

FY 2004-2005 **ANNUAL REPORT**



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Upper System – Haines Falls

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 also 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 operates under these Commissions with direction from the General Manager.

The Water Department is divided into four divisions that are each responsible for separate functions within the department. The four division and their primary functions are as follows:



Treatment: Responsible for source diversion and water treatment



Distribution: Maintains lines, meters and other appurtenances and is responsible for day-to-day operations of the City's distribution system, the Slow Sand Filter Plant and the Barney Reservoir.



Engineering: Designs and manages developer, city, JWC and BRJOC water projects.



Resources: Responsible for conservation program development and implementation, emergency response planning, backflow program administration, and communication coordination between city departments, other agencies, legislative bodies and the general public.

This annual report covers the activities of all divisions within City of Hillsboro's Water Department through June 30, 2005.

Hillsboro Utilities Commission

Utilities Commissioners are appointed by the City Council for three-year terms that run with the calendar year. Commissioners can be reappointed at the end of the three years to serve another term. At the beginning of each calendar year (January), the Commissioners reappoint a Utilities Commission Chair and any other Commission / Consortium or Committee positions that will need representation during the year.

For Calendar Year 2005, the following positions were appointed:

William Crandall – Utilities Commission Chair	Reappointed in 2005
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John Godsey – JWC and BRJOC Vice Chair	Appointed in 2004
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Larry Soderholm – Primary Consortium Representative	Reappointed in 2003
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Hillsboro City Manager / JWC & BRJOC General Manager

Tim Erwert	City Manager since 1990
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Water Department Director

Joe Thompson	Resigned June 2005
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WATER DEPARTMENT PERSONNEL

Water Treatment	Water Distribution	Water Engineering	Water Resources
Tahanni Al-Essa Chuck Kingston Ricky Bolkan Cathi Bonato Steve Brent Del Caley Gordon Grannis Derek Johnson John Kindel Mike McCann Jeff Roth Chris Wilson Art Woll Jean Woll Jeff Wright	Tahanni Al-Essa Rich Sattler Tim Adlesich Dan Applebee Dave Beckner Dick Berry Karl Borg Clay Caudle Dale Comiskey Doug Cook Jamie Davis Sherry Eagle Victor Fujinami Jennifer Gay Lester Ison James Loney Randy Matteson Jim Plesa John Reed Don Reid Dan Thomas Adam Thompson Cherie Wise-Walcott	Peter Martins Dick Bancroft Tom Brawand Mark Hamerl Dan Meeuwsen Bernie Monahan Matt Nussbaumer Dave Westby	Kevin Hanway Tonya Bilderbeck Kristi Senecaut Tacy Steele

Red denotes Manager

Blue denotes Supervisor

THE YEAR IN REVIEW

(FY 2004 – 2005)

July 2004

A Hillsboro (In-town and Upper System) Water Model was built in-house to be used for long-term demand forecasting. The model included:

- Pipelines, reservoirs, PRVs, and hydrants
- consumption data for 10% of customers (approx 3,000)

August 2004

Emergency Response Planning is underway and preparedness was improved in the following areas:

- Final ERP Workshop was completed and the plan books were received.
- And ERP Training Exercise was completed on July 28, 2004, and 10 Water Department Staff members took part in the exercise.
- Proposed security improvement projects to be done this fiscal year were reviewed and scheduled for design/completion.

September 2004

Utilities Commissioners toured the new Shute / Evergreen Reservoir and the newly-renovated 24th Street Reservoir. With the new reservoir in service, in-town storage for Hillsboro increased to 21 MG, which is not quite two average days use. The Master Plan goal is to achieve in-town storage of three average days.



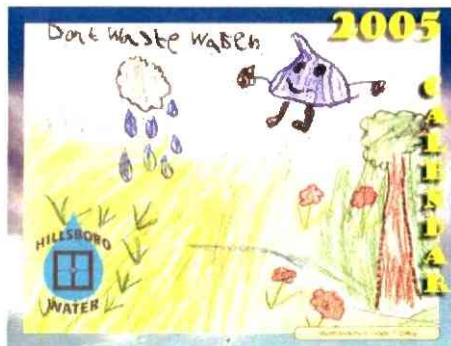
Evergreen Reservoir Construction

October 2004

The distribution crew was reorganized into two groups with Lester Ison and Karl Borg, each Water Distribution IV operators, in lead positions. Borg oversees operations and maintenance for the reservoirs (including Barney Reservoir), the Upper System, pressure reducing valves (PRV's), and transmission lines. Ison oversees leak repairs, valves, hydrants, meters, and distribution maintenance.

