CITY OF HILLSBORO
WATER DEPARTMENT

2003-2004 ANNUAL REPORT

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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, by its partners, 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 Commission was composed of the following individuals on June 30, 2004.

Hillsboro Utilities Commission

William Crandall

Larry Soderholm

John Godsey - Appointed in 2004

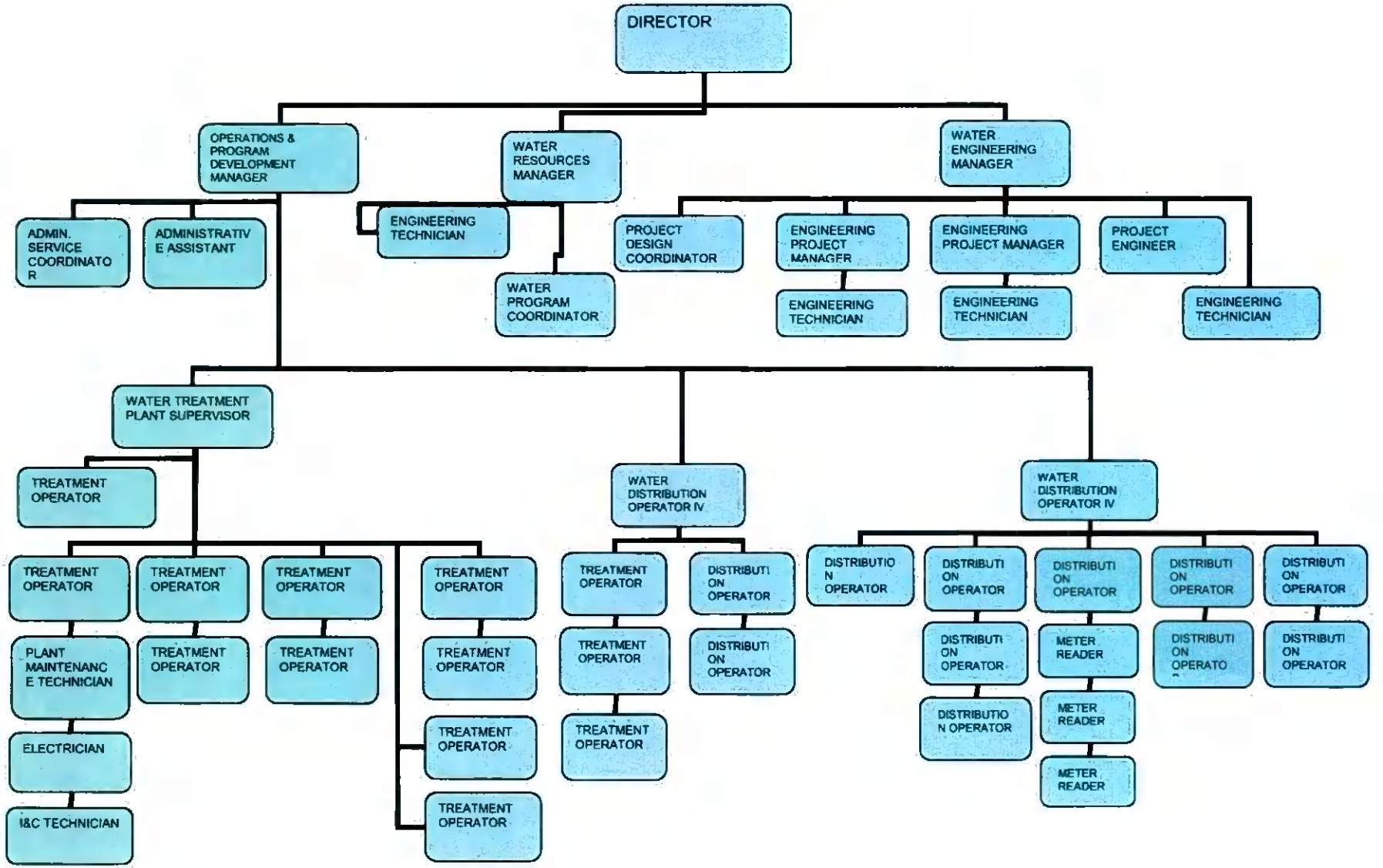
Shirley Huffman - Retired in 2003

Hillsboro City Manager/JWC & BRJOC General Manager

Tim Erwert City of Hillsboro

The City of Hillsboro Water Department respectfully submits the Annual Report for fiscal year 2003-2004.

