

ORDINANCE NO. 504

AN ORDINANCE EXTENDING A MORATORIUM ON DEVELOPMENT THROUGHOUT THE CITY OF WILSONVILLE DUE TO A LACK OF WATER SYSTEM CAPACITY, AND CONTINUING THE MORATORIUM TO JULY 5, 1999; AND DECLARING AN EMERGENCY.

WHEREAS, the City of Wilsonville is a home rule city under the laws of the State of Oregon and has a duly acknowledged Comprehensive Plan; and

WHEREAS, the City's acknowledged Comprehensive Plan is intended to ensure that the rate of community growth and development does not exceed the community's ability to provide essential public services and facilities, including adequate water for domestic, irrigation, and fire-fighting purposes. The City's acknowledged Comprehensive Plan further provides that a continued source of water will be available to meet the City's growing needs into the future, but the City's acknowledged Comprehensive Plan is silent as to how the City is to provide water service without an adequate source of water; and

WHEREAS, the City's acknowledged Comprehensive Plan policies also commit the City to provide water service that keeps pace with development; and

WHEREAS, the City found that there is a demonstrated need to prevent a shortage of water for domestic and fire flow usage which would otherwise have occurred during the period of the proposed moratorium commencing January 5, 1998, and did declare a moratorium on land development approvals on that date (Ordinance No. 493); and

WHEREAS, the City found that the circumstances necessitating the moratorium had not appreciably changed within the first six months of the moratorium. Because of that, the City

Council extended the moratorium for an additional six months, effective July 5, 1998 (Ordinance No. 497); and

WHEREAS, the circumstances leading to the findings of demonstrated need included in Ordinance No. 493 and Ordinance No. 497 continue and those findings convey the severity of the water shortage situation faced by the City; and

WHEREAS, the City finds that the Findings and Determinations of Ordinance No. 497 are still relevant and material, are hereby adopted, and that Ordinance No. 497 should be extended in its entirety; and

WHEREAS, on March 2, 1998, the Wilsonville City Council approved the program to correct the moratorium (Resolution No. 1441), as required by ORS 197.530; and

WHEREAS, on August 17, 1998, the Wilsonville City Council amended the program to correct the moratorium (Resolution No. 1495), as required by ORS 197.530; and

WHEREAS, the Wilsonville City Council will again amend the program to correct the moratorium within sixty days of the enactment of Ordinance No. 504, and

WHEREAS, the City Council makes the following additional findings, as required by ORS 197.530(2):

(a) The problem giving rise to the moratorium still exists. The City continues to experience falling water levels and declining water quality in the wells that supply all of the City's water. Exhibit "A," incorporated by reference herein, describes the declining status of the City's water system.

(b) Reasonable progress is being made to alleviate the problem. While the City's study of two of the three alternative sources of water (i.e., the City of Portland and the Willamette River in Wilsonville) is not yet complete, it is being completed. Reports have

just recently been received from consultants studying the Troutdale Aquifer, south of Wilsonville, the Willamette River, and from the City of Portland regarding its water sources. The City Council has now taken action on Resolution No. 1530 (attached as Exhibit "G"), eliminating from future consideration the Troutdale Aquifer as an alternative water source. The City will need some time to evaluate the reports on the Willamette River and the City of Portland's water supply and make them available for public review. Given that the current moratorium ordinance will expire during the first week of January 1999, and given that the City has not yet had time to evaluate those reports, the City cannot postpone the extension of the moratorium. Any conclusive information contained in those reports can be factored into the next amendment to the program to correct the moratorium that will be completed early in 1999. The City also continues to obtain information concerning methodologies and risks of the potential for aquifer storage and recovery (ASR). Implementation of water conservation efforts continues, and the City has prepared and submitted to the Oregon Department of Water Resources a Water Management and Conservation Plan for the community. The City continues to conduct regular public meetings to inform interested parties of the progress that is being made on the alternative water sources and on other actions taken by the City relative to the moratorium and water supplies. Exhibit "B," incorporated by reference herein, describes the status of the City's efforts to secure a new water source.

(c) Exhibit "C," the memorandum dated September 1, 1998, from Community Development Director Eldon Johansen, regarding the water moratorium, is a list of activities and timelines necessary to address the water moratorium. That information will

need to be evaluated in light of the recent decision on the Troutdale Aquifer, and the recent reports on the Willamette River and the City of Portland's water supplies.

(d) A specific date has been set for the duration of the moratorium. It will expire on July 5, 1999, unless subsequently extended by City Council action, in conformance with State law.

WHEREAS, pursuant to ORS 197.530(4), the City has provided written notice to the Department of Land Conservation and Development more than 14 days prior to the final public hearing on this ordinance; and

WHEREAS, pursuant to ORS 197.530(2), the City has made written findings justifying the need to extend the moratorium; and

WHEREAS, a duly noticed public hearing was conducted before the City's Planning Commission on December 9, 1998, after which the Planning Commission adopted Resolution 98PC06, recommending that the City Council extend the moratorium as provided in this ordinance; and

WHEREAS, pursuant to ORS 197.530(2), on December 21, 1998, the City Council held a duly-noticed public hearing on extending the moratorium based on the lack of water capacity to serve new development and the findings which support the moratorium.

NOW, THEREFORE, THE CITY OF WILSONVILLE ORDAINS AS FOLLOWS:

Section I: FINDINGS AND DETERMINATIONS

A. The City Council adopts the above recitals as findings and incorporates them by reference in support of this ordinance.

B. The Wilsonville City Council hereby determines that:

1. Ordinance No. 497 is hereby extended. The moratorium based upon lack of water capacity for new development is extended through July 5, 1999. The provisions of Ordinance No. 493 indicating which developments have received an allocation of water, and which are in queue awaiting an allocation, shall continue to apply. Those developments include Phase 3 of Teufel Village (Village at Main Street) to the extent that it was included as having Stage II approval in Exhibit C-2 of Ordinance No. 493, and an allocation of up to 93,000 gallons per day to allow for the build-out of Capital Realty's Town Center commercial area. Additional school development by the West Linn - Wilsonville School District shall be permitted, subject to the standards established in Ordinance No. 493. Except as otherwise set forth in this ordinance, approval of land use applications including, but not limited to, conditional use permits, partitions, subdivisions, variances, zone changes, and Stage II planned development approvals shall only be granted upon the condition that the applicant acknowledge, as part of the application, that connection to the City's water system, and building permits requiring water service, will only be finally approved upon a determination by the City's Community Development Director that a long-term water source for the City has been planned and funded and an adequate interim water supply is available.
2. In the event an approved development forfeits its rights to water capacity, the first priority to such rights shall be given to the properties involved in LID #12, and to those other properties listed in Exhibit C-2 of Ordinance No. 493

as "Projects with planning approval subject to availability of water," by order of the date of their completed development application on file with the City, in order to accommodate to the greatest extent possible needed housing and economic development.

3. The review of land use applications may continue to proceed based on the acknowledgment of the condition and being conditioned on the Community Development Director's determination as set forth in Paragraph B1, above, and the approval of tentative maps or plats for land partitions or subdivisions shall also be conditioned such that final plats shall only be approved for recordation upon a determination by the City's Community Development Director that a long-term water source for the City has been planned and funded and an adequate interim water supply is available.
4. Grading permits and public works permits shall only be issued upon a determination by the Community Development Director that adequate water will be available for dust control and other construction purposes. This may include water transported to the site from a source other than the City.
5. Applications for land use approvals may continue to be allowed to go forward to construction only where it is found by the City decision-makers, who are empowered by local ordinance to take action on development applications, that the development will not cause an increased demand for water service. Allowing developments which will not cause an increased demand for water to proceed is an additional accommodation to housing and economic needs.

6. Allocations of water capacity based upon development approval shall not be transferred from one site to another, except in cases where a public agency has acquired a developed site and reduced the need for water to serve that site. In such cases, the previous allocation can be transferred to another site as part of the development review process. The capacity allocated to existing developments may be allocated to replacement uses on the same site, provided that no increase in water demand results.
7. The Community Development Director is authorized to continue to determine the appropriate allocations of water to both existing and proposed developments.
8. The Community Development Director and Public Works Director shall regularly report to the City Council on the effectiveness of water conservation efforts. In the event that the City's program to encourage water conservation proves to be more successful than anticipated, and the Community Development Director determines that such success warrants modification of the table shown as Exhibit A of Ordinance No. 493, the Community Development Director shall make the necessary changes and advise the City Council and the public accordingly.
9. Community Development Staff shall continue to issue permits for water system connections only where authorized by the Community Development Director as being subject to a prior allocation of available water.

10. The Development Review Board and City Planning staff are directed to continue to ensure that landscaping plans include drought-tolerant plant species or otherwise minimize the demand for irrigation water.
11. Notwithstanding any other City requirements to the contrary, those developments that receive planning and zoning approvals and for which water is not yet available to be allocated, shall have the effective time of their development and zoning approvals tolled (i.e., continued) beyond their two-year expiration for a time equal to the time period between the approval of the application and the end of the moratorium, including any extensions that may legally be granted.
12. In the event that the State of Oregon formally demands that the City provide water to a correctional facility, the City Attorney is authorized to file an action in Circuit Court, naming the State's Department of Corrections, and any parties whose property development rights to connect to City water would be jeopardized by the State's actions. Such action shall seek to have the Court determine who shall receive City water pending a resolution to the lack of capacity.
13. This moratorium shall expire immediately upon a long-term water source being planned and funded and an adequate interim water supply being available, on July 5, 1999, or is otherwise extended in accordance with state law.

Section II. VALIDITY and SEVERABILITY

The validity of any section, clause, sentence or provision of this ordinance shall not affect the validity of any other provision of this ordinance which can be given effect without reference to the invalid part or parts.

Section III. EMERGENCY DECLARED

The matters contained herein concern the public health, welfare and safety. An emergency is hereby declared to exist, and this ordinance shall become effective on January 5, 1999.

SUBMITTED to the Wilsonville City Council and read for the first and second time at a regular meeting thereof on the 21st day of December, 1998, commencing at the hour of 7:00 p.m. at the Community Development Hearings Room.

