

March 31, 2008

Bob Gustavson  
District Forester  
Forest Grove District  
Oregon Department of Forestry  
801 Gales Creek Road  
Forest Grove, OR 97116-1199

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FOREST GROVE DISTRICT  
NWO AREA

**RE: Comments on the Forest Grove District FY09 Annual Operational Plan as they relate to Hillsboro's Slow Sand Plant and JWC's Water Treatment Plant**

Dear Mr. Gustavson,

The following are comments from the City of Hillsboro Water Department regarding the Oregon Department of Forestry, Forest Grove District's Annual Operational Plan.

**Potential Impacts to the Slow Sand Filter Plant:**

The Slow Sand Filter Plant (SSFP) is located on the Tualatin River west of Haines Falls, approximately 2 miles downstream from the proposed density management treatment areas and nearest proposed road work in section 19. The Slow Sand Filter Plant, operated by the City of Hillsboro, is the sole water supply source for the community of Cherry Grove and the primary source for Dilley, LA Water Cooperative, and the City of Gaston. Due to the limited nature of the treatment process at the Slow Sand Filter Plant, it is very sensitive to additional sediment loads. While the Annual Operational Plan (AOP) acknowledges the Tualatin River as a municipal water supply, it does not illustrate understanding of the extreme sensitivity of the Plant's operations. It is for this reason that we are particularly concerned about the impacts the Operational Plan may have on sedimentation and turbidity.

It is in the State's best interest to protect this source of water for Cherry Grove, Dilley, LA Water Cooperative, and the City of Gaston. The Cherry Grove community has no back-up water supply source and can not afford to have the Slow Sand Plant halt operations. Hillsboro must halt Tualatin River intakes at the Slow Sand Plant when influent water reaches 5 NTU. Limited production can be served by our storage pond at the plant for a maximum of 4 to 7 days of supply. Any activities that increase in-stream turbidity above 5 NTU for more than 4 days risk complete shut down of this water supply source.

Even elevated turbidity levels (but remaining below 5 NTUs) increases the direct operation and maintenance costs of the SSFP in the form of staff time to operate the plant and maintain the intake

facility, rapid blockage of the filtration materials, increased chemical use, and increased disinfection by-product formation. Taste and odor problems increase as influent turbidity rises as well. Hillsboro Water Department encourages ODF to recognize these indirect costs of harvest and nonmarket values of the forested lands in the Sunday Creek basin.

Currently, the SSFP must shut off its Tualatin River intake about three times per year due to high turbidity levels, debris flows, and land slides. While the harvesting and road building operations that led to these conditions took place during dry season, just as the AOP proposes, the disrupted soil is transported during winter rainstorms. The cumulative impacts of harvesting in the basin are taking a toll on the SSFP.

In the past, downstream harvesting practices have resulted in extremely turbid flows for extended periods (~3 years in worst case). Should an event of this nature occur upstream of the SSFP intake, the plant risks becoming overloaded with sediment. If elevated turbidity levels persist for more than 4 days, the disruption of water service, for consumption and fire protection, to approximately 2,000 people is highly likely. The citizens of western Washington county cannot afford a similar event occurring upstream of the SSFP intake.

#### **Potential Impacts to the Joint Water Commission's Water Treatment Plant:**

The increased turbidity also impacts the Joint Water Commission's Treatment Plant, which is managed by the City of Hillsboro. The Joint Water Commission (JWC) is the water supply agency for the cities of Hillsboro, Forest Grove, Beaverton, Tigard, and the Tualatin Valley Water District, serving approximately 400,000 people in the Portland Metropolitan area. The JWC Plant uses conventional dual media filtration, along with disinfection, to provide high quality drinking water. The JWC Plant can handle higher levels of turbidity, but treatment costs and time definitely increase during these events. Taste and odor problems occur and disinfection by-products formation potentially increases as a result of increased sediment and nutrient loading.