Joe Thompson Water Department Director


DIRECTOR
OPERATIONS & PROGRAM DEVELOPMENT MANAGER
WATER RESOURCES MANAGER
WATER ENGINEERING MANAGER
ADMIN. SERVICE COORDINATOR
ADMINISTRATIVE ASSISTANT
ENGINEERING TECHNICIAN
WATER PROGRAM COORDINATOR
PROJECT DESIGN COORDINATOR
ENGINEERING PROJECT MANAGER
ENGINEERING TECHNICIAN
ENGINEERING PROJECT MANAGER
ENGINEERING TECHNICIAN
PROJECT ENGINEER
ENGINEERING TECHNICIAN
WATER TREATMENT PLANT SUPERVISOR
TREATMENT OPERATOR
TREATMENT OPERATOR
TREATMENT OPERATOR
TREATMENT OPERATOR
TREATMENT OPERATOR
PLANT MAINTENANCE TECHNICIAN
TREATMENT OPERATOR
TREATMENT OPERATOR
TREATMENT OPERATOR
TREATMENT OPERATOR
ELECTRICIAN
TREATMENT OPERATOR
I&C TECHNICIAN
TREATMENT OPERATOR
WATER DISTRIBUTION OPERATOR IV
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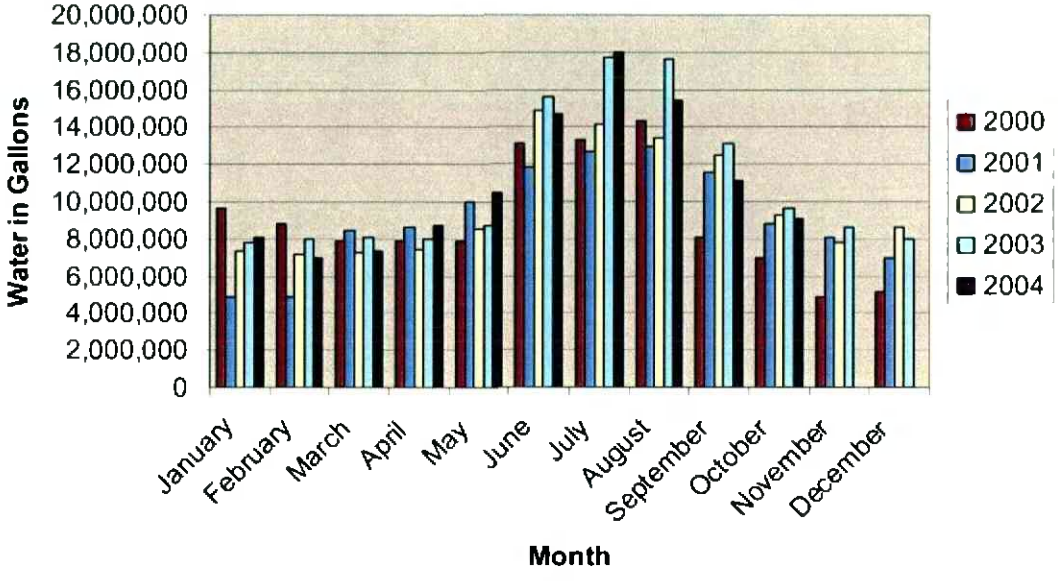
WHERE DOES OUR WATER COME FROM?

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 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.

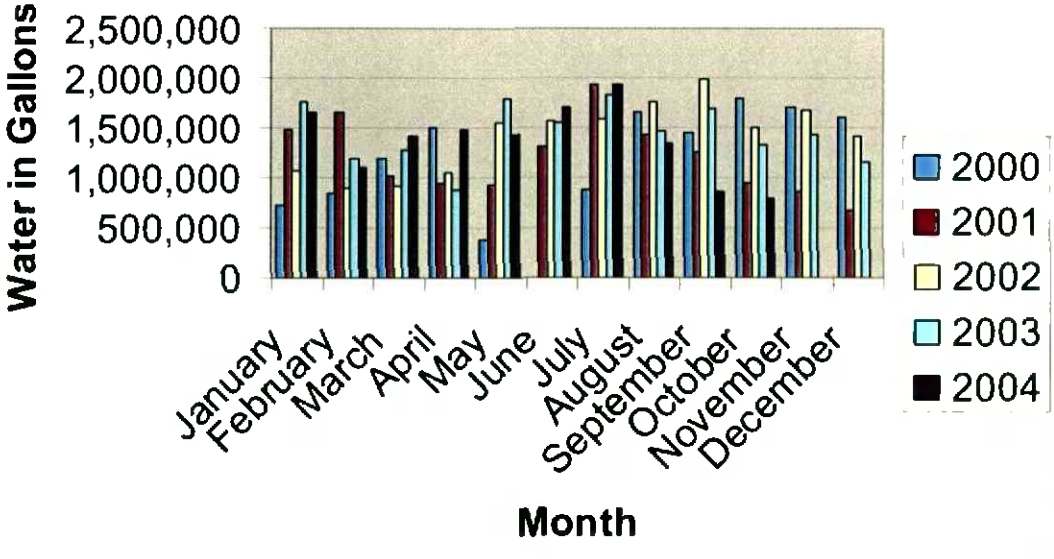
Water is drawn out of the upper Tualatin River for filtration and treatment at either the Cherry Grove Slow Sand Filter Plant (SSF) or the Joint Water Commission (JWC) Treatment Plant. Both plants operate 24 hours per day, 365 days per year. The SSF Plant can treat up to three million gallons per day (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 daily average is 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 as of 6/30/04, 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.

Cornelius Pass Road provides a rough service territory boundary between Tualatin Valley Water District (TVWD) and Hillsboro. Annexations are being done between the two water providers, post Senate Bill 122, in order to make the dividing line more precise. This will give Hillsboro several hundred additional services on the west side of Cornelius Pass Road. However, some of these areas will continue to be served by TVWD and its sources after annexations are complete, until Hillsboro service connections are extended to those areas.