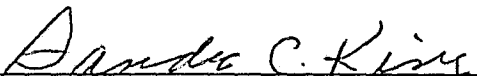


SANDRA C. KING, CMC, City Recorder

ENACTED by the Wilsonville City Council at a regular meeting thereof this 21st day of December, 1998, by the following votes:

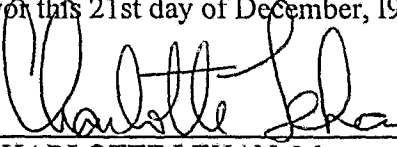
YEAS: -5-

NAYS: -0-



SANDRA C. KING, CMC, City Recorder

DATED and signed by the Mayor this 21st day of December, 1998.



CHARLOTTE LEHAN, Mayor

SUMMARY OF VOTES:

| | |
|------------------|-----|
| Mayor Lehan | Yes |
| Councilor Kirk | Yes |
| Councilor Luper | Yes |
| Councilor Helser | Yes |
| Councilor Barton | Yes |

List of Exhibits:

- A. Memorandum dated November 19, 1998 from Eldon Johansen to Stephan Lashbrook re: Status of Water System
- B. Memorandum dated November 17, 1998 from Jeff Bauman to Stephan Lashbrook re: Water Supply Planning (Update)
- C. Memorandum dated September 1, 1998 from Eldon Johansen to Arlene Loble re: Water Moratorium.
- G. Resolution No. 1530, A Resolution Directing The City Staff To Discontinue Expediting The Planning And Development Of The Troutdale Aquifer As The Future Water Supply Source For The City Of Wilsonville And To Discontinue All Expenditures And Efforts On This Project.

**COMMUNITY DEVELOPMENT
MEMORANDUM****EXHIBIT A**

Date: November 19, 1998

To: Stephan Lashbrook, Planning Director

From: Eldon R. Johansen, Community Development Director

Subject: *Status of Water System*

The moratorium on planning approvals due to a water shortage was adopted by City Council in January of 1998, (Ordinance No. 493) and subsequently extended in July, 1998, (Ordinance No. 497). On March 2, 1998, the City Council adopted the program to correct the problem. This program was updated on August 17, 1998, (Resolution No. 1495). Included as an exhibit to Ordinance No. 493 and 497 was a chart titled "Water Assurance Check". An update to the Water Assurance Check with water production information updated through November 1998 is attached as Enclosure 1.

We have seen a production decline in the Canyon Creek well, however, this was largely balanced by greater than anticipated production from the Elligsen well following modification of the well. We have thus far continued to defer modification of the Canyon Creek well to install a submersible pump because it is anticipated that the water quality will deteriorate when we install the submersible pump at a greater depth and withdraw poor water from the lower elevations.

The complaints about brown water have continued and are increasing as compared to previous years. Funding to correct the problem will be included in the budget request for FY 99/00.

One feature of our water program that has been extremely successful has been the water conservation program managed by Public Works. To allow development to proceed as long as possible before undertaking a substantial investment in water production from a new source it was decided to rely heavily on water conservation. This reliance projected an overall water conservation rate of 16% in 2002. The water consumption on the maximum day has continued to decline by 2 MGD in 1994, 4.9 MGD in 1995, 4.9 MGD in 1996, 4.7 MGD in 1997 to 4.6 MGD in 1998. The 1998 water conservation calculates to be 23%. This water conservation rate provides adequate capacity to allow for continued reduction in production from the Canyon Creek well and the approved projects that are still under or awaiting beginning of construction.

November 19, 1998
Stephan Lashbrook
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Attached at Enclosure 2 is a summary of the projected total maximum daily requirement and the actual maximum day requirement in both million gallons per day and in percent. As additional information becomes available it will be provided to the Planning Commission, City Council and the general public. Given the situation noted above, we must assume that Wilsonville's water situation is bad but has not deteriorated since June 3, 1998.

Eldon R. Johansen

ERJ:bgs

Enclosures: 1. Water Assurance Check
2. Consumption and Conservation Projections

Somerville Memos 1998
111998stephanlashbrook

WATER ASSURANCE CHECK

Supply

| 11/18/98 | January 1997 Report | October 1997 Status | Jan 1998 Status | Nov 98 Status |
|--|---------------------|---------------------|-----------------|-----------------|
| Production with new well | 5.55 MGD | 5.38 MGD | 5.49 MGD | 5.44 MGD |
| Use of reservoir to meet maximum day requirement | 0.20 MGD | 0.20 MGD | 0.20 MGD | 0.20 MGD |
| Continued voluntary reduction of max day demand by the top 10 irrigation users | 0.41 MGD | 0.41 MGD | 0.41 MGD | 0.41 MGD |
| Mandatory curtailment of irrigation to 2/3 of normal use | 0.78 MGD | 0.78 MGD | 0.78 MGD | 0.78 MGD |
| Reduction in "unaccounted for" water that has previously been identified | 0.13 MGD | 0.13 MGD | 0.13 MGD | 0.13 MGD |
| 20% of new reservoir capacity Source to be identified | 0 MGD | 0.40 MGD | 0.40 MGD | 0.40 MGD |
| Total | 7.07 MGD | 7.30 MGD | 7.50 MGD | 7.50 MGD |

Demand

| | January 1997 Report | October 1997 Status | Jan 1998 Status | Nov 1998 Status |
|---|---------------------|---------------------|-----------------|-----------------|
| Unconstrained maximum day consumption - Summer 1996 | 5.66 MGD | 5.66 MGD | 5.66 MGD | 5.66 MGD |
| Approvals not included in summer 1996 consumption | 1.36 MGD | 1.61 MGD | 1.84 MGD | 1.84 MGD |
| Total | 6.99 MGD | 7.27 MGD | 7.50 MGD | 7.50 MGD |
| Available for future projects | 0.08 MGD | 0.03 MGD | 0.0 MGD | 0.0 MGD |

**MEMORANDUM**

DATE: NOVEMBER 17, 1998

TO: STEPHAN LASHBROOK,
PLANNING DIRECTOR

FROM: JEFF BAUMAN,
PUBLIC WORKS DIRECTOR

RE: WATER SUPPLY PLANNING (UPDATE)

EXHIBIT B

This memo summarizes the progress that has occurred since my previous update of June 3, 1998.

During the month of June, three informational presentations were made at City Council meetings. One presentation by Mike Rosenberger, Director of the Portland Water Bureau, focussed on the Bull Run watershed as a potential water supply for Wilsonville. One presentation by Jeff Barry, project manager for CH2MHILL, focussed on the Troutdale Aquifer as a potential water supply. One presentation by Joe Glicker, project manager for Montgomery Watson, focussed on the Willamette River as a potential water supply.

On June 15th and June 29th the City Council held public hearings regarding future water supply. Based on this testimony and the analyses that had occurred to date, the Council directed staff to expedite planning and development of the Troutdale Aquifer as Wilsonville's next increment of water supply. The Council further directed staff to increase water SDC rates accordingly; to renew the City's water rights to the Willamette River as a potential long-term supply; and to continue to work with the City of Portland on the possibility of Bull Run as a long-term supply for Wilsonville. The following paragraphs briefly describe the steps that have been taken since June.

Troutdale Aquifer

Nine sites were identified as the most desirable locations for municipal wells. Seven of those sites are on private property, and only one of the property owners has granted the City permission to drill a test well. The City subsequently sent letters to 13 additional property owners in the hope of securing a total of 8 or 9 sites needed that are needed. However, none of these parties has granted such permission. In fact,



significant community opposition has arisen which is causing delays in the schedule. We are now seeking County permits to drill three test wells in public right-of-way adjacent to Miley Road plus one test well on the private property where permission has been granted. With benefit of data from these four sites, the City will be better able to assess the capacity of the Troutdale option. Short of condemnation, however, it does not appear the City will have access to enough sites to meet future needs with water from the Troutdale Aquifer. It is also clear that opponents to this project will protest the City's application for water rights. A contested application could take up to two years to resolve - - and the resulting permit (if granted) would likely include conditions to address the concerns of the opponents. In short, the popularity of this supply option as expressed in community meetings during the first half of 1998 has encountered significant opposition in the last half of 1998. The cost of this option is increasing, as is the time needed for implementation. As of this writing, the viability of this option is uncertain.

Bull Run Supply

The City of Portland is continuing to evaluate methods for expanding the capacity of the Bull Run system to meet regional demand (including Wilsonville's service area). Portland staff indicate a report will be available in mid-December of this year. We are hopeful this report will indicate how much Bull Run water the City of Portland is prepared to commit to the Wilsonville service area; when such water would be available to Wilsonville; and what the cost would be to Wilsonville.

In addition, the Regional Water Providers Consortium (of which Wilsonville is a member) has been meeting to review regional transmission alignments that would be needed to "wheel" large volumes of water from sources such as Bull Run to potential end users such as Wilsonville. At this time, there is no regional consensus as to what such a transmission system should be. Nor is there a funding mechanism to raise the necessary capital and determine the cost allocation among participating jurisdictions.

Willamette River

As part of its deliberations last June, the City Council concluded it is in Wilsonville's long-term interest to protect its municipal water rights to the Willamette River. In this regard the Council authorized the purchase of a parcel of land adjacent to the river as a future site for a water purification plant. The size and location of this site are consistent with the adopted Regional Water Supply Plan. Wilsonville is participating with the City of Tigard and the Willamette Water Supply Agency (WWSA) to formulate a site plan, transmission alignments, and cost estimates for a purification plant to serve the sub-region. By the end of December the consulting team is scheduled to prepare a report which evaluates these issues. In addition, the

November 17, 1998

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consulting team is conducting follow-up monitoring of water quality in the Willamette River.

Water Rates

The City Council has modified the rate structure to create an "inverted block" pricing system. This establishes further financial incentives to use water efficiently. As part of this restructuring, overall water rates were increased by 32% in anticipation of the additional costs associated with development of the Troutdale Aquifer. SDC rates were increased by 78% for the same reason. These rate changes went into effect on October 1, 1998.