#### **Concerns specific to Sedimentation:**

The actions within the Operational Plan that have the greatest potential to add sediment to the system above the Slow Sand Plant are the timber yarding and hauling and the road construction and maintenance activities in the Sunday Creek basin. The AOP indicates that in these four sale areas, approximately 261 acres of forest will be modified clear cut (MC), 1,035 acres moderate partial cut (PC-M) and approximately 7.4 miles of new road and 40.3 miles of road improvement will facilitate project activities. These activities have the potential to generate a considerable amount of additional sediment, despite the Best Management Practices and seasonal restrictions described in the AOP.

Soils in the project area include the Olyic silt loam, Tolke silt loam, Hembre silt loam, Laurelwood silt loam, and Pervina silty clay loam (page 50, USDA, SCS, 1982 and USDA, SCS, 1974). These soils further exacerbate the potential for increased sedimentation because they have moderate to severe erosion hazards when the soil surface is exposed. The steep topography, geology, and erosive soils in the Upper Tualatin watershed make this area highly susceptible to surface erosion, slumping and landslide activity (USDI, 2000). During high stream flows, heavy loads of fine sediment and organic material are carried into stream channels. Environmental Assessments of this area have stated that the area is prone to slumping and landsliding and that most landslides in the area are associated with improper road construction and maintenance (BLM EA, page 49).

After the first heavy rains, the stored generated sediment would be released and transported downstream and out of the project area as suspended sediment. Most critically, as written in the EA, "most of the

sediment would move downstream in the first high flow events of the first winter when turbidity levels are normally at their highest (pg 63)." The BLM Roaring Creek environmental assessment can be applied to ODF's operations due to the similarity in operational size, scope, and plans.

Despite the high potential for increased sedimentation, the AOP provides no considerations specifically to the Slow Sand Plant. The only sediment control practice for this is placement of sediment control devices in road ditches. The expected increases in sedimentation and turbidity from the project are relatively immediate and could result in serious negative impacts to the Slow Sand Plant. Considering the sensitivity and importance of the Slow Sand Plant, these considerations do not provide adequate protection.

Once the first heavy rains occur, nothing can be done to protect the Slow Sand Plant from the sediments generated by the proposed project; therefore, it is imperative that the City of Hillsboro be allowed to closely coordinate with the ODF and the purchaser/operator to eliminate the risk of putting this Plant out of commission and leaving these communities without a source of potable water.

We request that the City of Hillsboro be notified prior to any proposed management activities, including contractor selection, expected harvest dates, road construction and vacation, fertilizer and herbicide applications, and pending permits requesting wet season instream activities. If emergency maintenance actions are being considered, and the risk of sedimentation of maintenance is being weighed against the risk of future sedimentation due to failures (AOP pg 15), we request inclusion of Hillsboro staff in the decision making process.

ODF has indicated the many measures that would be in place to minimize the potential for increases in sedimentation and turbidity as a result of the AOP; however, most of these measures are solely dependent upon the operator's skills, compliance efforts and commitment. Due to the vulnerability of the Slow Sand Plant and the potential for significant impacts to its operations from the proposed project, the City of Hillsboro should be allowed to review the contractor selection criteria and evaluation, receive prior notification of thinning and road improvement actions, and have a contact person to work with from ODF and the contractor if issues arise during the project. ODF should also submit comments back to Hillsboro addressing these issues.

#### **Review Comments and Recommended Actions:**

Unfortunately, City of Hillsboro Water Department staff was not notified of this Operational Plan by ODF staff. Although resource specialists provided earlier input, we were not given this opportunity. Hence we ask that our concerns at this stage be given considerable weight. The list of public information and education activities (pg 43) performed by ODF is well diversified. We recommend a heavier emphasis on contacting directly affected entities and individuals in a timelier manner.

As indicated in the ODF publication 'Harvest Goal and Type Definitions for State Forest Lands' "more frequent, but less intense, thinnings may provide some of the same growth and structure results as the more intense thinning (pg 3)." We recommend that the operational plans for the Sunday Creek basin sales be changed from modified clear cut and moderate thinning to light thinning. Increasing the SDI% to 35-45 will increase rainfall interception to prevent erosion, retain surface stability, and progress the forest stand structure to one desired by ODF.