City of Hillsboro 5-Year Monthly Average Water Production
Source: Joint Water Commission Water Treatment Plant



5-Year Monthly Average Water ProductionSource: Slow Sand Filter Plant



WATER RESERVOIRS ONLINE IN 2004

In August 2000, the City of Hillsboro completed a 40-Year Water Master Plan. The plan states that Hillsboro was deficient in the amount of in-town finished water storage capacity. The American Water Works Association recommends that cities have a minimum of three average days of in-town water storage capacity in case of an emergency. Hillsboro's average daily water usage is 9 Million Gallons per Day (MGD).

Two in-town storage reservoirs were brought online in 2004 as part of fulfilling the commitment to the Master Plan. The 15 MG Shute and Evergreen finished water reservoir began the design phase after Utilities Commission approval on June 12, 2001, and has been operational since January 2004.

In addition, the 6 MG Reservoir on 24th Avenue was rehabilitated and began to fill and pump in June 2004. CH2MHILL was the design consultant and Ward Henshaw Construction, Inc. was the contractor for both reservoir projects.

The Water Department is searching for a suitable site for a new 10-15 MG reservoir so that total in-town storage can be brought up to the Master Plan's three-day commitment.

24th Avenue Reservoir

BEFORE

AFTER

WATER RATES

In August 2003, the Utilities Commission approved a 6.5% water rate increase for Hillsboro Water customers. However, even with the increase, Hillsboro continues to have one of the lowest rates in comparison with surrounding water providers. Hillsboro's typical monthly residential water bill (based on 10 ccf per month) is lower than bills in cities such as Forest Grove, Lake Oswego, Beaverton, Tualatin Valley Water District, Sherwood, and Wilsonville. The following chart gives a comparison of these monthly rates.

All Water Department operations and construction are fully supported by revenue from water rates and fees; the Department does not receive any support from property taxes or the City's general fund.

Comparison of Typical Monthly Residential Water Bill (using 10 ccf per month)	
1. Hillsboro (before rate increase)	17.46
2. Hillsboro (after rate increase)	18.63
2. Forest Grove	19.12
3. TVWD	22.96
4. Tigard	21.50
5. Portland	24.64
6. Beaverton	24.87
7. Cornelius	23.67
8. Wilsonville	37.40

WATER TECHNOLOGY

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".

GIS is utilized throughout the City of Hillsboro in various departments. Currently, approximately 95% of the water utilities in the City of Hillsboro have been mapped into the City's GIS System. Items such as waterline types and sizes, valves, services, and meters are now available. The GIS system is available on six field laptops, allowing distribution crews to access maps while in the field. This allows staff to correct any mapping errors discovered while out in the field, to update existing data onsite, and add new developments and additions as they are built. The system is set up to enter all new construction into GIS within a year of completion. A synchronized method will be used to make corrections and update the system and only staff with GIS Editor capabilities can make changes to layers in the system to prevent errors and/or duplicated data from being entered. At this time, Dave Westby is the GIS Editor for the Water Department.

Other agencies, such as Portland and Tualatin Valley Water District (TVWD), use similar systems. Coordinating with such surrounding agencies is important in order to have accurate mapping information along water service territory boundaries. Internally, monthly classes and annual map competitions are set up to assist in effective communications between departments to make ongoing improvements within our system.

WATER CONSERVATION

Hillsboro Water spent $36,500 on local conservation programs in FY 2003/04. Hillsboro spent another $ 28,504 on its funding portion for regional conservation programs.

Programs that continued from years past include: Participation in Tuesday Markets, Westside Home Improvement Show, Public Works Washington Square Event, Washington County Fair, Intel Earthweek, Tualatin Riverkeepers' Discovery Day, and the Community Action Energy Fair. Hillsboro also participated in Regional-sponsored events including: Salmon Festival and the Yard, Garden and Patio Show. Information on conserving water and water-saving tools were provided to the public at all events. Hillsboro staff taught conservation classes at Patterson and Dilley Elementary Schools and also offered an educational puppet show to Hillsboro schools. Hillsboro supported (staff and funding) the 11th Annual Clean Water Festival for 1000 fourth and fifth-graders at Portland Community College. The Washing Machine Rebate Program continued with 276 $50 rebates provided to customers who purchased water-wise washing machines. At the Community Action Fair, staff handed out indoor water conservation kits to participants, who were mostly low-income, Spanish-speaking customers. The instructions for the kit were provided in both English and Spanish. The kits are also available at Utility Billing's front counter for high water users. Hillsboro also sent out water conservation tips to all customers as a summer bill stuffer. Hillsboro also participated in the Regional Marketing campaign that blanketed the Portland area with "WaterWise" TV and Radio spots throughout the summer and also had public relations pieces on TV and radio shows, such as *Good Day Lifestyles, AM Northwest, In the Garden, The Garden Doctor* and *Simply Gardening.*

New conservation programs were developed and implemented in 2004 that were direct results of citizen input. At the Town Hall meeting in 2003, citizens demanded that the City of Hillsboro do something to help local schools, which were in dire economic straits. Hillsboro School District had the shortest school year in the State of Oregon during the 2002/2003 year, due to budget cuts. After that meeting took place, the City Council called upon the City Manager and Department Managers to come up with strategies for providing services to schools.