Since June there has been continued public information and public discussion regarding these options for future water supply. Meetings have been held with affected homeowners associations and interest groups, with Clackamas County Planning and Public Works staff, with affected farmers, with Oregon Water Resources Department staff, with individual property owners, and others. In addition numerous articles have appeared in the Spokesman, the "Boones Ferry Messenger", the "Seedling", and the Oregonian. There was also a vigorous and very successful water conservation program that included, among other things, mandatory water restrictions during the entire peak season from May 15th to October 1st. These conservation efforts are described in a draft Water Management and Conservation Plan, which is currently in the process of public review.

City of

WILSONVILLE
in OREGON



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REVISION TO 6/9/98 MEMO

**COMMUNITY DEVELOPMENT
DEPARTMENT**

EXHIBIT C

DATE: September 1, 1998

TO: Arlene Loble, City Manager

FROM: Eldon Johansen, Community Development Director

SUBJECT: WATER MORATORIUM

On January 5, 1998, Council approved a moratorium on planning approvals for land development throughout the City of Wilsonville due to a lack of water system capacity. The moratorium did not apply to projects with previous planning approval, nor did it apply to projects which would not increase the demand for water.

On March 2, 1998, Council adopted a program to correct the problem creating the moratorium on planning approvals for land development throughout the City of Wilsonville due to a lack of water system capacity. The program included a detailed evaluation of obtaining water from first: the Troutdale Aquifer, second: from the City of Portland, and third: from a water treatment plant on the Willamette River. Staff was directed to report back to City Council with the recommendations no later than June 29, 1998.

On June 29, 1998, there was insufficient information concerning costs for obtaining water from the Portland Bull Run system or for the City share of costs to construct a subregional Willamette River Water Treatment plant. The Troutdale Aquifer study indicated that the City could develop wells with a firm capacity of 5 million gallons per day from the Troutdale Aquifer. On June 29, 1998, Council adopted Resolution 1487 directing the City staff to expedite the planning and development of the Troutdale Aquifer as the future water supply source for the City of Wilsonville.

On August 17, 1998, Council adopted Resolution Number 1495 which included a revised program to correct the problem creating the water moratorium.

The following table provides a brief list of activities and timelines necessary to correct the water problem creating the water moratorium by developing a City water source from the Troutdale Aquifer. The schedule will be revised as more information is available.

| Schedule to Solve Water Moratorium | | | |
|---|-----------------------|--------------------------|-------------------------------|
| | 8/24/98 | | |
| Activity | Responsibility | Proposed Timeline | Actual Completion Date |
| Solicit proposals to evaluate Troutdale aquifer for viability as a long term water source | Eldon | 2/6/98 | 2/6/98 |
| Notice to DLCD of Public Hearing | Stephan | 2/13/98 | 2/13/98 |
| Public notice of Public Hearing on 3/2/98 | Stephan | 2/17/98 | 2/17/98 |
| Complete Draft Program for staff review | Eldon, Jeff & Stephan | 2/18/98 | 2/18/98 |
| Complete program for distribution to public | Stephan | 2/23/98 | 2/23/98 |
| Review proposals to evaluate Troutdale aquifer, select proposed consultant, negotiate scope of work and price | Jeff/ Mike S | 2/26/98 | 2/26/98 |
| Approve consultant agreement or delegate approval to PW Dir to evaluate Troutdale aquifer | Council | 3/2/98 | 3/2/98 |
| Approve program to solve moratorium | Council | 3/2/98 | 3/2/98 |
| Conduct Public Hearing | Council | 3/2/98 | 3/2/98 |
| Final date for submission of alternative sources as a consideration for current program to end moratorium | Council | 3/2/98 | 3/2/98 |
| Develop public information program & schedule | Dave | 3/9/98 | 3/9/98 |
| Community water meeting at Charbonneau Country Club | Dave | 3/12/98 | 3/12/98 |
| Community water meeting at Community Center | Dave | 4/15/98 | 4/15/98 |
| Receive & distribute preliminary results of Troutdale aquifer study to staff | Jeff | 5/8/98 | 5/8/98 |
| Receive & distribute final draft of Troutdale aquifer study to staff & Council | Jeff | 5/22/98 | 5/22/98 |
| Prepare & distribute preliminary legal analysis of municipal use of Troutdale aquifer & Willamette River | Michael K/ Joan | 5/25/98 | 5/22/98 |
| Check validity of projections in annual growth in water requirements and projections of required added water | Eldon | 5/28/98 | 5/29/98 |
| Community water meeting at Charbonneau Country Club | Dave | 5/28/98 | 5/28/98 |
| Develop draft of ordinance extending water moratorium for staff review | Stephan | 6/1/98 | 6/1/98 |
| Presentation & discussion of information about long term water supply from Portland | Council | 6/1/98 | 6/1/98 |
| Presentation & discussion of Troutdale acquirer study | Council | 6/1/98 | 6/1/98 |
| Provide 14 days advance notice to DLCD of public hearing to discuss extension of water moratorium | Stephan | 6/1/98 | 6/1/98 |

| | | | |
|--|------------------------------|---------|---------------------------------|
| Public notice of Hearing on 6/15/98 | Stephan | 6/1/98 | 6/1/98 |
| Public hearing for water rate increase | Eldon | 6/1/98 | 6/1/98 |
| Distribute draft ordinance extending the water moratorium to public | Stephan | 6/8/98 | 6/3/98 |
| Prepare & distribute final legal analysis of municipal use of Troutdale aquifer & Willamette River | Michael K/ Joan | 6/8/98 | 6/9/98 |
| Finalize agreement with DOC subject to approval of alt site | Michael K | 6/12/98 | 6/29/98 |
| Finalize agreement with Tigard & TVWD subject to approval of alt site | Arlene/ Mike S/ Michael K | 6/12/98 | Delay until after site decision |
| Presentation & discussion of information about long term water supply to all boards & commissions by | Jeff | 6/15/98 | 5/15/98 |
| Conduct public hearing to extend moratorium | Council | 6/15/98 | 6/15/98 |
| Presentation & discussion of Willamette pilot plant study & preliminary plans for a proposed Willamette water treatment plant | Council | 6/15/98 | 6/15/98 |
| Propose alternatives for analysis of rate & SDC impacts and discuss at a study session | Eldon/Jeff/ Arlene | 6/15/98 | Canceled, lack of data |
| Adopt resolution increasing water utility income by 30% and initiating an inverted block rate structure for single family residences to encourage water conservation effective 10/1/98 | Eldon | 6/15/98 | 6/1/98 |
| Public hearing for the 3 water options | Eldon | 6/15/98 | 6/15/98 |
| Develop Budget Committee recommendation on long term water to Council | Eldon | 6/18/98 | Canceled, lack of data |
| Coordinate with CH2M Hill & complete rate & SDC analysis of alternatives | Eldon | 6/22/98 | Canceled, lack of data |
| Develop and coordinate proposed long range solution to water moratorium | Eldon/ Jeff/ Arlene | 6/22/98 | 6/22/98 |
| Discussion, selection, & approval of long range water supply solution (Would a special mtg. on the 29th be possible?) | Council | 6/29/98 | 6/29/98 |
| Final public hearing on the 3 water options | Eldon | 6/29/98 | 6/29/98 |
| For brevity, items from last fiscal year have been hidden from this printout | Eldon | 7/1/98 | 7/15/98 |
| Resume tentative approval of Stage II applications subject to availability of water | DRB | 7/6/98 | 7/6/98 |
| Engage water rights attorney to assist with permits application | Michael K | 7/10/98 | 7/7/98 |
| Provide 15 day notice to DLCD concerning updating program to end moratorium | Stephan/ Eldon | 8/1/98 | 7/30/98 |
| Provide written notice of intent to modify water system development charges (45 days prior to first public hearing to adopt)(orig 7/2/98) | Eldon | 8/6/98 | 8/5/98 |

| | | | |
|--|----------------------------|----------|---------|
| <i>Identify properties for test drilling</i> | CH2M Hill | 8/14/98 | |
| <i>Approve Engr svc agreements to provide professional support for analysis of Troutdale aquifer and ASR study</i> | Council | 8/17/98 | 8/17/98 |
| <i>Council approve modified program of correction to end moratorium</i> | Council/ Stephan/ Eldon | 8/17/98 | 8/17/98 |
| <i>Distribute methodology and draft of ordinance adopting an increase in water systems development charges 30 days before first hearing to adopt the increase (orig 7/17/98)</i> | Eldon | 8/21/98 | 8/21/98 |
| <i>Solicit bids to drill and pump test 8 test wells</i> | CH2M | 8/24/98 | |
| <i>Coordinate with County Manager, Planning & Transportation for use of County right of way to drill wells</i> | CH2M Hill/ CJ/ Mike | 8/31/98 | |
| <i>Apply for land use approval within city</i> | CH2M Hill | 9/4/98 | |
| <i>Apply for county land use approval</i> | CH2M Hill | 9/4/98 | |
| <i>Award contract to drill and pump test up to 8 test wells</i> | Council | 9/10/98 | |
| <i>Conduct public meeting in Charbonneau to explain test drilling and pumping and impact on adjacent properties</i> | CH2M | 9/11/98 | |
| <i>Obtain property owner consent to test 8 wells, to encase and test pump up to 8 wells, to apply for land use approval from city or county and to apply for DWR permit</i> | CJ | 9/14/98 | |
| <i>Coordinate informal meeting with DWR to discuss pending application for permit to use Troutdale water</i> | CH2M Hill | 9/15/98 | |
| <i>Adoption of an ordinance increasing water systems development charges to reflect increased cost of capital for water production (orig on 8/17/98)</i> | Council | 9/21/98 | |
| <i>Apply for DWR permit for 8 wells</i> | CH2M | 10/8/98 | |
| <i>Notice of Public Hearing on extension/cancellation of moratorium to DLCD & public</i> | Stephan | 11/2/98 | |
| <i>Approve city land use</i> | Bob/DRB | 12/4/98 | |
| <i>Approve county land use</i> | County | 12/4/98 | |
| <i>Complete application for DWR approval</i> | CH2M Hill | 12/9/98 | |
| <i>Council decision on extending or canceling moratorium effective January 5, 1999</i> | Council | 12/21/98 | |
| <i>Encase and pump test three holes for future water quality and quantity evaluation</i> | CH2M | 12/31/98 | |
| <i>Review preliminary ASR results and determine if Troutdale water should be treated to use for ASR.</i> | Council | 1/19/99 | |

