

# Meeting Summary (6/30/2009 Draft)

## CLAGGETT CREEK WATERSHED COUNCIL

5:30 pm – 7:00 pm, Wednesday, June 3, 2009  
Room C, Keizer City Hall

**Attendees:** Dennis Koho, Mark Caillier, David Philbrick, Elizabeth Sagmiller, Marty Matiskainen, Patty Tipton, Jon Nottage, Clifton Serres (City of Salem, Assistant City Engineer), Bruce Clouser (City of Salem, Operations and Technical Services Supervisor), Keith Bondaug Jr. (City of Salem)

Dennis Koho called the meeting to order, the lack of a quorum was noted, no votes or official actions were taken, as much other progress was made as possible.

1. In introducing a presentation on Salem Keizer efforts to address Sanitary Sewage Overflow (SSO), Jon Nottage mentioned a couple of opportunities for the CCWC to review and comment:
  - a. As part of an effort to renew its MS4 permit, the Storm Water Management Plan has been revised and submitted to DEQ. Anticipate DEQ to open public comment period later this year. Encourage CCWC to review, comment, and support city efforts—as this plan describes activities that the city will take to reduce the introduction of pollutants in stormwater.
  - b. The city is revising its stormwater design standards to require treatment of runoff—an effort to remove pollutants from stormwater that runs into creeks and other surface waters. In the past Salem had required stormwater detention, but not treatment. This effort also involves creating a stormwater chapter in city code to enforce the design standards. If the CCWC likes what is proposed, it would be helpful to testify at City Council in support of the proposed plans.
2. Clifton Serres, Keith Bondaug Jr., and Bruce Clouser from the City of Salem, provided an overview of both maintenance and capital improvements being undertaken to address Sanitary Sewage Overflow (SSO). Following these meeting notes are more detailed notes used by the Salem staff in making their presentation.

All such overflow incidents are now tracked. A map showing the few that have occurred in Keizer was shared. These were the result of pipes blocked by roots and grease. Other common causes for non-storm related SSO, include vandalism (people throwing things into the sewer), sewer main collapses (some pipes in the Salem system are 80 years old), pump station failures, and contractor damage. During storms, when the ground water rises and there is significant surface runoff, SSOs can occur when the hydraulic capacity of the pipes are exceeded. In the past this has occurred on average approximately 7 times a year. This past winter it

occurred only once (it was in Salem at Union Street/North River Road). The overflow gate at Claggett Creek has not been used for years. It still exists, but would have to be intentionally opened. During these storm events, the sewage is a lot more dilute than normal. An ongoing maintenance program works to identify and reduce infiltration of water to the sewage system during high water events. Most current planned pipe maintenance focuses on parts of the Salem system. Piping in Keizer is all relatively new, so it has fewer problems than the older parts of the Salem system.

Added this year is the new treatment facility at North River Road. This is designed specifically to treat the more dilute sewage during storms. It separates the solids and routes those to the Willow Lake facility. Organisms in the remaining liquid are reproductively killed using UV light before the water is discharged to the river. The plant as built can handle 50 million gallons a day, but it has the capacity to be increased to 150 million gallons a day. It uses a different process than at Willow Lake, that is less expensive to build and more expensive to operate. This past winter, the facility was used twice. Willow Lake is also being improved. Its capacity has been increased from 105 million gallons a day to 155. Normal summer flows are around 30 million gallons a day. During the winter at times this increases 70 million gallons a day to over 100 million gallons a day.

3. With Mark Caillier's leadership, CCWC was successful in planting 50 ash and 50 willow trees along Claggett Creek on May 30. Anyone interested in helping to water the trees during the summer should contact Mark, he would appreciate any help.

4. At this point, our meetings are planned for the 1<sup>st</sup> Wednesday of the month, in room C of Keizer City Hall at 5:30 PM. The next meeting is Wednesday July 1, 2009 at 5:30 PM in Room C. Note, the building is locked at 5 so someone needs to be sure to either have or pick up a key card to assure we have access to the building and can let people in.

Following are notes prepared by City of Salem Staff that cover in greater detail the information they covered.

## **Claggett Creek Watershed Council Meeting June 3, 2009**

### **OUTLINE**

The City of Salem Operates under the Department of Environmental Quality NPDES Permit (National Pollution Discharge Elimination System). Renewable on 10/31/09.

