

**Special City Council Workshop Minutes**  
**October 28, 2014**  
**Dundee Fire Station Meeting Room**

**Call to Order**

Mayor Crawford called the meeting to order at 7:02 P.M.

**Council and Staff Attendance**

Present: Mayor Ted Crawford, Councilors Jeannette Adlong (7:28 P.M.), Jennifer Munson, Storr Nelson, and David Russ. Excused Absence: Councilors Doug Pugsley and Tim Weaver. Staff member: Rob Daykin, City Administrator, Charles Eaton, City Engineer, John Stock, Fire Chief, Alan Mustain, Public Works Supervisor, and Debbie Manning, Assistant City Recorder.

**Public Attendance**

Jay Harris, Public Works Director, City of Newberg, Kay Edwards, Tom Edwards, Dale Bernards, Lee Odell, CH2MHill, Dale Jutila, CH2MHill, and Larry Eaton. GSI Water Solutions, Inc.

**Old Business**

**Second Reading Ordinance No. 534-2014, Amending the Development Code**

The City Council passed the first reading of the ordinance at the October 21st meeting. C. A. Daykin noted a typographical correction to the Use table on page 3 of Exhibit "A" to retain the current permitted use under Parking Facility as "P" (Permitted Use) in lieu of the change to "S" (Special Use). **The motion** was made and seconded to adopt Ordinance No. 534-2014, an ordinance amending the Dundee Development Code to incorporate new commercial zoning standards and amending the zoning map and comprehensive plan map to create a new commercial zoning pattern with the correction to page 3 of Exhibit "A" to remain as currently listed: "P" (Permitted use). The Mayor read the ordinance by title. **The motion** passed unanimously.

**Long-Term Water Supply Alternates**

Dale Jutila, CH2MHill, stated they were present to address long-term water supply options and introduced Lee Odell, CH2MHill, and Larry Eaton, GSI Water Solutions, Inc. The PowerPoint presentation was included in the Council packet.

Lee Odell reviewed the City's past water use: peak day, average day and water lost. The percentage of water loss has decreased from over 20% to about 11% currently. The projected peak day demand from 2015 to 2035, as the population grows, is a total capacity of 652 gpm (gallons per minute) and a firm capacity, with the largest source out of service, is 517 gpm. The firm capacity is nearly equal to the current demand. The existing current supply is comprised of spring area wells, leased wells, and basalt wells located in the city. The deficit to be filled is approximately 300 gpm. Options include:

- Transition of the test well (rated to supply a peak season demand of 250 gpm) to a production well. Modifications to the well have been completed to allow the transfer of water rights. Larry Eaton recommended collecting data for this well's performance before considering dropping another well in the watershed.
- Potential to add an additional well in the watershed
- Potential to add additional basalt wells in town.
- The vineyard well north of town has a water right of 150 gpm. It is a deep well with a water right for irrigation and domestic use.

- Water Reuse for parks and possibly residential. The State of Oregon allows the use of Class A water for residential irrigation.
- Riverbank filtration well
- Ranney well
- Surface water right to the Willamette River
- Regional options including the City of Newberg
- Water loss through the system

Jay Harris, City of Newberg Public Works Director, inquired if Dundee had to do any PH adjustments to the well water. Jutila advised Dundee does not have a PH problem with the well water.

Larry Eaton, GSI, referred to the riverbank filtration test well off of Eighth Street at the Willamette River by well 4. The City has a surface water right for 4 cfs (1795 gpm) from the Willamette River. Three previously drilled wells in the riverside location had sanding and completion issues. Public Works Supervisor Mustain advised the State directed the City to investigate whether the wells near the river were actually surface water. Since the City recently completed construction of wells 8, 9 & 10 and did not want to consider water treatment at that point in time, the recommendation by the City engineer was to either use the river wells as emergency backup or retain the water right. The City stopped using well 4, a few years later the pump motor was damaged in the 1996 flood. Eaton relayed that a layer of gravel was found at about forty to sixty feet below the surface (samples of the soils at depths of five to fifty-four feet were displayed) with the drilling of the test well. The existing surface water right can be transferred to the ground water if we are within five hundred feet of the river. The test well was drilled three hundred feet from the river, with an observation well drilled halfway between the test well and the river. The test well was pumped for twenty-four hours and the water was tested for micro particulate analysis (MPA) with the results indicating a low risk of requiring any filtration or extensive water treatment. At 100 minutes into the test the draw down curve turned over and got steeper, where it should have flattened out after hitting river water. The result was no hydraulic connection to the river, which would be a fatal flaw for the riverbank filtration concept. Continued pumping of the well would likely dewater the shallow aquifer. Eaton speculated there is a barrier of silt and fine grained material that is preventing the river connection. He suggested that the City may wish to conduct a longer week-long test next summer to see if there is a breakthrough to a river connection.