| | | |
|--|-----------|---------|
| Report results of test drilling and pumping to Council and provide updated estimate to develop within Troutdale aquifer as appropriate | CH2M | 1/19/99 |
| Obtain Budget Committee approval of funding program for development within Troutdale aquifer | Gary | 2/11/99 |
| Obtain Council approval of funding program for development within Troutdale aquifer | Council | 2/23/99 |
| Complete 25% of design for wells, water lines, sequestering treatment plant, storage reservoir, and waterline crossing of Willamette and complete legal descriptions for acquisition of property | CH2M | 4/1/99 |
| Apply for DRB approval of site plan for water treatment plant and storage reservoir | CH2M | 4/1/99 |
| City oversizes and completes lines to Wilsonville reservoir adjacent to Tualatin reservoir for future interconnect to receive 2 MGD of Bull Run water | Mike | 6/1/99 |
| Council decision on extending or canceling moratorium effective July 5, 1999 | Council | 6/21/99 |
| Complete design for wells, water lines, sequestering treatment plant, storage reservoir, and waterline crossing of Willamette and check legal descriptions for acquisitions of property against final design | CH2M | 6/30/99 |
| Obtain appraisals and options to purchase property to construct wells, sequestering treatment plant, and reservoir and to obtain utility easements to construct waterlines | CJ | 7/31/99 |
| Approve site plan for reservoir & treatment plant | DRB | 8/1/99 |
| Department of Water Resources approval to construct and operate 8 wells | CH2M/ DWR | 8/8/99 |
| Public hearing to consider review of moratorium | Council | 8/17/99 |
| Obtain property to construct wells, sequestering treatment plant, and reservoir and obtain utility easements to construct waterlines subject to receipt of DWR permit | CJ | 8/17/99 |
| Award contract to construct and equip 8 wells subject to receipt of DWR permit | Council | 8/17/99 |
| Award contract to construct water lines, sequestering treatment system, tie to existing Charbonneau reservoir, new reservoir and line across Willamette subject to receipt of DWR permit | Council | 8/17/99 |
| Moratorium ends | Council | 1/4/00 |
| Resume issuing building permits based on staff conclusion that water will be available before buildings will be occupied | Eldon | 1/5/00 |

| | | |
|---|---------------|-----------------|
| <i>Complete first 3 wells</i> | <i>Mike S</i> | <i>2/1/00</i> |
| <i>Complete second 3 wells</i> | <i>Mike S</i> | <i>4/1/00</i> |
| <i>Construct water lines, sequestering treatment system, new reservoir and tie to existing Charbonneau reservoir</i> | <i>Mike S</i> | <i>5/1/00</i> |
| <i>Water from first three wells starts flowing to relieve current capacity problems</i> | <i>Mike S</i> | <i>5/1/00</i> |
| <i>Water from next three wells starts flowing to provide long term capacity for future growth</i> | <i>Mike S</i> | <i>5/1/00</i> |
| <i>Complete waterline across I-5 and remaining two wells</i> | <i>Mike S</i> | <i>9/1/00</i> |
| <i>Water from last two wells starts flowing to provide capacity for added long term growth to a max daily requirement of 8.02 MGD</i> | <i>Mike S</i> | <i>9/1/00</i> |
| <i>TVWD oversizes Tualatin lines to deliver 2MGD of water to Wilsonville for prison and City use</i> | <i>TVWD</i> | <i>4/1/01</i> |
| <i>Bull run water starts flowing to Wilsonville in April 2001</i> | <i>Mike S</i> | <i>4/1/01</i> |
| <i>Bull run water stops flowing to Wilsonville in December 2005</i> | <i>Mike S</i> | <i>12/31/05</i> |

Please contact the following staff if you have questions concerning this information:

- Legal process - Mr. Michael Kohlhoff, city attorney
- Planning process - Mr. Stephan Lashbrook, planning director
- Evaluation of alternatives - Mr. Jeff Bauman, director of public works
- Evaluation of water rates and systems development charges - Mr. Eldon Johansen, community development director

Sincerely,

Eldon R. Johansen
 Community Development Director

ERJ:bgs

- cc: M. Kohlhoff, City Attorney
- J. Bauman, Public Works Director
- M. Stone, City Engineer
- S. Lashbrook, City Planner
- D. Kanner, Public Affairs Director/Ombudsman
- G. Wallis, Finance Director



MEMORANDUM

DATE: NOVEMBER 25, 1998

TO: HONORABLE MAYOR AND CITY COUNCILORS

CC: ARLENE LOBLE

FROM: JEFF BAUMAN

RE: WATER SUPPLY PLANNING

EXHIBIT D

Questions have come up regarding when and how many public meetings have been held regarding options for future water supply. Meetings have occurred for many years, but here is a list of the meetings where City staff have made presentations in the past 12 months:

Community Public Informational Meetings

March 12, 1998
April 15, 1998
May 28, 1998

Briefings to City Boards and Commissions

| | |
|----------------------------|------------------------------------|
| Planning Commission | November 12, 1997 and May 13, 1998 |
| Budget Committee | April 22, 1998 |
| Development Review Panel B | April 27, 1998 |
| Library Board | April 29, 1998 |
| Development Review Panel A | May 11, 1998 |
| Parks Board | May 12, 1998 |

Formal Public Hearings

June 15, 1998
June 29, 1998

In addition, televised water supply presentations were made at numerous City Council meetings throughout the year - - particularly in conjunction with the Council's deliberations regarding the development moratorium.

Beyond these City-sponsored discussions, City staff have given presentations to the Boards of Directors for the Charbonneau Country Club, the Charbonneau Homeowners Association, the Fountain Lakes Homeowners Association, and the Charbonneau Golf Club. Presentations and discussions have also been held at the invitation of Friends of Goal 5, the Senior Center, nearby farmers, and concerned residents.



November 25, 1998

Page 2

Public information has also been extensive. Wilsonville's water supply dilemma has been the subject of well over 100 newspaper and newsletter articles in the past year.

For your information, I have also enclosed a copy of a letter I sent to Kay Hill. At a recent Council meeting she raised questions regarding the type and frequency of water quality monitoring associated with municipal wells. Hopefully this information clears up whatever confusion there may have been.

City of

WILSONVILLE
in OREGON



30000 SW Town Center Loop E
Wilsonville, Oregon 97070
(503) 682-1011
(503) 682-1015 Fax
(503) 682-0843 TDD

November 25, 1998

Kay Hill
7380 S.W. Fairway Drive
Wilsonville, OR 97070

Dear Kay:

In a recent phone conversation, you asked me what ongoing water quality monitoring we would do if the City developed wells in the Troutdale Aquifer. As I mentioned, there are a variety of tests that would be done - - some more often than others. In our phone conversation I said I would need to check into the specifics. This letter is to provide you the additional details.

The attached pages show the monitoring we currently do on the City's existing wells. These are the routine testing schedules. Additional monitoring is done on a case-by-case basis as the need arises. At this point we do not know precisely what water quality monitoring would be done if the City developed wells in the Troutdale Aquifer. The details of such monitoring would depend on results from the test program, which is yet to occur. In all likelihood we would test much more frequently for iron and manganese. At a minimum, however, we would do at least as much monitoring of the Troutdale wells as we are currently doing for existing wells.

I hope this information is helpful to you.

Sincerely,

A handwritten signature in black ink, appearing to read 'JB' or similar initials.

Jeff Bauman
Public Works Director



Daily Monitoring

Chlorine residual

Monthly

Bacteria

Quarterly

Trihalomethane

Yearly

Nitrate

Three-year Cycle

Conventional Parameters

Color
Conductivity
PH
Non-Volatile Suspended Solids
Chloride
Alkalinity
Total Organic Carbon
Total Phosphate

Inorganic

Aluminum
Antimony Total
Arsenic
Asbestos
Barium
Beryllium
Cadmium
Calcium
Chromium
Copper
Cyanide
Fluoride
Iron
Lead
Magnesium
Manganese
Mercury
Nickel
Nitrate-Nitrite
Nitrite
Potassium
Selenium
Silica (SiO₂)
Silver
Sodium
Sulfate
Zinc

Volatile Organics

1,1-Dichloroethane
1,1-Dichloroethylene
1,1-Dichloropropene
1,1,1-Trichloroethane
1,1,1,2-Tetrachloroethane
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
1,2-Dichloropropane
1,2-Dichloroethane
1,2,3-Trichloropropane
1,2,4-Trichlorobenzene
1,3-Dichloropropane
1,3-Dichloropropene
2,2-Dichloropropane
Benzene
Bromobenzene
Bromodichloromethane
Bromoform
Bromomethane
Carbon Tetrachloride
Chlorodibromomethane
Chloroethane
Chloroform
Chloromethane
o-Chlorotoluene
p-Chlorotoluene
Cis-1,2-Dichloroethylene
Dibromomethane
m-Dichlorobenzene
Dichloromethane
Ethylbenzene
Monochlorobenzene
O-Dichlorobenzene
P-Dichlorobenzene
Styrene
Tetrachloroethylene
Toluene
Total Xylenes
Trans-1,2-Dichloroethylene
Trichloroethylene
Vinyl Chloride

Three-year Cycle (continued)

Synthetic Organics

2,4D
2,4,5-TP Silvex
3-Hydroxycarbofuran
Adipates
Alachlor.(Lasso)
Aldicarb
Aldicarb Sulfoxide
Aldicarb Sulfone
Aldrin
Atrazine
Benzo(A)Pyrene
BHC-gamma (Lindane)
Butachlor
Carbofuran
Carbaryl
Chlordane
Dalapon
Dibromochloropropane
Dicamba
Dieldrin
Dinoseb
Dioxin
Diquat
Endothall
Endrin
Ethylene Dibromide (EDB)
Glyphosate
Heptachlor Epoxide
Heptachlor
Hexachlorobenzene (HCB)
Hexachlorocyclopentadiene
Methomy1
Methoxychlor
Metolachlor
Metribuzin
Pentachloropnenol
Phthalates
Picloram
Polychlorinated Biphenyls (PCB)
Propachlor
Simazine
Toxaphene
Vydate

Four-year Cycle

Radioactive substances

RESOLUTION NO. 1530

A RESOLUTION DIRECTING THE CITY STAFF TO DISCONTINUE EXPEDITING THE PLANNING AND DEVELOPMENT OF THE TROUTDALE AQUIFER AS THE FUTURE WATER SUPPLY SOURCE FOR THE CITY OF WILSONVILLE AND TO DISCONTINUE ALL EXPENDITURES AND EFFORTS ON THIS PROJECT.