November 2004

The Water Department printed and distributed prizes and calendars to their first-ever poster contest winners and participating schools. Prizes for the winning entries were distributed by Hillsboro Water Representatives who visited each school and presented the winning students with their framed original artwork and tickets to the Portland Children's Museum. The participating schools also received 150 copies of the Water-Wise Calendars to use however they wished. The colorful calendars were a big hit and provided viewers with water-conserving hints throughout 2005.



2005 Calendar Contest Cover Winner

December 2004

Staff updated the Water Department Standard Specifications, which were originally adopted on September 10, 2002. The updating process took into account:

- The recent standardization of the joint ODOT/APWA specifications.
- Changes/updates to AWWA Standards
- The City of Hillsboro developer review process.
- Coordination of construction terms and common details with the Public Works Department.
- Neighboring jurisdiction standards (TVWD).
- Detail drawing coordination with manufacturer listings.

- Re-occurring design/field issues Staff inspectors are continually confronted with.
- Peer reviews from the Public Works Department and firms involved locally from the construction and civil design industry.
- Other comments or issues noted since 2002.

The Commission passed Resolution 190-W, and adopted the 2005 Edition, City of Hillsboro Water Department Engineering & Construction Standards.

January 2005

Commissioner Will Crandall was re-elected to Utilities Commission Chair.

Commissioner John Godsey was appointed as Vice Chair of the Joint Water Commission and Barney Reservoir Joint Ownership Commission and also as representative to the Tualatin Basin Water Supply Feasibility Study Policy Steering Committee.

Commissioner Larry Soderholm was appointed as primary representative to the Regional Water Providers Consortium.

February 2005

Hillsboro received a Critical Infrastructure Grant from the Homeland Security Program in the amount of \$80,700, to be used for the following security improvements:

- Fencing and hardening work at the Dilley PRV, Slow Sand Plant and Dilley Reservoir.
- Reservoir hatches to be hardened with covers to prevent access, with alarm monitors.
- Improvements at the JWC Treatment Plant and Barney Reservoir.

March 2005

The Water Department's Engineering and Resource Divisions moved from the trailer to the new Civic Center. The PRV / Reservoir / Upper System Crew then moved over from the Distribution building to the trailer, creating more space for everyone.

April 2005

2005-2006 Budget was approved by the Utilities Commission.

May 2005

Two positions were filled in the Water Department. Rich Sattler, previously employed for 18 years by City of Tigard, joined the Water Department as the Distribution Supervisor. Sherry Eagle was hired from Utility Billing into the new meter reader position.

June 2005

Joe Thompson, Water Department Director, resigned and was replaced by Interim Director, Kevin Hanway.

FISCAL FACTS and FIGURES

TREATMENT DIVISION



Treatment Plant Aerial

WATER PRODUCTION:

Peak Day Summer Season (*Includes Hillsboro, Cornelius and Upper System Usage*):

24.72 Million Gallons (July 23, 2004)

Peak Day Winter Season (*Includes Hillsboro, Cornelius and Upper System Usage*):

12.65 Million Gallons (January 23, 2005)

Average Daily Water Consumption: 11.6 MG

Average Daily Peak Season Day: 16.3 MG

Average Daily Off-Peak Season Day: 9.7 MG

"Average Day" information includes Hillsboro, Cornelius and Upper System Usage

Summary of Work-Related Injuries for Treatment Division:

Total Number of Injuries: 0

Total Days missed due to Injuries: 0

Total Days on Restriction or Light Duty: 0

Customer and Water Service Information:

Total Annual Water Consumption (includes Hillsboro's wholesale customers):

4.2 billion gallons of water

Population served:

Approximately 70,000 people (Hillsboro provides water to all in-town customers living west of Cornelius Pass Road.)

Hillsboro also serves water to approximately 500 customer accounts outside city limits. These customers are referred to as the "Upper System." Their meters are located south of Forest Grove on the 18-inch line that is fed by the Slow Sand Filter Plant in Cherry Grove. Customers can petition to hook to that line by filing a *Request for Extraterritorial Service* with the Hillsboro Water Department.

Wholesale Customers

Hillsboro has three wholesale customers: Cities of Cornelius and Gaston and the LA Water Co-op.