Research of the contractor's archives brought to light old studies near Ash Island considering placement of a Ranney collector. A Ranney collector system involves the construction of a caisson near the river with horizontal screened pipes radiating from the caisson into the layer of gravel that water passes through. The reports supported placement of a collector on the other side of the river with the expectation to produce from 2.5 to 11 mgd (million gallons per day). Also, many of these test wells were drilled very close to the river. Harris advised that the City of Newberg is getting 4.5 mgd out of one Ranney collector currently. Exploring the option of a Ranney collector along the Willamette River could still be a viable future option to follow-up on. Crossing the river would be expensive; but Ash Island could be an option. It would require installation of a bridge to facilitate maintenance. L. Eaton recommended that the City continue exploration of the geology of various sites that would be suitable to either riverbank filtration or a Ranney collector over an extended period of time.

Mayor Crawford inquired if the water right is big enough to attract McMinnville Power & Light on a regional water supply. C. A. Daykin updated at a meeting with the Yamhill County water task force earlier this year, McMinnville Power & Light reported they secured a river water right but concluded after further analysis the curtailment requirements for fish flow will severely limit

its use. They want to purchase other senior, less restricted water rights. It was noted it is easier to transfer a water right down stream rather than up stream.

Odell suggested the options of a regional partnership to develop a Ranney collector supply or obtaining off peak water to inject into the basalt wells to increase the capacity of wells 9 and 10. Water could be transmitted from the City of Newberg by use of a new pipeline along Highway 99W to Dundee in the off peak season. Harris advised it would be a smaller six-inch pipeline to match the existing system at the point closest to Dundee, which typically should not be a problem in the winter. He suggested use of Dayton Avenue or the Bypass ROW (could be costly over Chehalem Creek). The City of Newberg has eight wells: 1, 2, and 3 have been abandoned as they are only producing a couple hundred gallons per minute, well 4 has been rehabilitated and has some issues, well 5 was not drilled deep enough. He noted well 8 is the big producer, with that well down the city can just meet their peak flows. They are proceeding with well 9 in the area of well 8. Newberg has two waterline crossings: one on Highway 219 and one under the river. They have one reuse customer; Chehalem Glenn Golf Course. It is a part-year use, running during the summer, which they have to bring up for the summer season and take it down during the winter. He recommended a year round reuse system with year-round customers.

The study on Aquifer Storage and Recovery (ASR) for the surface springs near Harvey Creek will be an expensive option for very little gain. Another option could be artificially recharging the aquifer for the basalt wells in the City with water from the City of Newberg. Councilor Nelson questioned how fast the water recharges the well as compared to the draw out rate. L. Eaton replied it is about the same.

Odell noted that the parks have been curtailing their water usage and an estimate of water reuse is unknown. C. A. Daykin noted a large part of the capital cost is to the developer for installation of the distribution system. Odell noted it amounts to an estimated \$850 per new home built. The City would build the pumping and storage facilities at the Wastewater Treatment Plant (WWTP).

Three ASR options: 1) using water from Newberg or 2) river water filtrated through the gravels to recharge the city's basalt wells, or 3) the use of Harvey Creek water to recharge the spring wells. C. Nelson inquired how much time would be needed in the gravels to filter the class "A" recycled water. Odell noted additional treatment beyond Class "A" is recommended for indirect potable reuse. He added that the State of Oregon has no requirements for indirect potable reuse at the moment.

Odell requested feedback on which water supply options should be explored in more detail.

City Engineer Eaton expressed concern to be chasing insignificant, low production wells. He suggested talking to Newberg about their 200 gpm wells.

Public Works Supervisor Mustain pointed out that the twelve-inch main, running down Eighth Street toward the river, is about two-thirds replaced due to the Bypass project. There is power at well 4; he supported developing the 50 gpm well as a less costly option, provided that it can be demonstrated that additional treatment is not required.