WHEREAS, on June 29, 1998, Council approved Resolution No. 1487 directing City staff to expedite the planning and development of the Troutdale Aquifer as a future water source for the City of Wilsonville; and

WHEREAS, on August 17, 1998, Council approved a resolution authorizing the city engineer to sign Task Order Number 3 to the Professional Services Agreement dated March 3, 1998, between the City of Wilsonville and CH2M Hill for professional services to obtain access to the well sites, prepare plans and specifications to drill test wells, analyze the quality and quantity of water available based on the test hole/pilot wells and prepare a report analyzing the availability of water in terms of quality and quantity from the Troutdale Aquifer as a future water source for the City; and

WHEREAS, the ability to analyze and report on the use of the Troutdale Aquifer was premised on the reasonable availability of nine test holes/pilot wells (including one in the Miley Road right-of-way) as described in the May 1998 final report of the Troutdale Aquifer Study by CH2M Hill; and

WHEREAS, staff and CH2M Hill with the assistance of Hannah, McEldowney and Associates, made diligent and good faith efforts to obtain permission from the property owners to drill the aforementioned nine test holes/pilot wells; and at the direction of City staff, CH2M Hill further identified 13 additional potential test holes/pilot well sites; and

WHEREAS, in all but one case the property owners would not provide this permission because of concerns about impacts on present and future use of their property, potential impacts on the groundwater table for domestic, fire and agricultural purposes and perceived impacts on property values; and

WHEREAS, staff recommended developing two of the sites in the county right-of-way along Miley Road instead of in the adjacent common areas of Charbonneau given the level of

homeowner opposition bringing the total number of potential wells in the county right-of-way to three; and

WHEREAS, of the total 22 sites, 19 sites are on private property and only one property owner agreed to allow drilling of a test hole/pilot well. (Summary including Miley Road sites is enclosed at Attachment 1) and Clackamas County has denied the City's application to drill test holes in the Miley Road right-of-way (letter from Clackamas County is enclosed at Attachment 2); and

WHEREAS, the City finds that property is not reasonably available to acquire for test hole/pilot well sites, nor is condemnation a reasonable alternative to acquire a sufficient number of sites given locations outside city limits and exclusive farm use laws and lack of condemnation authority against the County; and

WHEREAS, the community development director has also estimated that it would take approximately three years and nine months from obtaining a right to drill test holes before the City would be able to use the Troutdale Aquifer for a municipal water supply; and

WHEREAS, the community development director has projected a reasonable city growth rate of 5% per year given the current growth, and that the additional water from four wells in the Troutdale Aquifer would only provide water for between 2.4 and 5.4 years of community growth, therefore the City finds that an appeal of the County denial of right-of-way access, even if successful, would not produce a timely, or sufficient water supply; and

WHEREAS, the public works director has analyzed correspondence with the Department of Water Resources and has concluded that the City would probably not obtain permits for unconditional use of wells and that any such conditions would include priority rights to senior water rights holders which could subject the City's rights to interruption and termination; the City finds this is an unreasonable basis upon which to ensure long-term growth of the City; and

WHEREAS, the City has been unable to test the water quality in different parts of the Troutdale Aquifer, due to the lack of test holes/pilot wells; and

WHEREAS, as a substitute the City has tested the water quality from the Louvonne Well which is a well owned by the Charbonneau Golf Course and located within the Troutdale Aquifer; and

WHEREAS, the water from the Louvonne Well tested to have extremely high iron and manganese content; and

WHEREAS, if the water from other Troutdale Aquifer wells had similar levels of iron and manganese, which is probable given the close proximity of the potential well sites, then a treatment plant would be required to treat Troutdale Aquifer waters; and

WHEREAS, the original cost estimate for eight wells in the Troutdale Aquifer providing a firm capacity of 5 million gallons per day was \$6,000,000; and

WHEREAS, due to increased treatment costs and increased waterline costs the estimated cost to drill wells and treat water to obtain a capacity of 2.2 million gallons per day has increased to approximately \$7,000,000, thus making treatment for less than a sufficient quantity as described above unreasonably expensive as a water source alternative; and

WHEREAS, staff also considered the concept of exchanging the City's water rights to the Willamette River for farmers' existing water rights to the Troutdale Aquifer, but such an exchange would necessitate a dual transmission system to deliver Willamette water to the farms and to deliver Troutdale Aquifer water to the City, thereby further increasing the cost of the project and further complicating the issue of wellhead protection to assure that untreated Willamette water did not seep into the aquifer; and

WHEREAS, in Resolution Number 1487 Council directed that staff to make recommendations concerning the viability and cost effectiveness of the Troutdale Aquifer as a long-term water source option; and

WHEREAS, based on the analysis to date (Attachment 3), further exploration of the Troutdale Aquifer is not warranted and staff therefore recommends termination of the City's efforts in this regard; and

WHEREAS, the Council finds the above described circumstances conclude that the Troutdale Aquifer will not serve as a reasonable alternative for a future long-term water supply source for the City of Wilsonville.

NOW, THEREFORE, THE CITY OF WILSONVILLE RESOLVES, AS FOLLOWS:

1. The Troutdale Aquifer is not a reasonable alternative to serve as a long-term water supply source for the City of Wilsonville. City staff is directed to discontinue plans

to develop test holes/pilot wells within the Troutdale Aquifer and discontinue any further efforts to analyze the Troutdale Aquifer as a viable future water supply source for the City of Wilsonville.

2. City staff is directed to instruct CH2M Hill to tabulate aquifer baseline data already collected from the monitoring of existing wells in the neighborhood of the proposed Troutdale Wellfield and to cancel remaining work on Task Order Number 3.

ADOPTED by the Wilsonville City Council at a regular meeting thereof this 21st day of December, 1998, and filed with the Wilsonville City Recorder this date.

CHARLOTTE LEHAN, Mayor

ATTEST:

Sandra C. King, CMC, City Recorder

SUMMARY of votes:

Mayor Lehan _____
Councilor Kirk _____
Councilor Luper _____
Councilor Helser _____
Councilor Barton _____

| STATUS REPORT Wilsonville Well Sites Project December 15, 1998 | | | | | |
|---|------------------------|-------------------------------------|--------------------------|-------------------|--|
| Well Site # | Tax ID | Owner Name | Well Site Location | Letter/ROE mailed | Comments |
| 1 | Near 31W 25AC 1700 | Clackamas County | Charbonneau | None from HMA | City handling Charbonneau - Possible use of County R/W |
| 1A | 31W 25 100 | William Miley | Miley Road | 10/11/98 | Possible: Owner wants approval from OSU prior to commitment; next mtg 11/13/98 |
| 2 | 31W 25BD 3400 | Fountainlake Homeowners Association | Charbonneau | None from HMA | City handling Charbonneau - Possible use of County R/W |
| 3 | 31W 25BC 8900 | Charbonneau Homeowners Association | Charbonneau | None from HMA | City handling Charbonneau - Possible use of County R/W |
| 4 * | 31W 25 804 | Paul and Maria Brown | Airport Road | 9/03/98 | Right of Entry signed 10/1/98; forwarded to City |
| 5 | 31E 30 901 | Pablo and Helen Safrochik | Browdale Farm Rd | 9/03/98 | Owner not interested |
| 5A | 31E 30 803 | Pablo and Helen Safrochik | Browdale Farm Rd | None mailed | This parcel identified as potential site. Same owner as above so they were not contacted |
| 6 | 31E 30 701 | Paul and Beverly Singer | Browdale Farm Rd | 9/03/98 | Owner not interested |
| 7 | 31E 26 2500 | Thomas and Eileen Berning | Boones Ferry Road | 9/05/98 | Owner not interested |
| 8 | 31E 26 2100 | Sandra Croff/Brent McKinney | Boones Ferry Road | 9/03/98 | Owner not interested; too many concerns |
| 9 * | Next to 31W 26 2080 | State of Oregon (ODOT R/W) | Boones Ferry Road at I-5 | 10/7/98 | As of 11-5-98, permit is approved by (ODOT District Manager subject to City posting \$5,000 bond & insurance |
| 10 | R31W 26 02200 | Clark and Alice Knox | Boones Ferry Rd | 10/16/98 | Owner not interested |
| 11 | R31W 26 02600 | Robert Toon, Trustee | Butteville Road | 10/16/98 | Owner not interested |
| 12 | R31E 30 00802 | Ken and Tana Triplett | Browdale Farm Rd | 10/16/98 | Owner not interested |
| 13 | R31E 30 00804 | Anxier Farms | Glass Road | 10/16/98 | Owner not interested |

STATUS REPORT
Wilsonville Well Sites Project
December 15, 1998

| Well Site # | Tax ID | Owner Name | Well Site Location | Letter/ROE mailed | Comments |
|-------------|---------------|---------------------------|--------------------|-------------------|---|
| 14 | R31E 30 00801 | Victor and Arline Bollman | Browndale Farm Rd | 10/16/98 | Owner not interested |
| 15 | R31E 19 00709 | Fred and Laura Flora | Becke Road | 10/16/98 | Owner not interested |
| 16 | R31E 19 00716 | Doumit Dagher et al | Becke Road | 10/16/98 | Owner has not expressed enough interest to pursue further discussions |
| 17 | R31E 19 00715 | Brian and Tracy Starock | Becke Road | 10/16/98 | Not likely. Owner wants quid pro quo with City for permit to use test well for pond |
| 18 | R31E 19 01500 | Rocky and Dianne Irinaga | Becke Road | 10/16/98 | Owner not interested/Opposition organizer |
| 19 | R31E 19 01800 | Charles Day, Trustee | Becke Road | 10/16/98 | Owner not interested |
| 20 | R31E 19 01400 | Sandra Thompson | Becke Road | 10/16/98 | Owner not interested |
| 21 | R31E 19 01300 | Raymond Johnson | Becke Road | 10/16/98 | Owner has talked to neighbors and as of 11-5-98 is definitely not interested |
| 22 | R31E 19 01601 | Stephen and Denise Bizon | Glass Road | 10/16/98 | Owner not interested |

* Received permission to use for test well sites.

d:\projects\ch2m\wilsonvilstatus



CLACKAMAS COUNTY

Department of Transportation & Development

THOMAS J. VANDERZANDEN
DIRECTOR

December 9, 1998

Michael A. Stone P.E.
City Engineer
City of Wilsonville
30000 SW Town Center Loop
Wilsonville, Oregon 97070

Re: Street Opening Permit Applications for Miley Road Well Sites

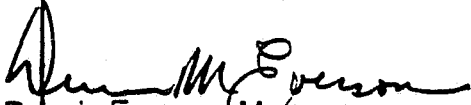
Dear Mr. Stone,

I have now had an opportunity to review and consider the City of Wilsonville's Street Opening Permit Applications, submitted by you with an explanatory letter dated November 9, 1998. I write to inform you that these applications are denied, and to provide a brief summary of the over-riding County concerns that prompted this decision.