<u>Wholesale Customer</u>	<u>Usage (CF)</u>	<u>% Increase/Decrease from previous year</u>
Cornelius	57,770,800	-4.944%
Gaston	5,431,900	-12.007%
LA Co-op	10,927,700	- 2.053%

DISTRIBUTION DIVISION



Mainline Leak Repair

WATER MONITORING:

Every Tuesday, water samples are taken at strategic stations throughout Hillsboro that represent the entire distribution system. They are sent to an independent lab for testing in order to ensure water quality is maintained throughout the city.

How many water samples were taken? 1,109

WATER METERS:

How many meters were installed in FY 04/05? 1,273 residential meters and 42 commercial meters

How many meters does Hillsboro read and maintain? 21, 824

How many meters, on average, are read per day? 250 meter reads per meter reader.
(The City employs four rotating meter readers – two read meters and two manage service shut-offs, turn-ons and other customer service calls)

VALVES AND HYDRANTS:

How many water valves are maintained by the city? 8,057

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? 2,216

How many Hydrant repairs were performed? 542 repairs

The Fire Department took over fire hydrant testing and maintenance in 2004. The Water Department continues to do repairs as needed, per Fire Department request.

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 streets or public utility easements in order to prevent damaging the existing utilities.

How many water lines were located as part of normal operations? 3, 960

Additionally, Verizon is putting conduit in all Hillsboro streets for high speed internet access and required massive numbers of locates. One utility worker was assigned to conduct locates for the Verizon work as a full-time task for a year.

Summary of Work-Related Injuries for Distribution Division:

(These numbers are from the OSHA Form 300A for Calendar Year 2004)

Total Number of Injuries: 3

Total Days missed due to Injuries: 36

Total Days on Restriction or Light Duty: 216

ENGINEERING DIVISION



Engineering Staff

Waterline Projects

Number of new waterline projects completed by Developers: 14

Arbor Rose Phase 2	Tanner Creek
Cherry Dr. Roadway	Brookwood Crossing
Brisbin Farms	Quatama Crossing
Gateway Commons	Oakhurst Phase 1
Carlye Oaks	Arbor Roses Phase 4
Glencory Subdivision	Hunters Run
Arbor Rose Phase 3	Spring Meadows

Total new pipeline installed: 22,721 lineal feet

Number of replacement water projects completed by the City: 3

5th Avenue
Walnut Street
Bailey Street

Total existing waterline replaced: 1,658 lineal feet

Summary of Work-Related Injuries for Engineering Division:

Total Number of Injuries: 0
Total Days missed due to Injuries: 0
Total Days on Restriction or Light Duty: 0

RESOURCES DIVISION



Consultant performs School Audit

Projects and Programs:

Number of Conservation Programs presented to elementary students: 18 programs

Approximate number of elementary students reached: 1600 students

Number of Washing Machine rebates processed: 352 Rebates (\$50 each)

Events attended to promote Water Conservation and Water awareness:

Washington County Fair
Salmon Festival
Community Action Fair
Yard, Garden and Patio Show
Clean Water Festival
Intel's Earth Week
Tuesday Markets
Westside Home Show

How many backflow devices were monitored, tested and tracked? 4,684 devices

Summary of Work-Related Injuries for Resource Division:

Total Number of Injuries: 0

Total Days missed due to Injuries: 0

Total Days on Restriction or Light Duty: 0

Events Participation:

Resource Staff participated in the following Organizations and Committees:

Regional Water Providers' Consortium
Consortium Conservation Committee (Tacy Steele Chairs Youth Ed Subcommittee)
Consortium Technical Committee
Tualatin Basin Water Supply Partnership Committee
Safety Committee (Water and City)
Community Emergency Response Team (CERT)
City Communicators
Clean Water Festival Planning Committee
American Water Works Association (AWWA) Pacific Northwest Section (PNWS)

Awards and Recognition:

Awards Earned: AWWA – PNWS Excellence in Communication: Large Utility Small Printed Piece

Be Water Smart: Tips for Saving Water this Summer



Winning Brochure Cover

2005 City Mainline Totals

(This data was pulled from Arcview on 12/30/05)

Mainlines:

Total Length (Miles)		
Diameter	2003/04	2004/05
1"	0.6	0.6
2"	5.1	6.1
3"	0.1	0.1
4"	15.6	14.1
6"	54.4	51
8"	89.1	92.1
10"	35	34.1
12"	23.4	24.5
16"	10.7	11.6
18"	12.6	12.6
24"	1.3	2.1
Unknown	0.05	None
TOTAL:	247.95	248.9

Hydrant Mains:

Total Length (Miles)		
Diameter	2003/04	2004/05
4" = .2 miles	0.2	0.25
6" = 7.8 miles	7.8	8.6
8" = .1 miles	0.1	0.1
Unknown	0.1	None
TOTAL:	8.2	8.95

Hillsboro Stored Water Releases

from Hagg Lake and Barney Reservoir

2004 / 2005

Release Year	Amount Released in Acre Feet (AF)	Average released per day (AF)
2005	3,804.32	29.26
2004	3,020.31	21.57

Units shown are Acre Feet

Release Season

2005

Start

06/20/2005

End

10/27/2005

130 days regulated use

2004

Start

05/26/2004

End

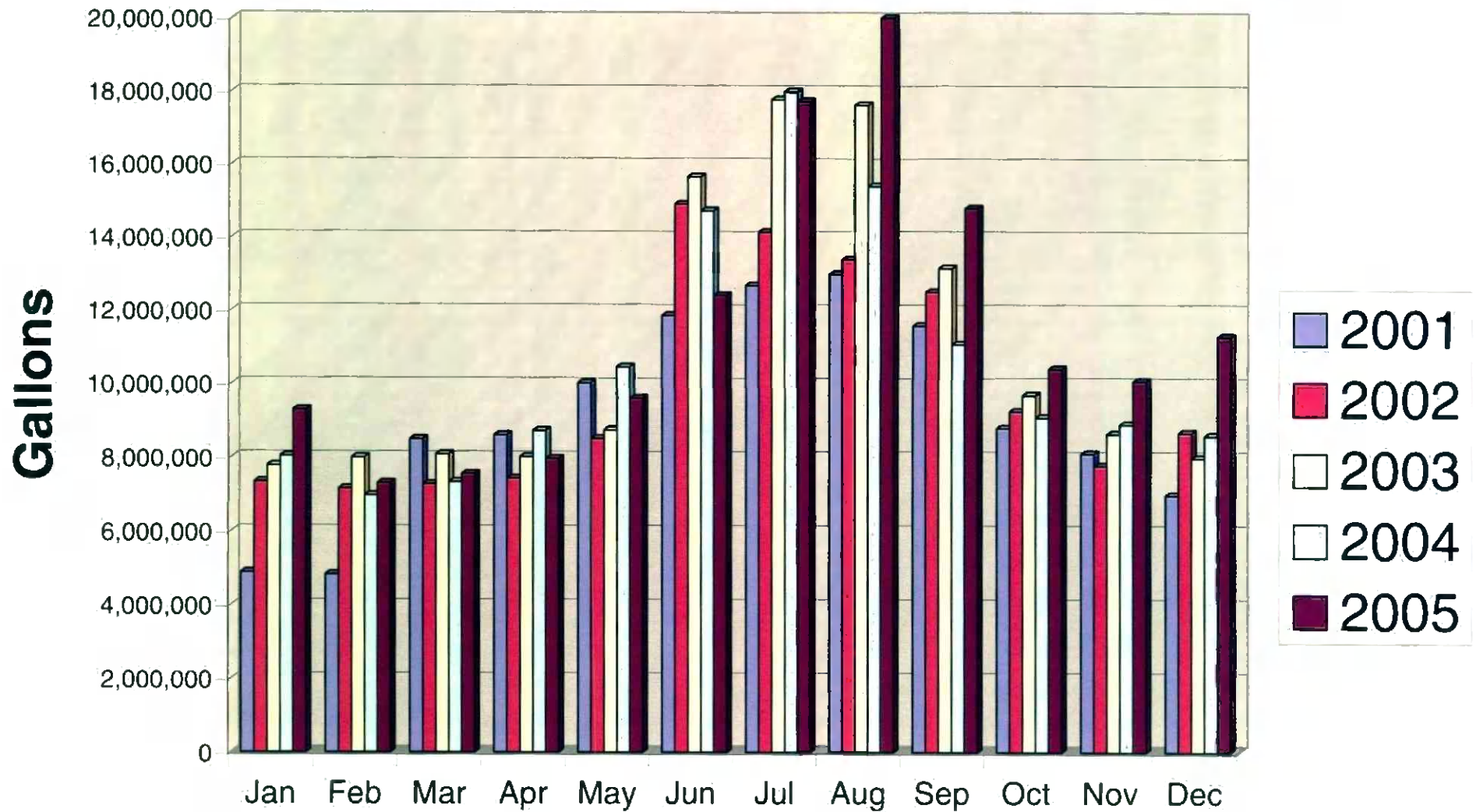
10/26/2004

140 days regulated use

Five Year Average Daily Delivery by Month

(JWC Treatment Plant)