Soft programs provide teachers with educational resources they might not be able to afford otherwise and they educate future customers, but they don't do much for the school budget, so the Water Department considered opportunities for "hard" programs. A "hard" conservation program could lower water use (which would help meet Department conservation goals) and also lower water bills (which would help the School District's bottom line).

Since many of the buildings in the Hillsboro School District were built in the early to mid 20th century, one option was to provide audits and money for plumbing fixture improvements for the school that would aid in reducing water use. In March 2004,

Hillsboro Water hired consultant SBW Consulting to perform one pilot audit at Brookwood School. They were to evaluate indoor and outdoor water usage and propose water saving suggestions that showed a payback of less than 10 years (this was the timeline that was acceptable to the school district). After reading the report and suggested changes, the School District was motivated to make changes and decided that they could afford the infrastructure improvements with their capital budget and would prefer the Water Department to fund more audits, rather than pay for the improvements. Hillsboro ended up spending a total of $7600 to fund audits at four Hillsboro schools including: Brookwood, Peter Boscow, W.L. Henry and Minterbridge. The savings were estimated at 1.5 million gallons of water per school year and an average of 41% reduction in water/sewer costs for each of the schools, if all suggested changes were implemented. Hillsboro School District spent the summer changing out the plumbing fixtures and October water bills are already reflecting the savings. This has been a win/win partnership for Hillsboro Water and the School District and more audits are planned for 2005, with hopefully similar results.

BACKFLOW PREVENTION

The Water Department operates on active backflow protection inspections program. The following information is provided to customers to inform them about requirements for in-ground sprinklers.

Thinking about In-ground Sprinklers?

Here are some things you should know:

The addition of a lawn sprinkler system is an asset to any residential home. Unfortunately, improper installation can be a serious health hazard if it allows contaminated water to enter your potable water supply. The City of Hillsboro, in accordance with Oregon Administrative Rules 333-61-07 and Public Law 99-339 of the Safe Drinking Water Act of 1986, has the responsibility to protect the public potable water supply. This means preventing water from unapproved sources and any water contaminated by toxic chemicals or potentially harmful fluids, from siphoning into your drinking water.

Many approved backflow prevention devices are available on the market. Every year, the State issues a list of approved devices and each approved device has its own installation standards. If you are unsure whether a device is approved for use, please contact the City at (503) 681-6144 for a copy of the list.

A plumbing permit and backflow inspection is required before the irrigation system can be activated. The current cost of the permit is $59.40 and is available from the City of Hillsboro's Building Department.

If you are planning to install a double check valve, or pressure vacuum breaker, it is required to be tested by a State Certified Tester upon installation and annually thereafter. The homeowner will need to contract for these services with an Oregon State Certified backflow tester.

Atmospheric Vacuum Breakers are another option for homeowners to use for backflow protection. AVB's do not require annual tests, but they do have special requirements for installation that must be met in order to be approved. Maintenance of any backflow device is the responsibility of the homeowner.

It is also important to note that, in the interest of public health, there are no grandfather clauses for backflow protection. If you have already installed a backflow device on your irrigation system, you will still need to apply for a plumbing permit and have the installation inspected by the City. Annual testing, if applicable, is still required as well.

Questions? Please call the Water Department at (503) 615-6732, or the Building Department at (503) 681-6144.

2003-04 FISCAL YEAR FACTS:

WATER PRODUCTION:

Peak Day Water Consumption:
21.56 Million Gallons (July 29, 2003)

Average Daily Water Consumption: 10,915,144

Total Annual Water Consumption:
5 billion gallons of water.

How many customers does Hillsboro provide water for? 65,000

WATER MONITORING:

Every Tuesday, water samples are taken randomly at various points throughout Hillsboro in order to ensure water quality is maintained throughout the city.
How many water samples were taken? 1,133

How many backflow devices were monitored and tracked? 4,400

WATER METERS:

How many meters were installed in FY 03/04? 1,500 residential meters and 90 commercial meters.

How many meters does Hillsboro read and maintain? 20, 257

How many meters, on average, are read per day? 400 meter reads per meter reader.
(The City employs 3 meter readers)

VALVES AND HYDRANTS:

How many water valves are maintained by the city? 8,280
These valves are located at various blow off stations, mainlines, fire hydrants, water services, fire lines, and vaults throughout the city.

How many total fire hydrants are located and maintained in the city? 2,117

How many hydrants were opened for mainline flushing, and repaired or maintained? 2,075

WATER LINE LOCATES:

The Water Department owns and maintains the water mains in the street and the water lines from the main line to the meter. Water line locates need to occur before any excavation or digging is done on private property in order to prevent damaging the existing utilities.
How many water lines were located? 4, 044

2004 CITY MAINLINE TOTALS:

Just how many miles of public water mainlines are running through Hillsboro? 247.95 miles of water and hydrant mainlines run through Hillsboro.