These requests to allow the drilling of test wells in the County Road right-of-way are unlike any other Street Opening Permit Applications ever before presented to the County. They are particularly unusual because it is clear that the City's ultimate goal is to create permanent facilities for a continuing municipal water supply. This raises serious concerns for the County about the project's potential long-term implications. For example, the County cannot reasonably assume that the wells could be abandoned and relocated, as other utilities are always required to do, if it becomes necessary to widen the road or to alter the layout of the traveled portion of the road in the future. In addition, the County's continuing obligation to accommodate all existing and future utility lines and facilities within the right-of-way would likely be compromised if the test wells are converted into permanent facilities. Last, but not least, Clackamas County is sensitive to the impacts of road right-of-way projects upon the property owners whose land abuts proposed project sites. In this case, abutting property owners have expressed their opposition to any well-drilling at the project sites identified in your applications.

After carefully balancing the obligations of Clackamas County to all utility service providers who need to locate in the road right-of-way, and weighing the opposition of the property owners who abut the proposed drilling sites, Clackamas County has concluded that the three Street Opening Permit Applications for the Miley Road Well Sites submitted in November by the City of Wilsonville must be denied.

Very truly yours,



Dennis Everson, Manager
Construction & Development

DE:de

cc: Chair Judie Hammerstad
Commissioner Ed Lindquist
Commissioner Bill Kennemer
County Counsel
Tom VanderZanden



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MEMO FROM
THE CITY MANAGER'S OFFICE

TO: HONORABLE MAYOR AND CITY COUNCIL
FROM: ARLENE LOBLE
CITY MANAGER
RE: PRE-COUNCIL WORK SESSION
DATE: DECEMBER 7, 1998

SUBJECT: TROUTDALE AQUIFER

At the last City Council meeting I promised I would have for you by your December 7, 1998, meeting:

1. An answer from the County as to whether or not we could proceed to drill wells within their right-of-way.
2. Updated information from CH2M Hill revising their cost estimates for up to four wells rather than the eight originally anticipated.
3. A revised timetable estimating what would be involved in obtaining the necessary approvals to get the Troutdale Aquifer wells on line for City use.
4. A better idea as to probability of Water Resources approval of the Troutdale Aquifer as a water source.

I regret to say that the staff response on all four issues is not encouraging.

1. Drilling wells #1,2, and 3 within the County right-of-way: The City Engineer made application through the County Public Works Department for administrative approval to drill the test wells within the right-of-way. Although wells aren't normally the type of "utilities" contemplated within a right-of-way, from a technical standpoint there is no reason why the wells could not be located there. Nonetheless, the County has made the decision (although we have yet to receive written confirmation) that the City's application will be denied. Should the City Council wish to pursue this issue further, the City Attorney is prepared to discuss with you in executive session what the City's legal options may be. But, without well sites the information contained in the rest of this report may well be moot.



However, even with the County's cooperation, this is looking more and more like an uphill battle of diminishing returns.

2. The cost of one or four wells vs. eight: CH2M Hill's original cost estimate included the construction of eight wells for a total cost of \$6 million. The latest cost estimates (see enclosed report prepared by CH2M Hill) include estimates in excess of \$7 million for four wells. There are two reasons for the increasing cost:
 - First of all, CH2M Hill's original estimates assumed that treatment specifically for iron and manganese would not be necessary or would be a low cost sequestering option. The cost estimates now assume full treatment like the City of Woodburn has recently approved for their Troutdale Aquifer system. This would be consistent with the test results from the Lavonne well in Charbonneau. Again, without test wells in place, we don't know what the quality of the water will be and, therefore, what level of treatment will really be required. For cost estimating purposes we have assumed the worst case. Also, there may well be significant acquisition costs involved in providing a water treatment plant site or if the City-owned reservoir site is used the design would be complicated, and it would be expensive to retrofit the limited space.
 - Secondly, the original cost estimates greatly underestimated the real cost of providing the transmission lines. As you can see from the CH2M Hill report, they have done a good job of finding an alignment that doesn't require going through Charbonneau, itself, but it will be costly. The single well option is even less cost effective. Although it would provide good backup for Charbonneau, the necessity of treatment really makes it cost prohibitive. Enclosed with your packet is a memorandum prepared by Eldon Johansen, the Community Development Director, summarizing CH2M Hill's cost estimates and comparing and contrasting that cost with our existing well system and with the Willamette treatment plant option.
3. Timetable: The enclosed memorandum from Eldon Johansen also estimates using various assumptions the amount of time that it will take to bring the Troutdale Aquifer on line (nearly four years assuming there are no major appeals or lawsuits). He has also estimated how many years of growth capacity the City would have assuming we had four Troutdale wells on line. Development could continue for 2.4 to 5.4 years depending on the assumptions that are used. When you consider both the number of years it will take to have the Troutdale Aquifer wells on line and then the number of years of future capacity it would provide and compare that with the price, it doesn't appear to be a prudent investment.
4. Probability: Assuming we could, in fact, drill the test wells, and assuming that the Council decided to make the investment in the Troutdale Aquifer, and assuming that the City could overcome the land use challenges, what is the probability that Water Resources would approve the wells for City use? Enclosed is a memorandum prepared by Jeff Bauman, the Public Works Director, highlighting our City staff concerns about the conditions that could be placed on

the Troutdale Aquifer wells. Our worst fear is that the wells would be approved but so heavily conditioned as to render them useless during those periods of time (i.e., peak summer use) that we really need them. Again, without going through the process there is no way of knowing what the outcome will be. From the staff's perspective, the risk seems high and the cost out of line with the benefit received. The Troutdale Aquifer cannot serve as a real alternative to the Willamette or the Portland options, and it is of questionable value as a bridge to longer-range decision making.

al:lb



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 Wilsonville, Oregon 97070
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COMMUNITY DEVELOPMENT
 DEPARTMENT

Date: December 2, 1998
 To: ↓ Arlene Loble, City Manager
 From: Eldon R. Johansen, Community Development Director
 Subject: *Analysis of Troutdale Aquifer*

Currently, the only well locations that we have somewhat positive indications that we will be able to drill a test hole/pilot well are well sites number 1, 2 and 3 along Miley Road adjacent to Charbonneau and well site number 4 on the Brown property.

Troutdale Aquifer Analysis Costs

The August estimate to analyze the Troutdale Aquifer for eight production wells was estimated at \$1,096,000. CH2M Hill has expended significantly greater than anticipated effort on analysis of 23 sites as compared to an anticipated nine sites and additional cost estimating because of probable changes in iron and manganese concentrations. We now are focusing on four possible sites and our current estimate is as follows:

| Costs to Complete Analysis | |
|---|--------------------|
| Task Order #3. CH2M Hill Agreement to analyze Troutdale Aquifer | \$380,000 |
| Drilling contract for four pilot wells and two monitoring wells | \$336,000 |
| Miscellaneous permits | \$8,000 |
| Cost to substitute three production wells for test wells (under discussion) | \$120,000 |
| Options and entry permits | \$10,000 |
| Contingency at 15% | \$128,000 |
| Community Development staff support | \$49,000 |
| Subtotal | \$1,031,000 |



System Expansion

Costs

You requested additional background as to what the overall cost would be to the City for developing one well in the Troutdale Aquifer to provide sufficient water for Charbonneau if the waterline across the Willamette River were no longer in service. You also asked what the cost and impacts on developments would be if we develop four wells in the Troutdale Aquifer.

To develop the cost estimates and the estimate of impact on development we have used the estimated production of 500 gallons per minute per well as CH2M Hill included in the Troutdale Aquifer Study. We have also used the iron and manganese concentrations from the LaVonne Well of 1.6 milligrams per liter for iron and 0.3 milligrams per liter for manganese in developing the treatment method and the cost for treatment. Costs will change if well production or water quality changes.

Cost estimates have been prepared for two separate levels of production. One cost estimate was for one additional well and the treatment capacity to treat water from that well and the existing Charbonneau wells. Costs for this alternative varied from \$3,734,000 to \$4,164,000 depending on the location of the treatment plant site. The second alternative was for four new production wells and the capacity to treat 2,100 gallons per minute. The treatment capacity included the capacity to treat the water that could be moved to the north across the Willamette River as well as the water that would be used within Charbonneau. Costs for this option varied from \$6,788,000 to \$7,647,000. A report titled Troutdale Aquifer Wellfield Revised Cost Estimate Draft dated November 20, 1998, by CH2M Hill will be distributed separately and provides the background assumptions used to prepare the cost estimates.

Added Development

An additional question that we considered was how long could we allow additional development to occur if we completed four Troutdale Aquifer wells and the related water treatment plant. This would allow development from 2.4 years to 5.4 years depending on the assumption that was used. The spreadsheet at Attachment 1 provides the calculation of the additional water that would be available for development or changes in the operating parameters and suggest four alternatives for consideration.