Includes deliveries to Hillsboro and Cornelius (Cornelius switched from SSFP in August 2004)

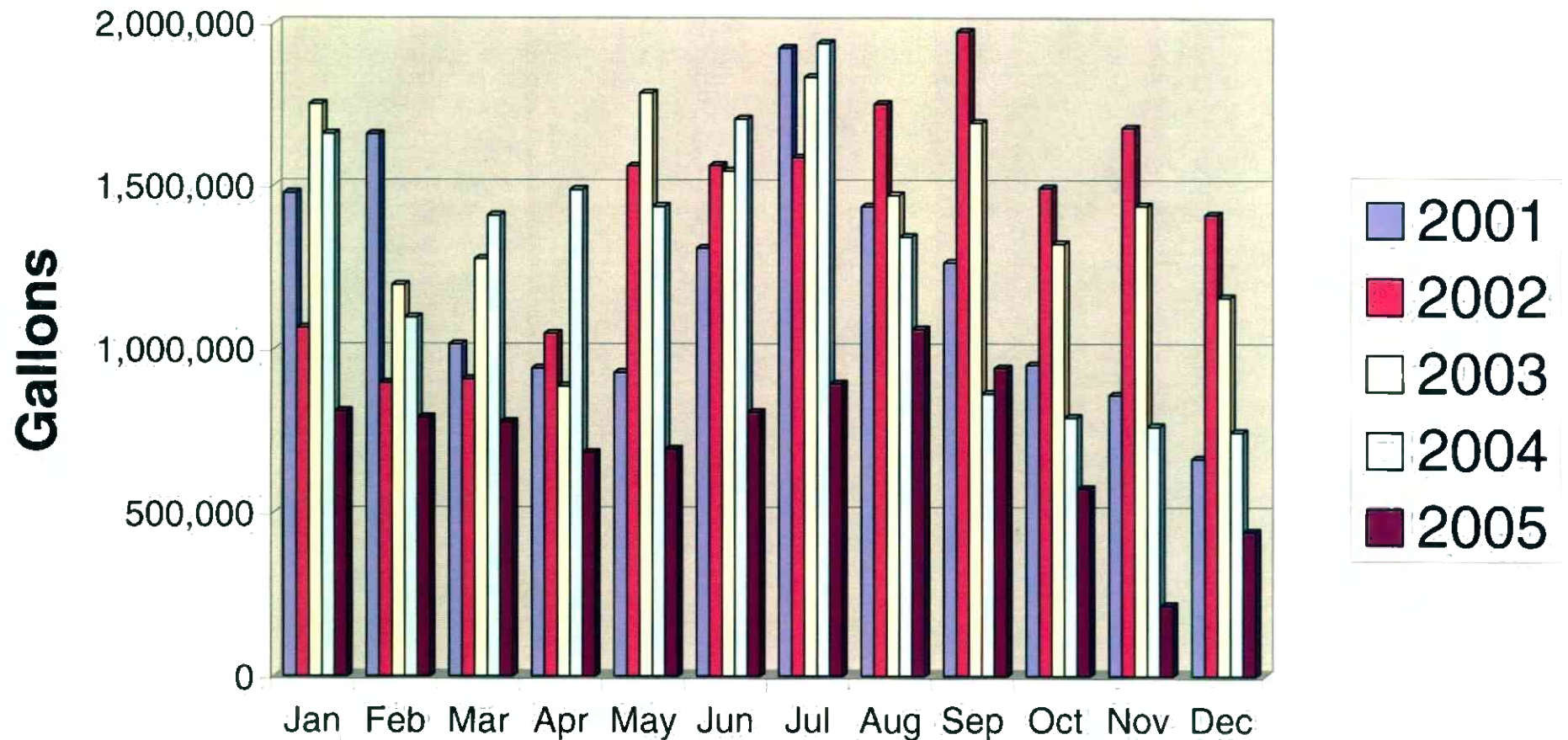


