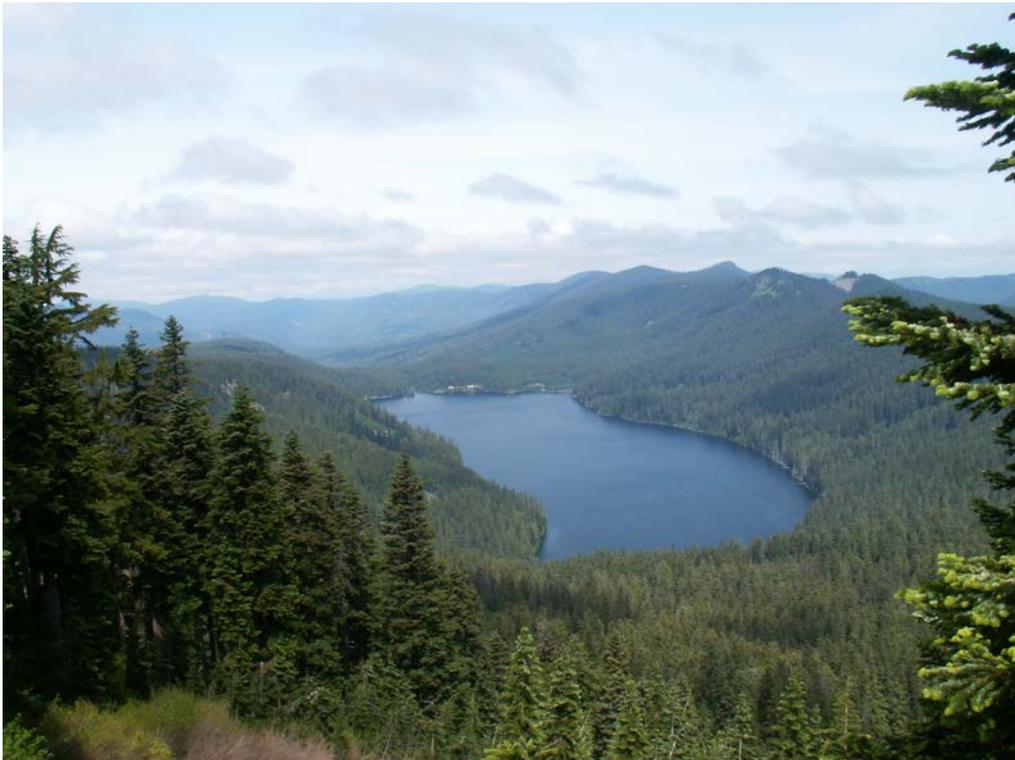

Portland Water Bureau and United States Forest Service

Bull Run Watershed Management Unit Semi-Annual Report

April 2013



Bull Run Watershed Semi-Annual Meeting



Contents

Contents	3
A. SECURITY and ACCESS MANAGEMENT	5
Bull Run Security Access Policies and Procedures	5
Bull Run Closure Area	5
B. EMERGENCY PLANNING and RESPONSE	5
Life Flight Helicopter Landing Zones	5
C. TRANSPORTATION SYSTEM	6
Road 10 and Road 1008	6
D. FIRE PLANNING, PREVENTION, DETECTION, and SUPPRESSION.....	6
Hickman Butte Fire Lookout	6
E. WATER MONITORING (Quality and Quantity)	6
Key Station Upgrades.....	7
F. NATURAL RESOURCES – TERRESTRIAL.....	7
Aerial Survey for Forest Health /Insects & Disease	7
Invasive Species	7
Aquatics	7
Plants	7
G. NATURAL RESOURCES - AQUATIC	8
Bull Run Lake.....	8
Amphibian Surveys at Goodfellows Lakes	9
Salmon & Steelhead Monitoring in Little Sandy River	9
Johnson’s Hairstreak Butterfly Surveys	9
Blue Lake Cutthroat Trout Survey.....	9
H. CONSERVATION EDUCATION	10
I. ADMINISTRATIVE USE TRAILS.....	10
J. LAND OWNERSHIP and LAND OCCUPANCY ARRANGEMENTS.....	10
Land Exchange	10
Bull Run Lake Cabins	11

Little Bear Creek House.....	11
K. OTHER ACTIVITIES.....	11
Dam 2 Tower Improvement Project.....	11

A. SECURITY and ACCESS MANAGEMENT

Bull Run Security Access Policies and Procedures

PWB continued implementation of its new Bull Run Security Access Policies and Procedures, outlining updated procedures for entering the Bull Run as an employee or contractor. The plan creates a comprehensive and clear policy regarding who has authorization to enter the watershed and the level of access the person is granted. Key components of the plan include a requirement for PWB employees and contractors to notify Security Dispatch when entering and exiting the watershed, and a new vehicle permit designed to more clearly mark vehicles in the watershed, used by both PWB and the Forest Service.