Our earlier projections that were completed for the development of eight wells would have allowed the City to go to a more conservative basis for determining capacity available for development by allowing up to 20% of the wells to be offline for repair or for modification because of dropping water levels. The calculations also assume that we would reduce our very stringent dependence on water conservation to allow system capacity to meet maximum day demands. Using these assumptions, the four wells would provide capacity for an additional 2.4 years of development with a 5% annual growth rate. If we do not implement the firm capacity concept, but still reduce water conservation to 15% from 19% we would be able to support growth for an additional 4 ½ years at 5% per annum. If we decided that we would maintain our current water conservation rates and made no effort to go to a firm capacity basis of determining available water, the four wells would provide additional growth for 5.4 years.

December 2, 1998

Arlene Loble

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Staff's recommendation would depend on whether the four well alternatives were being implemented as a measure by itself or as an initial interim solution that is strongly tied to a longer range solution. If this is a solution that must stand on its own, staff would recommend that we allow for the largest well out of service and reduce the conservation to 15%, thereby allowing growth for an additional 2.4 years. On the other hand, if this were being implemented along with either a Portland alternative or a Willamette River alternative it would be feasible to continue operations at a level with very little margin for error and to allow the entire amount for growth at an additional 5% per annum for a total of 5.4 years.

Project Completion

The timeframe to actually have Troutdale Aquifer wells in place has slipped severely since we last completed the schedule to solve the water moratorium. At that time, we were projecting that by May of 2000 we would be able to have water from the first three wells available and that we would be able to end the moratorium in January of 2000. The current requirements for time to complete wells is projected as follows:

| | |
|--|--------------------------|
| Complete test holes/pilot wells and the analysis of the Troutdale Aquifer | 4 months |
| Obtain County land use approval for development of wells in county | 4 months |
| Obtain Department of Water Resources approval assuming contested case procedures | 17 months |
| Design and property acquisition | 8 months |
| Construction of wells, water lines and treatment plant | 12 months |
| Total | 3 years, 9 months |

The above schedule allows no time for appeals of the County land use approvals to the Land Use Board of Appeals and allows for no law suits. It defers design until after Department of Water Resources approval is obtained to minimize a very significant expenditure of design funds with the high degree of uncertainty as to whether the Department of Water Resources permit.

Cost Comparisons

Order of magnitude comparison of costs for the Troutdale Aquifer to other water production projects is as follows:

| Source of Water | Capacity | Total Cost | Cost Per Gallon |
|---|---------------------------|--------------|-----------------|
| Boeckman Well | 720 gallons per day | \$700,000 | \$.97 |
| 10 MGD capacity in a subregional Willamette water treatment plant | 10 MGD per day | \$25,000,000 | \$2.50 |
| One well with 800 gallon per minute treatment capacity and 400 gallon per minute supply | 576,000 gallons per day | \$2,630,000 | \$4.56 |
| 4 Troutdale Aquifer wells | 2,448,000 gallons per day | \$6,813,000 | \$2.78 |

The cost of the one well and the 4-well options on the Troutdale Aquifer are based on Option A. The cost of treatment of the water from the existing wells have been removed from the table for consistency in comparison with other alternatives.

Continuing Concerns

Perceived neighborhood impact. Although the initial push for consideration of the Troutdale Aquifer came from Charbonneau residents, they did not speak for all Charbonneau residents. A number of the residents are concerned about impacts on their property and lifestyle. At this stage it is questionable as to whether any public information program can correct the perception of an adverse impact on property values or lifestyle.

Department of Water Resources permit. We would be seeking permits for four wells which would be junior to the existing well permits and would be seeking permission to operate wells with a significant increase in approved withdrawals from the Charbonneau vicinity. Our ability to obtain a permit that is sufficiently free of conditions to allow pumping during the summer particularly during dry periods is of serious concern. We could take up to two years to find out that the permit does not allow for a viable increase in water production. Although the groundwater model that is used by CH2M Hill should clearly show our impact on adjacent wells it would be difficult to convince adjacent property owners, and to some extent Department of Water Resources that the model is reliable.

Water quality. The basic tenet of wellhead protection is that the program is voluntary. Our ability to obtain voluntary cooperation from neighbors that oppose our use of the wells could be difficult. We could construct a water system that provides potable water now only to have to subsequently construct expensive modifications to treat water that becomes contaminated because of our inability to enforce wellhead protection.

Overall risk. We can continue to fund Troutdale Aquifer expenditures of over \$1,000,000 and then wait for 25 months before finding out whether the expenditure bought us anything. This only makes sense if there is no other alternative.

Eldon R. Johansen
Community Development Director

ERJ:bgs

Cc: File



MEMORANDUM

DATE: DECEMBER 3, 1998

TO: ARLENE LOBLE

FROM: JEFF BAUMAN

RE: TROUTDALE AQUIFER ISSUES

While some members of the community continue to be ardent advocates for the City's development of the Troutdale Aquifer, it has become clear in recent months that many other people (for various reasons) are opposed to this project. I think we can reasonably expect such opponents to protest the City's application for water rights to the Troutdale Aquifer. We have met periodically with staff from the Oregon Water Resources Department (OWRD) to keep them apprised of our intentions and to seek their input regarding Department policies and procedures for allocating the State's water resources. This memo discusses the issues that are likely to be factors in OWRD's review of an application by the City to use the Troutdale Aquifer. (Note: My comments here assume we are successful in obtaining data from test wells and monitoring of nearby wells. Such data will be needed as a basis to support the City's application for water rights.)

First of all, the application/approval procedure can be complicated (and lengthy) if protests are filed. The attached flow chart illustrates the process and time frames. In discussions with OWRD staff, it is their expectation a Wilsonville water right application would become a complex contested case. Procedurally, this could take approximately a year and a half from the time the permit application is received to the issuance of a final order.

An early step in the water rights application process requires submittal of a "land use compatibility statement." For sites within the Wilsonville city limit, such a statement would be provided by the City's Planning Department in consideration of applicable land use plans and policies. For sites outside the Wilsonville city limit, such a statement must come from the County's Planning Department. It is not clear whether or not Clackamas County considers municipal wells a compatible land use in this case, nor do we know what process or time frame the County would use in making such a determination. A water rights application is not complete (i.e., the OWRD clock does not start) unless the application is accompanied by the required land use compatibility statement.



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Given the fact that Wilsonville has already been granted water rights to the Willamette River, and given the fact that our most recent permit for the Canyon Creek and Boeckman wells states "the City of Wilsonville understands that reliance on ground water for a long-term water supply is unacceptable," we have asked OWRD staff whether Wilsonville has any reasonable hope of being granted water rights to the Troutdale Aquifer. OWRD staff has been ambivalent on this point. Essentially they have said we will have to go through the application process before they will have enough information to make such a determination. They have made it clear, however, that if Wilsonville is permitted to use the Troutdale Aquifer there will likely be conditions attached to such a permit.

On the one hand, OWRD has been somewhat encouraging with regard to Wilsonville's use of the Troutdale Aquifer. Recent correspondence from OWRD staff states:

"... administrative limitations in your current basalt aquifer well fields ... are in the Sherwood-Dammasch-Wilsonville Groundwater Limited Area as outlined in OAR 690-502-0160 the Willamette Basin Program. Further ... under the Willamette Basin Program, this portion of the Troutdale Aquifer is not classified to prevent the City from applying for a permit for municipal use."

"The current effort to incorporate the Troutdale Aquifer being responsive to your concerned public and to diversify the number of the City's sources has merit."

On the other hand, the same correspondence states:

"Other issues such as access, county land-use approvals and the relationship to other utilities such as sewer lines may be more important factors [than OWRD's permitting procedures]. It is interesting to note that some of the water quality issues the public has raised about contaminants in the surface water of the Willamette have not been raised about the groundwater from the Troutdale Aquifer. . . It also may be of some interest to point out that the location of these proposed wells are near the discharge point of a 303d listed stream (the Pudding River)."

"Several general concerns which they [surrounding landowners] have expressed are:

- "Interference with continued use of their sources as related to supply, including short term and long term interruptions. Many of the types of agricultural users cannot sustain a short term interruption. These would include such uses as poultry, container nurseries, dairies and green houses.
- "Interference with domestic wells. Individual homeowners may not be able to afford deepening their wells to develop their wells to the point that the Water Resources Department could protect their priority date.

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- "Some users may be concerned that a wellhead protection program would somehow interfere with current or future uses of chemicals or other media for agricultural purposes. Some also may be concerned that a city well field would increase the need for implementation of costly waste management practices.
- "The cost of treatment for this groundwater to acceptable taste would be as high as treating Willamette River water.
- "Any interference with the Pudding River would not be acceptable to DEQ because of the limitations on surface water quality."