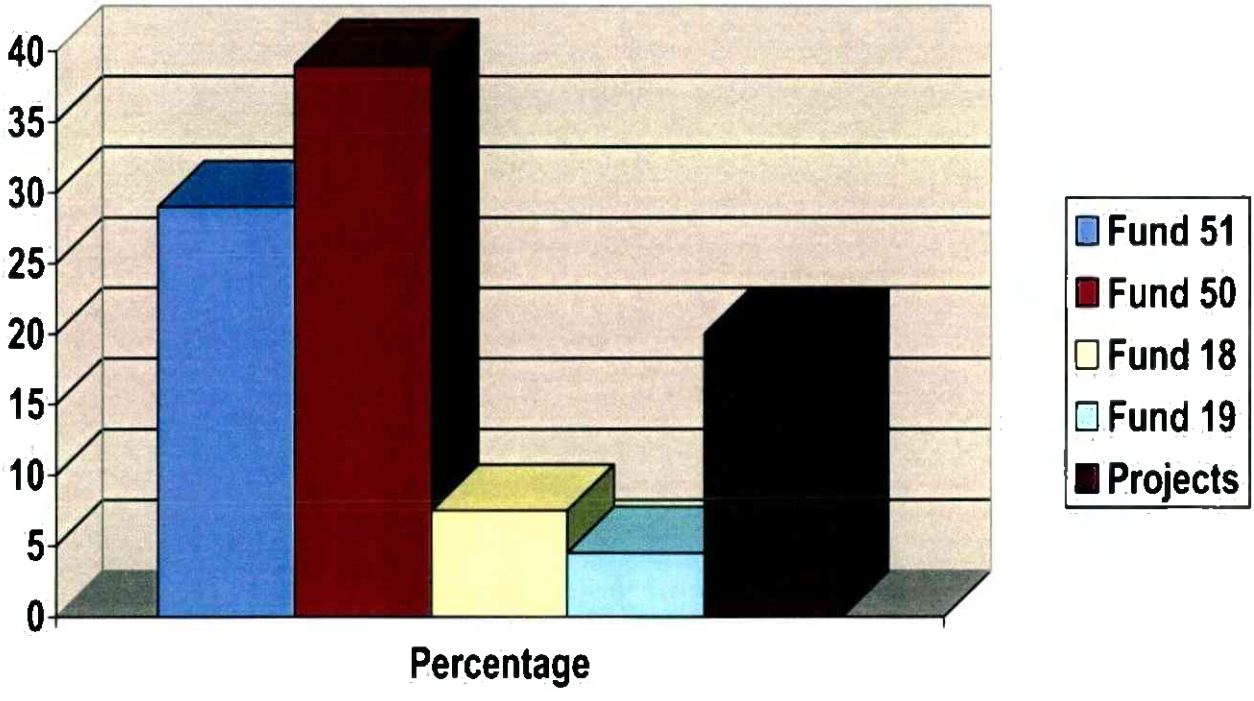
Mainline sizes and length in miles:

1" = .6 miles
2" = 5.1 miles
3" = .1 miles
4" = 15.6 miles
6" = 54.4 miles
8" = 89.1 miles
10" = 35 miles
12" = 23.4 miles
16" = 10.7 miles
18" = 12.6 miles
24" = 1.3 miles

Hydrant Mains:
4" = .2 miles
6" = 7.8 miles
8" = .1 miles

2003 PERSONAL SERVICES ALLOCATION SUMMARY

Fund	Budget	Percentage
Fund 51	$1,058,320	0.29
Fund 50	$1,428,453	0.39
Fund 18	$274,228	0.075
Fund 19	$164,467	0.045
Projects	$739,426	0.2
TOTAL	**$3,664,894**	



JOINT WATER COMMISSION

JWC WATER TREATMENT PLANT

THE JOINT WATER COMMISSION

The Joint Water Commission (JWC) is a joint water authority formed in Washington County, Oregon to provide treatment and storage of water supplies to its members. The JWC was originally formed in 1976 through an intergovernmental agreement (IGA) between the Cities of Hillsboro and Forest Grove, to meet the municipal demands of their expanding communities. At that time, the total treatment capacity was 20 million gallons per day (mgd). In 1979, the City of Beaverton joined JWC, followed by Tualatin Valley Water District in 1994. The newest member, City of Tigard, joined in 2004. Three expansions of the joint water treatment plant (JWTP) have been completed, with the latest effort in 1998, bringing the total treatment capacity to 70 mgd. A new IGA was also drafted and approved in 2004, to account for the newest member and update the JWC agreements and procedures. These municipal and domestic water suppliers jointly own various percentages of raw water storage, surface water rights, raw water pump stations, water treatment plants, water reservoirs and transmission facilities.

The governing body of the Joint Water Commission has 15 representatives, made up of three representatives from each member agency. Commission meetings are held quarterly. The Commission has an Executive Board, which meets quarterly, made up of one representative from each agency. The City of Hillsboro is the current managing agency for JWC, and the Hillsboro City Manager acts as the JWC General Manager. The Executive Board and the managing agency are elected annually.