The City of Salem operates the sewer system under both DEQ and EPA (Environmental Protection Agency) Regulations.

Last year we were audited by the EPA. DEQ reports that the audit was favorable. We have not received the formal audit summary yet.

### **STATS**

We maintain **797** miles of sanitary sewer pipe (Keizer = 115 miles)

Pipe sizes range from **4" to 75"** pipe

Roughly just over **10%** of the sewer system is over **50 years old** (**80** miles of pipe and corresponding manholes) **25.5** miles of pipe is **75 years old** (**3.2%**)

Salem service area for Wastewater Collections includes Keizer, Turner, the East Salem Service District, and Labish Village

Wastewater Collection Services has 40 full time employees

Operating Budget of approximately 6 Million dollars each year

### **MAINTENANCE ACTIVITIES**

Scheduled TV Video Inspections                      Sewer Main  
Repairs

Flow Monitoring Program              Manhole/pipeline chemical grouting

Winter Manhole Inspection Program              Manhole repairs/adjusts

Scheduled Hydro Cleaning Program              Root/Grease removal

Root Treatment Program (contracted out in the summer) 40,000lf

Sewer System Operation                      GPS Manhole Coordinates

Smoke Testing Program                      Asset Mgmt. System/GIS Mapping

Vac Excavations              New Sewer Service Taps

Standy-by Duty Service for Collections - 24/7 for 365 Days a Year

### **INFLOW/INFILTRATION (I/I)**

Inflow from illegal connections such as Rain Drains

Infiltration from leaky sewer mains, manholes, and private service laterals

### **What are we doing about I/I:**

\* Winter Manhole Inspections to find and document leaky manholes for repair (about 1,500 each year)

\* Flow Monitoring to identify I/I sewer basins and sub-basins  
The monitors calculate flow volumes and velocity

An average of 60-75 flow monitors are utilized yearly

\* A network of 22 Rain Gauges collect rainfall data which is used with the flow monitoring data to correlate rainfall events to actual sewer flow increases

\* Summer Smoke Test Program to find illegal connections of storm drainage/roof drains to the sanitary sewer system (last year about 150,000 lf or 28 miles of pipe was smoke tested) Letters are sent to property owners for removal of rain drains from the sanitary sewer

\* Mainline pipe joint testing and chemical grouting program for concrete pipe (28,000 lf or 5.3 miles done last year)

\* Manhole chemical grouting program to stop Infiltration leaks (last year 81 manholes were chemically grouted)

\* Manhole repair to stop Infiltration or potential leaks (147 completed last year)

\* TV Inspections (last year 494,038 lf or 93.5 miles was inspected). TV Inspections document structural problems, roots, grease, debris and I/I (TV is scheduled on a 6 year cycle)

\* Capitol Improvement Projects (CIP's) Includes replacement of sanitary pipe, manholes, service line replacements and Sewer Pump Station upgrades

## **SANITARY SEWER OVERFLOWS (SSO's)**

What conditions helps cause SSO's to happen?

- \* High groundwater conditions that allow water entering sewer mains and failing private sewer services from cracked or broken pipe and failing sewer main connections
- \* Household or restaurant cooking grease accumulations
- \* Root growth in sewer mains and private services
- \* Vandalism (a manhole lid gets pulled and filled with debris)
- \* Sewer Main collapse – (rarely happens)
- \* Utility or contractor damage – (excavations/directional boring)
- \* Hydraulic capacity issues (during extremely high flows)
- \* Prolonged rain events during the winter or (5 year/24 hour and 10 year/24 hour storm events) accompanied by groundwater saturation conditions
- \* Illegal rain drain or area drain connections to the sanitary sewer
- \* Willamette River high water levels (helps to raise groundwater levels in low lying areas near the river that were previously excavated, such as sewer trenches)
  - Bankfull = **21.2 feet**      Flood Stage = **28 feet**
- \* Flooding events – creeks cresting/flooding over manhole lids
- \* Sewer Pump Station Failures
- \* Widespread Electrical Power Failures that may affect Pump Station operation

**NOTE:** (Many but not all of our Sewer Pump Stations have on-site generators. Salem does have several trailer mounted generators that can be used for redundant power)