Five Year Average

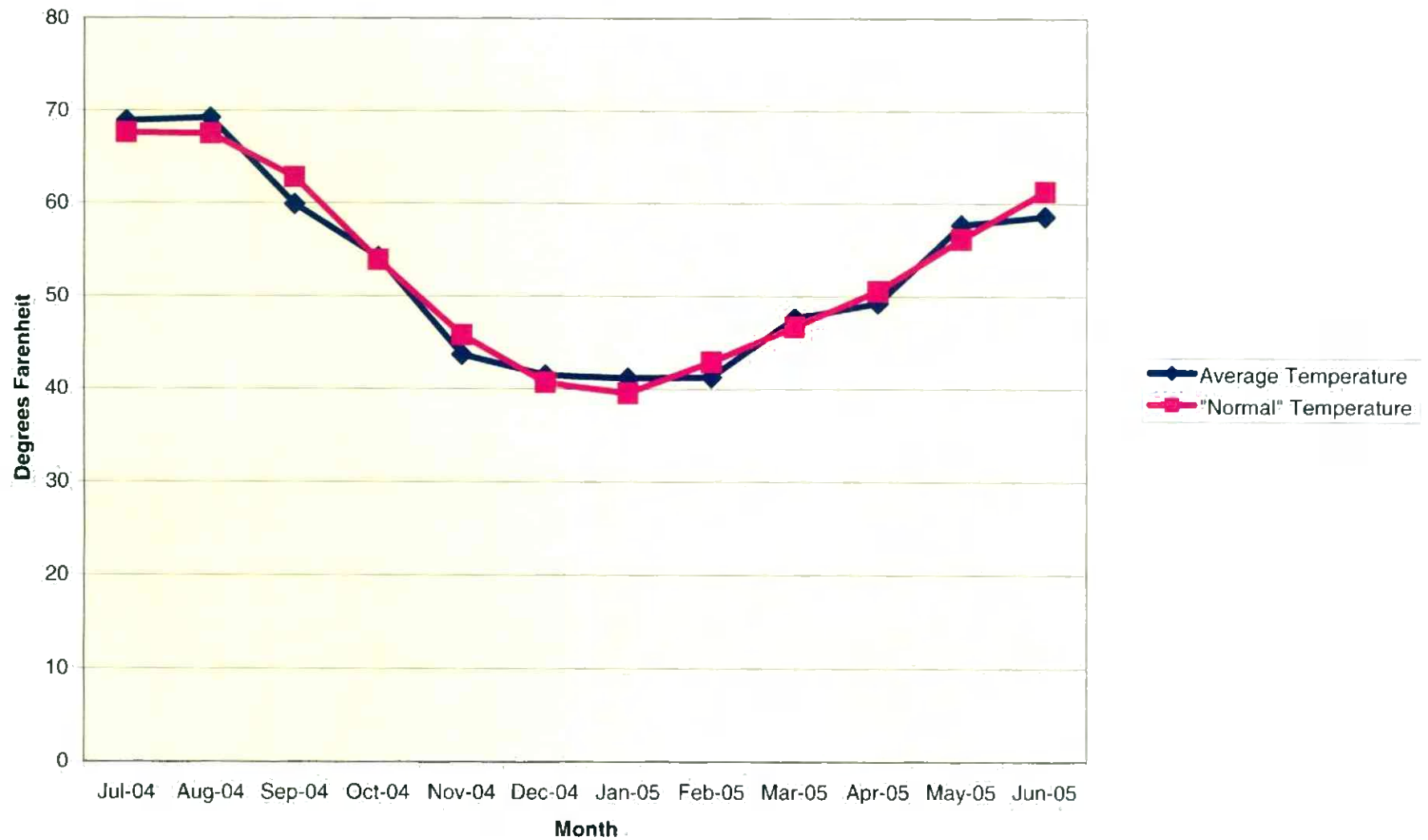
Daily Delivery by Month

(Slow Sand Filter Plant - SSFP)