Joint Water Commissioners:

Hillsboro
William Crandall
Larry Soderholm
John Godsey – 2004
Shirley Huffman - 2003

City of Tigard
Dick Winn
Bill Monahan
Brian Moore

Forest Grove
Carl Heisler, Chairman
Rod Fuiten
Nancy Spieler – 2003

Beaverton
Mayor Rob Drake
Jesse Lowman
Forrest Soth

Tualatin Valley Water District
Lisa Melyan
Greg DiLoreto
Jim Doane

Joint Water Commission General Manager

Tim Erwert, City Manager – City of Hillsboro

WHERE DOES OUR WATER COME FROM?

The Joint Water Commission (JWC) is a water entity formed by an intergovernmental agreement between the Cities of Hillsboro, Forest Grove, Beaverton, Tigard and the Tualatin Valley Water District (TVWD). The JWC is managed by the City of Hillsboro and is responsible for the operation of a Water Treatment Plant, the Fern Hill Reservoir and two major transmission lines. The water produced serves 81,455 connections in western Washington County, which reaches an estimated population of 295,400. It is the second largest water treatment system in the State of Oregon. The sources of this high-quality water are stored water from Scoggins Reservoir, natural flow from the Tualatin River, and stored water diverted into the Tualatin from the Barney Reservoir on the Trask River. All of the water is conveyed by the Tualatin River to an intake near the plant and is then pumped to the Plant for treatment.

The Joint Water Treatment Plant has been expanded three times. The first time was in 1985, when it went from 20 to 30 million gallons per day (MGD). The second time was from 30 to 40 MGD in 1991. Lastly, a 1998 expansion increased capacity to 60 MGD. This latest project has also put the Treatment Plant on the cutting edge of technology, with improvements that include:

- Structure improvements of basins and filtration
- A control system that monitors all water coming through the system
- Computers that provide exact, instantaneous chemical feed information.
- State-of-the-art Earthquake Protection
- Three new 1,000 amp pumps

Current projects under development include a second reservoir on Fern Hill, another Plant expansion to increase capacity to 75 MGD and a raw water pipeline from Scoggins Reservoir to the WTP. Though the Joint Water Commission is working very hard to meet current and future demands for water, it is still important that water be used in the most efficient manner possible. The JWC is an active promoter of conservation efforts to insure that there is plenty of water for future generations as well.

JWC WATER MANAGEMENT PLAN

The Water Conservation portion of the JWC Management Plan has been completed and approved by the State of Oretgon. Sections 1, 2, and 4 were approved in 1998, but sections 3 and 5 (Conservation and Long-term planning) were only granted tentative approval pending more information and changes that needed to be made as a result of Regional Water Supply Plan (RSWP) revisions. The RWSP revisions were completed in 2002, and in January 2003, Tacy Steele, JWC project manager and Lisa Obermeyer, Montgomery Watson Harza consultant, met with the State Plan Reviewer, who laid out the new policies and expectations for the alterations. The revised plan was submitted to the State in July 2003. The State approved the plan in August 2004. Updates are required every five years, so the next one will occur in 2009.

The focus of the Conservation Plan is to document the conservation practices of the JWC members and make sure that they comply with the state's newly-revised Division 86 Rules. The Oregon Water Resources Department found that the Plan was in compliance with the new rules. These rules require all utilities to have the following components: metering on all connections, regular maintenance of the system, regular employment of a leak detection program, and general public education.

An annual progress report needs to be submitted to the State to demonstrate what the members have accomplished in regards to the plan and its recommendations. This report will be prepared by the JWC managing agency staff. JWC is also required to conduct annual water audits, comparing the amount of water produced against the amount sold. JWC member utilities need to begin performing monthly water audits to support this requirement.

JWC EVENTS 2003-2004

JWC participated in three major events in FY 2003/04: the Washington County Fair, the Forest Grove Corn Roast, and the Westside Home Expo.

In July 2003, staff representatives from all four agencies took turns staffing an information booth and handing out free water to thirsty fair attendees. Tualatin Valley Water District (TVWD) provided the signage and equipment for the booth and Hillsboro, Beaverton and Forest Grove contributed information material and staff time to make the Fair a successful public outreach endeavor.

In September 2003, the JWC was asked to provide an exhibit at the Annual Corn Roast in Forest Grove. Tacy Steele attended with a display of services and functions of the JWC, as well as an interactive planting activity for kids.

At the Westside Home Expo in February 2004, the JWC booth showcased water conservation tools for inside and outside the home. Information materials were provided to attendees at the three-day event. Also, TVWD and Hillsboro ponied up door prizes, so the booth could have a drawing to bring people into the booth.

The three events were chosen for JWC participation, due to their attendee draw from throughout western Washington County.

JOINT WATER COMMISSION FY 2003-2004 PROJECTS

1. Water Treatment Plant Master Plan
2. Sain Creek Tunnel
3. Raw Water Pipeline
4. Fern Hill Reservoir #2

WATER TREATMENT PLANT MASTER PLAN

PROJECT PURPOSE: The existing JWC WTP was built in 1976 as a conventional rapid sand filter chlorine gas disinfection system with a capacity of 20 MGD. WTP expansion occurred in 1991 to 40 MGD and in 1996 to 60 MGD. The JWC Capital Improvement Plan (CIP) projects water demands to exceed 60 MGD by the year 2010. A WTP Master Plan is underway to develop a future expansion plan to efficiently expand the capacity to 150 MGD.
The Professional Services Agreement for the WTP Expansion Master Plan was awarded to CH2MHill on April 9, 2004.