It is my opinion that Wilsonville could probably obtain municipal water rights to the Troutdale Aquifer. However, it would take nearly two years from today to obtain such rights. And they would be heavily conditioned. In light of the meetings, discussions, correspondence, and past practices with OWRD staff, I anticipate such conditions would include things like:

an extensive, ongoing groundwater monitoring program for this portion of the Troutdale Aquifer, with pre-established thresholds of concern when changes in the water table are detected;

a presumption that any future lowering of the water table is attributable to operation of the City's wells, regardless of the pumping rates of nearby agricultural and residential wells (Note: even though municipalities are required to monitor and report their pumping rates, agricultural and residential users are not required to do so - - and in fact are often reluctant to provide this information);

a presumption that a decline in the productivity of surrounding landowners' wells is attributable to operation of the City's wells, with a commitment by the City to pay a portion of the cost (or perhaps the entire cost) of deepening nearby agricultural and residential wells if/when they report declines in productivity;

an immediate cessation of pumping at City wells whenever the water table in nearby wells drops below a pre-established level and/or summertime flow in the Pudding River falls below a pre-established level;

an agreement that the City would pay a portion of the cost (or perhaps the entire cost) for wellhead protection measures taken by impacted parties;

OWRD staff has made it clear that they would like us to address these kinds of issues in our permit application. And it is possible additional issues may arise during the application process itself. OWRD staff does not want to be in the position of having to

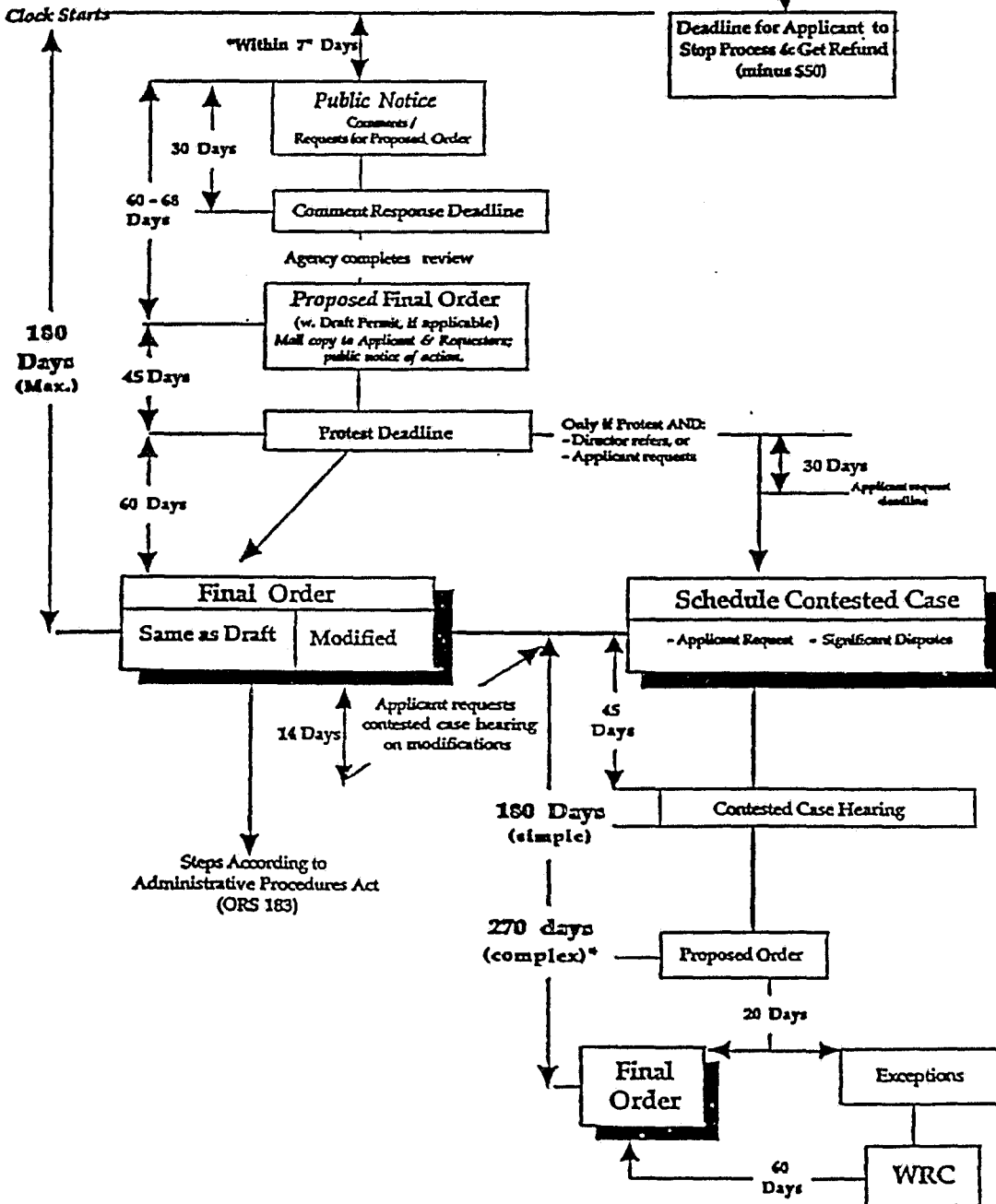
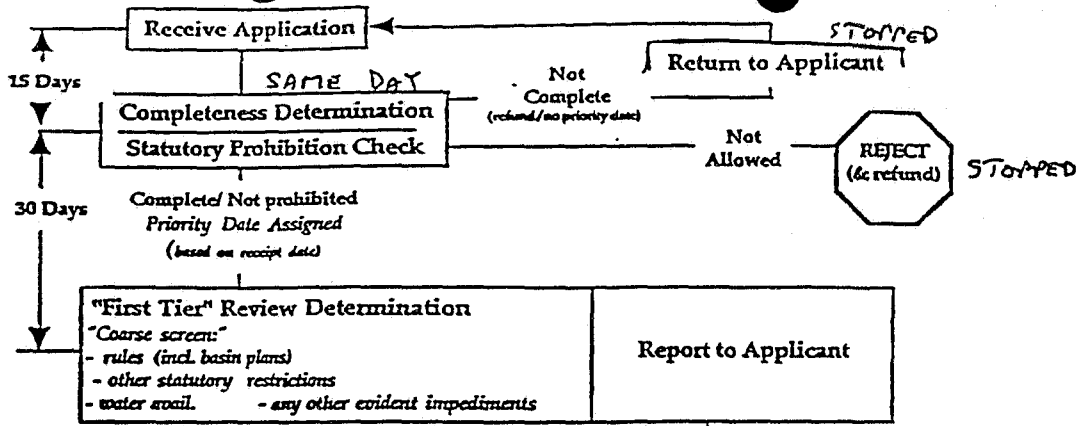
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make these kinds of judgment calls after-the-fact if/when surrounding landowners claim they have been impacted by operation of City wells permitted by OWRD. We can also anticipate that over time surrounding landowners may seek compensation from the City for whatever losses they claim to have suffered due to actual (or perceived) interference/interruption of their groundwater supply.

In short, development of the Troutdale Aquifer will not be as timely or as plentiful as was anticipated last June when the Council directed staff to pursue this option. Unless the Council is willing to condemn private property, it appears to me we will be able to develop no more than four well sites - - and these would be heavily conditioned in some yet-to-be-determined way. From a technical and hydrologic standpoint, the Troutdale Aquifer may still be a viable (if limited) source for Wilsonville's future water supply. But circumstances have changed from last June when it appeared the Troutdale Aquifer could double our water supply. If in fact we are now limited to a maximum of four wells it begs the broader policy question: is it worth the additional time, cost, uncertainty, and constraints in order to secure water that may be restricted during the peak season when we need it the most? I remain dedicated to develop this source to the best of my ability if it is the Council's desire to do so. At the same time, I feel a responsibility to keep you and the Council apprised of the issues we are likely to face.

| Alternate Impacts on Development of Four Troutdale Aquifer Wells | |
|---|-----------------------------------|
| | 11/30/98 |
| | Supply in MGD |
| Supply capacity for maximum day demand | |
| Present capacity | |
| Present production | 5.44 |
| Use of existing reservoirs to meet maximum day requirement | 0.20 |
| 20% of new reservoir capacity | 0.40 |
| Conservation (19.5%) | 1.46 |
| Total present capacity | 7.50 |
| Changes in Capacity | |
| Four Troutdale wells- Capacity limited by capacity of waterline over Willamette River | 2.16 |
| Conservation applied to added capacity | 0.52 |
| Reduce for decreased basalt aquifer production | 0.22 |
| Reduce for reduction in reservoir storage availability for max day requirement | 0.20 |
| Net increase | 2.26 |
| Total available capacity with four added wells | 9.76 |
| Previous approvals with estimated maximum day demand | 7.50 |
| Available for added development or changes in operating parameters | 2.26 |
| | |
| Alternatives for consideration | Added Development in years |
| Allow for largest well out of service of 0.9 MGD, reduce conservation to 15% by allowing .44 MGD for less conservation and 0.92 MGD for growth at 5% growth per annum | 2.40 |
| Allow for largest well out of service of .9 MGD and 1.36 MGD for growth at 5% growth per annum | 3.40 |
| Reduce conservation to 15% by allowing .44 MGD for less conservation and 1.82 MGD for growth at 5% growth per annum | 4.50 |
| Allow entire amount for growth or 2.26 MGD at 5% per annum | 5.40 |



DECEMBER 11, 1998



30000 SW Town Center Loop E
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(503) 682-1011
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TO: INTERESTED PARTIES

FROM: DAVE KANNER, PUBLIC AFFAIRS DIRECTOR

RE: PUBLIC HEARING ON WATER MORATORIUM

On Monday, December 21, the Wilsonville City Council will hold a public hearing on a staff recommendation to extend a moratorium on new development approvals in the city for another six months. As you are no doubt aware, this moratorium was imposed in January of this year when it was determined that the city's existing water supply would not allow for any more growth beyond that which had already been approved.

When the Council extended the moratorium last June, the Council also adopted a statutorily required "plan of correction" that called for aggressively pursuing the drilling of test wells in the Troutdale Aquifer. It was our hope at the time that the Troutdale Aquifer would at the very least be a bridge to a long-term water solution, if not the long-term solution itself, and that we would be able to develop wells in the Troutdale Aquifer quickly enough to get us out of the moratorium.

It is now clear that this is not the case. After having spent more than \$200,000 to date in our effort to develop the Troutdale Aquifer, we have no test wells and only one property owner who is even willing to let us drill a test well. Staff will now recommend that the city abandon this effort. This recommendation is grounded in the following:

- Strong opposition to the Troutdale Aquifer has surfaced both inside and outside of the city. Because of this, a challenge to a water rights application is virtually certain. A "contested case" application could take two years (or more) to resolve, with no guarantee of success. Even if we could get the permits, staff at the Water Resources Department has indicated that the permits would be heavily conditioned and possibly not allow us to pump the wells during the summer months, when we need the water the most.
- Because there are no willing property owners, the city has the choice of drilling test wells only in Clackamas County rights of way or condemning private property to obtain sites for test wells. However, Clackamas County staff has made it plain that they will not approve a city application for permits to drill wells in the right of way. A challenge to that denial could take years to resolve, with no guarantee of success. Similarly, challenges to a city condemnation action (for land that we might not even need in the long-term) could be expensive and lengthy, with no guarantee of success.
- Finally, the water from the Troutdale Aquifer would require a much more expensive form of treatment than earlier anticipated. As a result, it appears that the Troutdale Aquifer would actually be *less* cost-effective than other options available to the city.