The Mayor questioned the production for the Four Graces vineyard well located just north of the city limits. L. Eaton advised he does not have production data available for the well; however, the water right is for 150 gpm. Crawford asked the production capacity for wells 5 and 6. Mustain replied 125 gpm. Crawford questioned water rights for Falcon Crest Park. C. A. Daykin clarified we do not have water rights there; we have the right to go on the property and construct a well.

C. A. Daykin inquired the investigation cost to determine if development of a Ranney well is feasible. L. Eaton estimated \$250,000 over a ten year period to explore.

Odell suggested adding the prospect of Newberg wells to the list for consideration. Harris inquired the length of the run of the waterline down Dayton Avenue. Mustain advised it stops just this side; but it reduces at Hagey Road to a two-inch pipe with a further reduction to a one-inch pipe near the cemetery. It would need to be replaced by a six or eight-inch line to transmit water from Newberg.

Reducing leakage will be removed from the list for further exploration due to the high cost of replacing all of the substandard water lines for the small amount of gain. The City will continue to monitor water loss and repair leaks in the distribution system. Daykin suggested removal of the option for a surface water intake structure and treatment plant at this time.

C. A. Daykin inquired if the Council would support the cost for development of a purple pipe system; the cost could run \$900 to the developer/buyer per residential lot. The Design Specifications will be updated; but it is probable the water will not be immediately available. Mayor Crawford supported the cost of a home purchase here as comparable to other cities in the state. Engineer Eaton clarified that the developers would have to place two pipes; one would be a vacant pipe. Harris asked if the city adjusted the water SDC to fund the transmission and storage of the water. Daykin added the pumping and storage facilities are part of the SDC calculation.

C. Nelson supported further consideration for an ASR for the basalt wells if a cheap water source can be determined. City Engineer Eaton supports an ASR for a future planning cycle for the city. C. Russ asked if excess capacity could be used to charge the basalt wells. L. Eaton replied ASR requires a source outside of the system.

C. A. Daykin polled the Council's in regards to starting conversation with the owners of the vineyard well. The majority consensus agreed with moving forward with this contact. Daykin questioned if the test well is put into production how far into the future will it carry us. Odell estimated ten years. Mayor Crawford asked how many households. Odell answered, an estimated addition, based off of the Portland State Population figures, of about 1,000 people; 350 new connections.

Dale Bernards, representing the Lindquist family, shared they have developers ready to move forward now. They want to know what it will take to make it happen. He offered an option of a private developer, willing to assist the city, fronting the funds to build a water system (to city standards) and then turning the system over to the city once the developer is paid back. He noted \$900 hookup fees are not an issue compared to the fees in the City of Portland.

Harris inquired if there would be additional consideration for conservation; possibly offering incentives for water saving faucets, etc. Odell reviewed that peak day usage has declined, but the average day usage has stayed level. The majority Council consensus was to look at in home water conservation options. Mustain suggested a comparison of the one winter month, which reflects mainly household usage, over a number of years.

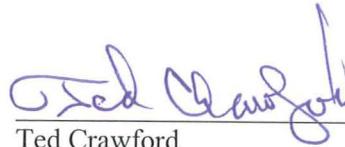
C. Russ asked for an estimate of other costs, such as research costs, for the water supply options. He questioned the cost of the test well being the same as the cost of additional spring wells. The test well could be the least expensive and quickest option to address now.

The Mayor asked if the old Harvey Creek well located on City-owned property west of the cemetery could be used as an ASR. Mustain stated the problem is the cost of moving the water to the basalt wells.

C. Nelson asked what it would take to bring the vineyard well on-line. L. Eaton replied tying into the system, a pump, pump house, telemetry and power.

C. A. Daykin clarified the need to determine an intermediate fix for the next ten years; to grow the customer base and spread the cost involved in the use of the surface water rights, for example through a Ranney collector, over more users. He reminded the Council that there are other water system costs to address including storage and distribution issues.

The meeting was adjourned at 9:02 P.M.

A handwritten signature in blue ink, appearing to read "Ted Crawford", written over a horizontal line.

Ted Crawford  
Mayor

Attest:

A handwritten signature in blue ink, appearing to read "Debra Manning", written over a horizontal line.

Debra Manning, MMC  
Assistant City Recorder