PROJECT TIMELINE: The Master Plan report is scheduled for completion in February 2005, to achieve a goal of expanding the WTP to 75 MGD firm capacity, through a set of limited near-term improvements, by 2007/2008.

PROJECT BUDGET: $350,000 with an addition five percent contingency.

PROPOSED PARTICIPANTS: Joint Water Commission

PICTURE: Water Treatment Plant Site

SAIN CREEK TUNNEL

PROJECT PURPOSE:

To complete a feasibility study and preliminary design work for construction of a tunnel to convey surface water from above Haines Falls on the Tualatin River to Sain Creek above Hagg Lake.
The tunnel is proposed to play a key role in the development to obtain additional water supply for the Joint Water Commission's future demand. The water diverted through the tunnel would improve the reliability of filling an enlarged Hagg Lake.

PROJECT TIMELINE:

The HDR/Jacobs Associates/Cornforth consultant team was awarded the Professional Services Agreement for the Sain Creek Tunnel Feasibility Study on July 9, 2004. Work began on schedule in August 2004. The scheduled study completion date is July 2005.

PROJECT BUDGET:

Total budget:

$850,000

Feasibility Study and Preliminary Design:

$717,320

PROPOSED PARTICIPANTS:

Joint Water Commission, Clean Water Services, Tualatin Valley Irrigation District, and the City of Tualatin.

PICTURE:

Hillsboro's settling pond below Haines Falls was one of the sites considered for a tunnel inlet portal.

RAW WATER PIPELINE

PROJECT PURPOSE: To construct a raw water pipeline, up to 96-inches in diameter, to transport water from the Scoggins Reservoir to the JWC Water Treatment Plant.

PROJECT TIMELINE: Phase I Route Analysis was awarded to Murray Smith & Associates and the final Phase 1 deliverable was provided on January 9, 2004.

Phase II Preliminary Engineering was awarded to Murray Smith & Associates on April 9, 2004.

PROJECT BUDGET:

Overall Project Budget:	$52,000,000
A/E Services – Phase 1	$359,910
A/E Services – Phase 2	$1,021,176

PROPOSED PARTICIPANTS: The Joint Water Commission, Clean Water Services and Tualatin Valley Irrigation District.

FERNHILL RESERVOIR NO. 2

PROJECT PURPOSE: The purpose of Fernhill Reservoir No. 2 is to add 20 Million Gallons (MG) of additional water storage on Fernhill where the existing JWC storage facility is located. The additional storage will help meet the operational and redundant storage needs of the growing JWC demands.

PROJECT TIMELINE: The CH2MHill team was awarded the A/E design portion of the project. Project design is expected to be complete by June 30, 2005. Construction is expected to begin July 1, 2005 and completed by December 2007.

PROJECT BUDGET:

Overall Project Budget:	$27,000,000
A/E Design Services:	$1,866,223

PROPOSED PARTICIPANTS: Joint Water Commission

BARNEY RESERVOIR JOINT OWNERSHIP COMMISSION

BARNEY RESERVOIR

BARNEY RESERVOIR JOINT OWNERSHIP COMMISSION

The governing body for the Barney Reservoir is the Barney Reservoir Joint Ownership Commission. 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 BRJOC was led by the following individuals during 2003 and 2004.

Barney Reservoir Joint Ownership Commission

2004

Carl Heisler, Chairman	City of Forest Grove
Jim Doane, Vice Chairman	Tualatin Valley Water District
William Crandall, Vice Chairman	City of Hillsboro
Forrest Soth, Vice Chairman	City of Beaverton
Bob Cruz, Vice Chairman	Clean Water Services

2003

Forrest Soth, Chairman	City of Beaverton
Nancy Spieler, Vice Chairman	City of Forest Grove
Jim Doane, Vice Chairman	Tualatin Valley Water District
Larry Soderholm, Vice Chairman	City of Hillsboro
Bob Cruz, Vice Chairman	Clean Water Services

BRJOC General Manager

Tim Erwert, City Manager	City of Hillsboro

The City of Hillsboro Water Department respectfully submits the Annual Report for fiscal year 2003-2004.