The costs and benefits of road construction to access stands and the likelihood of sedimentation increase should be reviewed. For example, if long road sections are planned for construction to reach relatively small harvestable acres, or to reach potentially unstable or steep slopes, the harvest area should be

removed from production and the road not built. For example, in the south-western corner of the Sunday Addition sale, a relatively large road is planned for construction to allow access the steepest land of 70% slope. This proposed activity is also in closest proximity to the Tualatin River and SSFP intake. We recommend removal of this section from harvest operations due to the high risk of increased sedimentation, especially since this area is rated as a high landslide hazard location.

Additionally, planned roads in close proximity to stream headwalls should also be reconsidered to protect these fragile areas from collapse. For example, within the Sunday Addition timber sale boundary, five roads will lie perpendicular to tributary headwalls. Due to the higher instability of headwall areas, we recommend the increased stream buffer width or modified road plans to reduce the risk of headwall collapse. Additionally, we ask that more roads be selected for either partial or full vacation road closures to reduce long term sedimentation impacts to the SSFP.

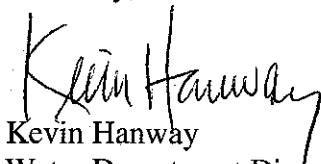
Finally, an increase in the minimum stream buffer width in the Sunday Creek Basin sales from 25 ft to 60 ft is recommended to protect riparian vegetation and reduce subsequent bank erosion. A key water quality recommendation in the Upper Tualatin - Scoggins Creek Watershed Analysis is to reduce sediment discharge to streams from erosion and mass wasting because sedimentation is impairing the functions of the watershed. By increasing the no harvest buffers from 25 feet to 60 ft, the risk of stream bank failure and gully erosion greatly decreases, protecting the potable water supply for the communities of Cherry Grove, Dilley, LA Water Cooperative and the City of Gaston.

Again to ensure turbidity levels below 5 NTUs at the Slow Sand Filter Plant the City of Hillsboro recommends the following in the Sunday Creek basin:

- Implement a light thinning prescription as opposed to modified clearcut and moderate thinning.
- Increase stream buffer width to 60 feet.
- Review road proximity to stream headwalls and alter plans to reduce sediment deliveries to the Tualatin River. Increase the miles of road to be partially and/or fully vacated.
- Contact COH Water department of any potential for high erosion or mass wasting events to allow adequate time to prepare staff and the SSFP for possible increased turbidity in the Upper Tualatin River.
- Remain in contact with COH Water Department staff for all proposed management activities, including contractor selection, expected harvest dates, road construction and vacation, fertilizer and herbicide applications, and pending permits requesting wet season instream activities.

Please call if you have any questions at (503) 615 - 6585.

Sincerely,



Kevin Hanway  
Water Department Director  
City of Hillsboro  
(503) 615-6585  
[kevinha@ci.hillsboro.or.us](mailto:kevinha@ci.hillsboro.or.us)



# Oregon

Theodore R. Kulongoski, Governor

June 2, 2008

Kevin Hanway  
City of Hillsboro Water Department  
150 E. Main Street  
Hillsboro, OR 97123

Dear Mr. Hanway,

The Oregon Department of Forestry (ODF) appreciates your thorough comments on the Forest Grove District FY 09 Annual Operations Plan (AOP). We understand your concerns as they relate to your role and obligations in managing the municipal water supply for the Joint Water Commission, water districts, and local communities in accordance with the Safe Drinking Water Act and other state and local laws. We have carefully considered your letter of March 31<sup>st</sup> and would like to address the issues and concerns raised about the forest operations proposed on state forest lands in the upper Tualatin basin.

Protecting water quality on state forest lands is essential. As you may be aware, state Board of Forestry lands are by law to be managed for the "Greatest Permanent Value" for the people of Oregon. The "Greatest Permanent Value" has been defined in administrative rule (OAR 629-035-0020) as:

(1) As provided in ORS 530.050, "greatest permanent value" means healthy, productive, and sustainable forest ecosystems that over time and across the landscape provide a full range of social, economic, and environmental benefits to the people of Oregon. These benefits include, but are not limited to:

- (a) Sustainable and predictable production of forest products that generate revenues for the benefit of the state, counties, and local taxing districts;
- (b) Properly functioning aquatic habitats for salmonids, and other native fish and aquatic life;
- (c) Habitats for native wildlife;
- (d) Productive soil, and clean air and water;
- (e) Protection against floods and erosion; and
- (f) Recreation.

