. DSi worked in the spring of 2002 to redesign the web page and to develop the theme, and advertising for the 2002 campaign.

In the fall, the Consortium evaluated the 2001 Summer Marketing Campaign to measure its effectiveness in communicating a water conservation message to our public. Campbell DeLong Resources, Inc. was selected through a competitive bid process to do the evaluation. The survey examined residential outdoor water usage patterns, helped determine the level of awareness of the water conservation messages promoted by the RWPC, and identified the media through which residents learn about conservation. A report explaining the findings was published in October 2001 and was a key resource in developing the 2002 campaign.

Yard Garden and Patio Show

This is a popular and standing event for the Consortium. We have the opportunity to interact with hundreds of people. Counting visitors is almost impossible, but based on the amount of items we gave away, it is reasonable to expect that we interacted with over 1000 people. Our message was soil quality and the benefits of compost. We partnered with Drakes Seven Dees, who provided our booth with low water use plants and we also had a soil bin that demonstrated different soil types and the benefits of compost.

Youth Education

One of our biggest accomplishments this year was the development of a regional water supply cartoon map geared towards kids and use in the classroom. Through a competitive bid process, cartoonist Joe Spooner was selected to develop the map. It took a tremendous amount of coordination and effort by the Conservation Committee to ensure that the map captured the essence of each water provider and schematically portrayed the regions water systems and sources in a fun and interesting way. Interactive activities are on the back of the map. These maps are being distributed to schools all around the region.

Technology Today

GIS Development/GPS Project

Geographical Information Systems (GIS)

What is GIS (Geographical Information System)?

"A computer system for capturing, storing, checking, integrating, manipulating, analyzing and displaying data related to positions on the Earth's surface"; as defined by the University of Edinburgh.

What is GPS (Global Positioning System)?

The GPS is a Department of Defense developed, worldwide, satellite-based radio navigation system. The constellation consists of 24 operational satellites.

The Water Department has been involved in a GIS pilot program that is to be used for the development of the Water GIS program. This project entailed evaluation of two types of information: existing aerial contours, water index and distribution maps and the as-built construction drawings; plus, actual field GPS data of existing features, which includes the location of valves, meters and hydrants.

Environmental Systems Research Institute (ESRI) was contracted to create the geodatabase model and implement and revise it through a one square mile pilot project. The pilot project was completed by the end of the fiscal year 2001-2002. A review of this project required a cost re-evaluation for continuation. Inside Oregon Enterprises, Engineering Support Unit (ESU) was selected to complete the data conversion. Hillsboro's Information Services (IS) Department managed the data conversion project and adjusted the geodatabase model as needed. The GPS data collection for the pilot project was completed early in the fiscal year.

Partnerships and doing our Part

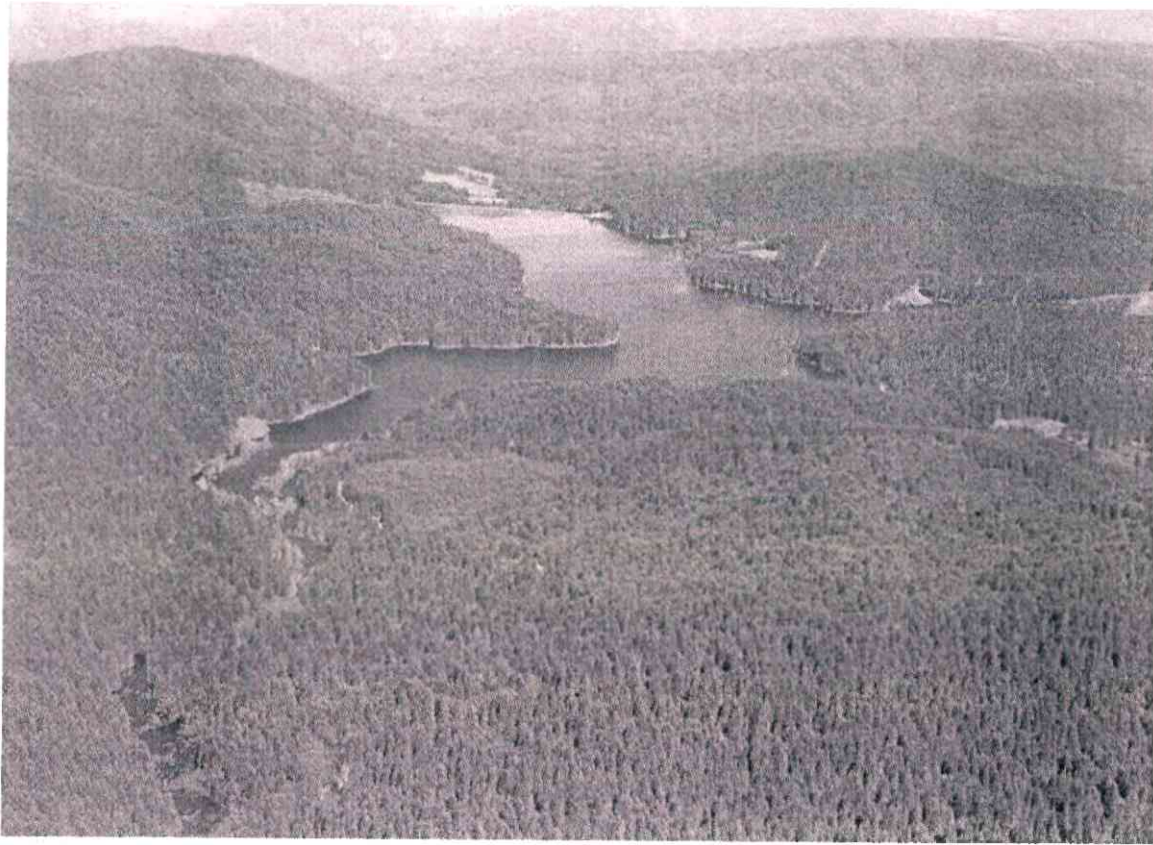
Joint Water Commission

The Joint Water Commission (JWC), founded through an intergovernmental agreement in 1976, is a joint authority formed to provide treatment and storage of water supplies to its members: Hillsboro, Forest Grove, Beaverton and Tualatin Valley Water District. This water group was formed in order to meet the demands of the expanding communities.

Regional Water Providers Consortium

In 1996, 25 cities and special districts, plus Metro, endorsed the Regional Water Supply Plan (RWSP) for the Portland metropolitan area, and in-so-doing, formed the Regional Water Providers Consortium to coordinate and oversee

implementation of the plan. The Consortium provides a forum for collaboration on water supply, resource management and conservation efforts.



Barney Reservoir in the Spring

Statistics of Operations, Maintenance and Treatment Activities

	<u>1999-2000</u>	<u>1999-2000</u>	<u>2001-2002</u>
Investigations	418	515	554
Hydrants			
Services & Repaired	1,409	1,033	1,912
Installed	0	0	0
Blue Dots Installed	0	0	593
Valves Located/Casings	113	183	168
Line Locations	3,857	5,414	4,161
Transmission Line Repairs 18"	9	20	6
Mainline Repairs	77	54	63
Service Line Repairs	329	460	483
New Meters Installed	654	655	1,365
New Services Installed	86	118	97