BARNEY RESERVOIR HISTORY

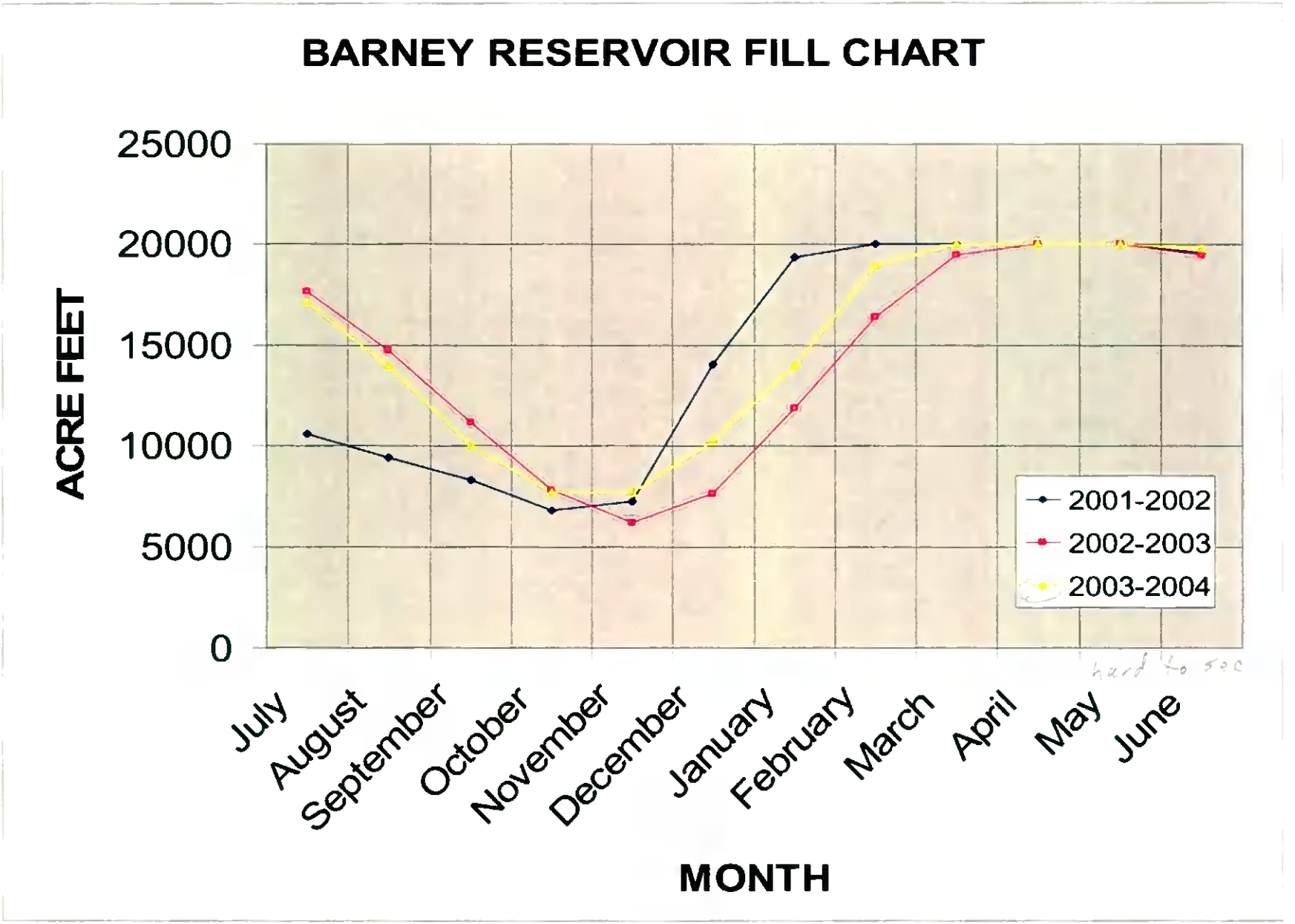
In the early 60's, City of Hillsboro engineers, led by Harold Hathorn, discovered a natural occurring depression in the coastal range that they determined could be used for a gravity-fed water supply. The original dam was completed in the fall of 1970 and stood 1600 feet above sea level (water level 1590). J.W. Barney, in whose honor the reservoir is named, was a native Oregonian who was the key figure in the securing, planning and construction of the original reservoir. He was City Manager of Hillsboro from 1939 to 1971, and also served as a County Commissioner for 15 years.

Originally, the reservoir held 4000 acre feet of water and was exclusively for the used of the City of Hillsboro. The cost of the original construction was approximately $2.5 million. The 36" pipeline that diverts the water from the Trask River to the Tualatin is 6500 feet long and cost approximately $400,000 to construct (also completed in 1970). In 1976, Forest Grove partnered with Hillsboro, with Hillsboro owning 87.5 % of the Reservoir and Forest Grove owning 12.5 %.)

Beaverton, TVWD, and USA desired to become partners also, and in 1994, the Barney Reservoir Joint Ownership Commission was formed to raise the dam. The expansion took 5 years, and increased storage capacity to 20,000 acre feet. The dam now stands 1650 feet above sea level (water level 1640). Under the partnership agreement, Hillsboro owns 31% of the stored water, Forest Grove 2.5%, Beaverton 21.5%, Tualatin Valley Water District (TVWD) 35%, and Unified Sewerage Agency (USA, now Clean Water Services) 10%. The project cost approximately $28.5 million to complete. There are approx. 760,000 cubic yards of rock in the backbone of the dam. A portion (15%) of the annual fill is dedicated to release to the Trask River for river enhancement and allocation for fish habitat. There are natural barriers downstream that prevent any anadromous fish species from reaching the dam.

2004 Release Season

Barney Reservoir entered the 2004 release season full, reaching full pool elevation on February 23rd. Releases began on June 4th. The reservoir fill curve for recent years is attached.


BARNEY RESERVOIR FILL CHART
ACRE FEET
25000
20000
15000
10000
5000
0
July
August
September
October
November
December
January
February
March
April
May
June
MONTH
2001-2002
2002-2003
2003-2004
hard to see

December 2004

December 2004