The "Greatest Permanent Value" for these lands is achieved by managing them consistent with the Northwest Oregon State Forest Management Plan (FMP) of 2001.

The value of providing clean water from state forest lands is recognized in our FMP on pages 2-84 to 2-91, and 5-9. The translation of this value into the vision and guiding principles of our management is charted further on pages 3-3, 3-5, 3-16, and 3-17, which contain references to watershed health, cooperative efforts with other agencies, water availability, and water quality. To achieve these goals we implement specific strategies that are integrated into our management operations. These are described in detail in Chapter 4 of the FMP (pgs 4-59 to 4-76, and 4-108) and Appendix J, and define the measures we are directed to employ specifically for protecting aquatic and riparian habitats and water resources.

Department of Forestry  
Forest Grove District  
801 Gales Creek Road  
Forest Grove, OR 97116  
(503) 357-2191  
FAX (503) 357-4548



"STEWARDSHIP IN FORESTRY"

These measures prescribe stream buffer widths and identify limitations to allowable management, the protection of soil resources and minimization of erosion and sedimentation, and avoidance of operations on unstable slopes. All of our operations are planned using these strategies and measures. For example, we undergo active efforts to reduce hydrologic connectivity of existing and new forest roads. As a result, monitoring has shown that many of our road segments do not drain to the stream network. Or as another example, we do not allow harvest of timber on or adjacent to stream banks, and have designed operations that exclude activities in areas most prone to landslides.

In response to your comments that are specific to the Forest Grove district's 2009 Annual Operations Plan we would like to offer the following key points to address your concerns.

- 1) The Upper Tualatin-Scoggins Watershed Analysis indicates that there are no stream segments on state forest lands in the Upper Tualatin basin on DEQ's 303(d) list of impaired water bodies as water quality limited for the defined beneficial uses (i.e. municipal water supplies).
- 2) The amount of contributing drainage area above the city's slow sand filter plant (SSFP) is about 15,612 acres. State forest land comprises about 46 percent of that contributing area.
- 3) The decision whether to thin or clearcut a forest stand is based on its existing condition and our desired future condition for the landscape. The desired future condition for the Sunday Creek drainage on the Forest Grove district is defined in their 2003 10-year Implementation Plan (IP). At the end of the 10-year planning cycle of the IP, the amount of regeneration structure (young saplings and seedlings <15 years old) on state forest lands will be approximately 6 percent; the remaining 94 percent will be in mid-age structural stages with continuous forest canopies.
- 4) Currently, the amount of state forest land that has been clearcut (what we term a "regeneration" stand structure type) is about 1 percent (148 acres). The 2009 Forest Grove AOP proposes another 2 percent to be regeneration harvested.
- 5) The pre-operation reports for the 4 timber sale operations in the AOP in Sunday Creek drainage indicate that harvest proposed in the 2009 AOP amounts to 308 acres of modified clearcuts and 1,096 acres of moderate partial cuts (thinning) for a total of 1,434 gross acres. Riparian buffers, green-tree retention areas, and the exclusion of high landslide hazard locations from harvest activities however equates to about 9 percent of the gross acres being withdrawn from logging operations as a result of implementing aquatic, riparian, wildlife, and water protection measures.
- 6) All stream buffers will be in accordance with Appendix J of the FMP. Their design, arrangement, and width will vary depending upon stream size and fish presence. Stream buffers are typically laid out during the sale preparation phase of operations.
- 7) There are three large streams associated with the proposed sales; Maple Creek, Sunday Creek, and the Tualatin River. Three of the four sales are located 1,000 feet to 3,000 feet from these streams, and are located approximately 2.5 miles upstream of the city's SSFP. The sale furthest from the SSFP (approx. 6 miles upstream) includes No Harvest zones adjacent to Sunday Creek ranging from 25 feet to 300 feet. Many of the No Harvest portions of the riparian buffers will be greater than 25 feet. All streams within or adjacent to modified clearcut areas will have No Harvest zones of approximately 50 feet.