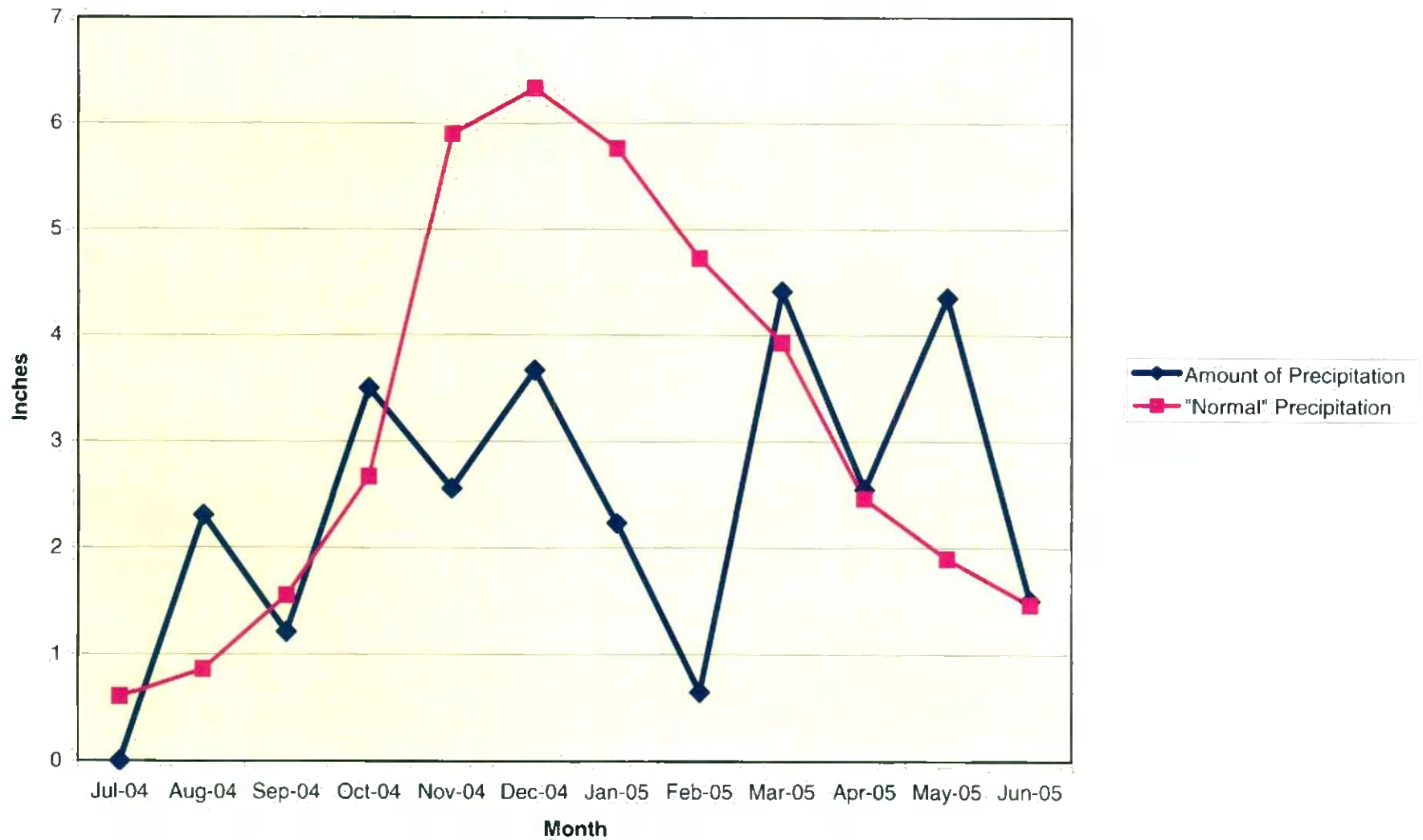
Includes deliveries to the Hillsboro Upper System, Gaston, and LA Co-op
(Prior to August 2004, totals also included deliveries to Cornelius)



Average Monthly Temperature



Average Monthly Precipitation



MONTHLY WATER RATES

(3/4" Meter, Inside City Limits)

EFFECTIVE: October 1, 2004

(Reflects 4.5% increase over previous year)

Minimum:	\$9.22
Next 900 Cubic Feet:	\$1.14
Next 19,000 Cubic Feet:	\$1.23
All over 20,000 Cubic Feet:	\$1.08

For Multi-Family houses, Apartments, and Mobile Home Courts there is, in addition to water consumption charges, a flat rate imposed for each living unit being serviced jointly by a single meter, in the amount of \$1.00 per living unit per month.

Living units are determined when permits are issued. Changes in existing living units are also accounted for through the permit process.