- 8) Existing and new road segments accessing the proposed units are designed and constructed in the best locations for carrying out anticipated activities, while minimizing the impacts on natural resources. Roads are designed to disconnect drainage from the stream network and minimize potential sediment delivery to water bodies. Our roads are effectively maintained to retain their longevity and prevent adverse effects to natural resources. Unneeded roads are closed or vacated and, where appropriate, the land they occupied is returned to active forest management.
- 9) There is no new road construction planned on or near any headwalls or High Landslide Hazard Locations (HLHL). All proposed road construction is located near or at the ridge tops. Currently, there is one planned stream crossing with new road construction, however we will be reviewing another option that may avoid this stream crossing. There are 7.4 miles of new construction and 2.6 miles of road improvement associated with these four sales. Road vacation opportunities will be evaluated more closely during the sale preparation phase of operations.
- 10) ODF standard operating procedure is to inspect and administer active operations to insure compliance with contractual specifications intended to serve as protection of aquatic, riparian, soil, and water resources. In addition, we typically inspect roads during the first significant fall storms where there are active operations. Erosion control measures are to be in place prior to the wet season. If situations are observed where there is the potential for excessive sediment delivery to enter streams, we will coordinate a plan of action with the city's Water Department.
- 11) On page 26 of the district's IP there is direction pertaining to monitoring roads. The road system will be inspected during or following a major storm event (as safety conditions permit). The road system will be inspected to insure drainage systems are functioning properly. Should a landslide or washout, or other sediment issue that could potentially affect the SSFP be observed, we will inform the Water Department and collaborate as needed on a course of action
- 12) The contract length of a timber sale is typically 2 to 3 years. Standard language is included in all contracts as a provision for halting operations during inclement weather to prevent accelerated erosion and damage to forest roads. The same is true during periods of high fire danger when forest operations are stopped to prevent a forest fire.
- 13) All forest operations whether contracted or not are subject to weather conditions, administration requirements, term limits, funding considerations, and other factors prior to start. In the event that there would be concerns as to the effects of operations on the SSFP (for example as a result of storm related erosion or forest fire), it would be our inclination to inform the city water department. Note that under the Forest Practices Act you can request and obtain information on all proposed forest chemical applications within ten miles of your intake, for both private and state forests.

In closing, we submit that establishing a collaborative working relationship should dispel discomfort pertaining to forest operations on state forest lands in the Upper Tualatin sub-watershed. It is our intent to garner trust and support for our FMP that includes a vision and goals to achieve the greatest permanent value for Oregonians by providing a host of environmental, economic, and social benefits. As an agency we are committed in carrying out and attaining the goals of the FMP, including those specified on page 3-16 of the FMP that pertain to water quality and the relevant federal, state, and local laws and regulations.

As a step in establishing a cooperative relationship, we are looking forward to our planned field day with your staff to review and discuss our proposed operations in the Sunday Creek drainage. It will be an opportunity for us to show you in more detail with on-the ground examples how the strategies in our FMP are applied. And again, thank you for your comments and recommendations.

If you would like to view a version of the Northwest Oregon Forest Management Plan, the Forest Grove District Implementation Plan or an Annual Operation plan including pre-operations plans, please see the following website or visit us at our district office.

[http://egov.oregon.gov/ODF/STATE\\_FORESTS/state\\_forests.shtml#Forest\\_Management\\_and\\_Planning](http://egov.oregon.gov/ODF/STATE_FORESTS/state_forests.shtml#Forest_Management_and_Planning)

Sincerely,



Andy White  
Acting District Forester  
Forest Grove and Tillamook Districts

c: Wayne Auble, Mike Bordelon, Erik Marcy, Terry Orton, Eric Perkins, Todd Reinwald, Liz Dent, Keith Mills, Jason Hinkle