Another component of the security policy is the new electronic lock and key system. PWB Security issued keys to authorized PWB staff, the Forest Service, and partner agencies during fall 2012. The new lock system went live on November 27, 2012. The new system provides a higher level of security by allowing Security managers to selectively program keys to only activate locks on specific gates, for specific times and days, and for a specific begin date and expiration date. The new system also allows Security to run a variety of reports on which users are accessing which locks, how frequently, and whether or not the user is authorized for access.

Bull Run Closure Area

PWB is pursuing an agreement with BLM to grant PWB enforcement authority on BLM-owned lands within the Bull Run Closure Area. BLM passed a Closure Order in 2011 to close its lands within the Bull Run Watershed Management Unit (BRWMU) to public access. An agreement with PWB would enhance the ability of both agencies to enforce the boundaries of the Closure Area.

B. EMERGENCY PLANNING and RESPONSE

The Forest Service and PWB exchange updated emergency contact information for key personnel in the fall and spring of each year.

Life Flight Helicopter Landing Zones

PWB and the Forest Service worked with the program aviation manager for the local Life Flight program to identify a total of five Life Flight landing zones in the watershed, all of which are located on roadways, previously cleared storage areas or rock quarries. Removal of eight alder trees within the road prism was required at one of the landing zones. PWB is coordinating with the Life Flight program to conduct

test landings at the five sites in the summer of 2013.

C. TRANSPORTATION SYSTEM

Road 10 and Road 1008

Survey of two roads projects will be completed by early summer 2013. Design on the projects will take place during the summer and fall of 2013. A portion of Road 10 from Soapstone to Larsons will be reconstructed to create better ditch lines, address slumping, slides and jersey barriers. Road 1008 will be repaved. Construction work on both projects is expected to begin in summer 2014.

D. FIRE PLANNING, PREVENTION, DETECTION, and SUPPRESSION

Hickman Butte Fire Lookout

PWB and the Forest Service have an interagency agreement to staff Hickman Butte that covers the five-year period from 2012 to 2017 and includes authorization for a small maintenance fund of \$2,500/year to cover the cost of minor maintenance work on the tower.

Installation of a new solar panel system began in August and was completed in September 2012. The roof on the shed that holds the batteries and other new electrical equipment for the solar system was replaced in October 2012.

E. WATER MONITORING (Quality and Quantity)

The Forest Service implemented stream temperature monitoring in the Little Sandy watershed to determine the source of warm water that results in routine exceedences of Oregon Department of Environmental Quality (DEQ) water temperature standards in the Little Sandy River. Water temperature was monitored year round at four locations in the Little Sandy River, the Upper, Middle and Lower Goodfellows Lakes, and in the outlet of the upper and lower Goodfellows Lakes.

The Water Bureau continues to contract with the Natural Resources Conservation Service (NRCS) to monitor snow depth, snow water equivalent, and meteorological conditions at three sites in the watershed.

The Water Bureau continues its cooperative agreement with the U.S. Geological Survey (USGS) to monitor stream flow, reservoir levels, and/or water quality at a total of 11 stations within the Bull Run watershed.

Key Station Upgrades

Four of the 11 stations in the watershed are referred to as “key stations” – North Fork (station 15), Main Stem (station 18), South Fork (station 35) and Fir Creek (station 44). These will be replaced by the end of the 2013 field season. Stations 15 and 35 will be replaced in early summer 2013 and stations 18 and 44 will be replaced in late summer 2013. The stations were built between 1966 and 1978 and suffer rot, mold, and general decay from exposure to the elements over the course of the 35 to 47 years that they’ve been in service.

F. NATURAL RESOURCES – TERRESTRIAL

Aerial Survey for Forest Health /Insects & Disease

The Forest Service flies aerial surveys in Oregon and Washington each year to survey for forest disturbances. The aerial surveys cover all forested lands and are flown on a 4-mile grid. The surveys in Oregon are conducted in cooperation with the Oregon Department of Forestry. Resource managers can request that limited geographic areas be flown with a tighter grid pattern to provide detailed survey results for area(s) of concern. The results of the survey flights are posted on the Forest Health Protection web site at: www.fs.usda.gov/goto/r6/fhp/ads . Portions of the Bull Run watershed area are mapped on the following quadrangle maps: Vancouver, Hood River, Oregon City, and Mt. Hood.

Invasive Species

Aquatics

As provided for in the Aquatic Invasive and Nuisance Species Standard Operating Protocol, staff continued to oversee implementation of preventative measures for both contractors and in-house maintenance and operations work, including boat and equipment decontamination for safe use in the reservoirs and Bull Run River.

Plants

The PWB has created a draft Invasive Plant Species Standard Operating Protocol and it is currently going through an internal review. PWB installed a wheel wash station on NFS Rd 10, just inside the main gate. The wheel wash station is part of PWB’s draft invasive plant species standard operating protocol. The wheel wash is designed to clean City vehicles entering the watershed to minimize the risk of the spread of invasive non-native plant species. PWB is already implementing Forest Service policy requiring higher standards for weed prevention through vehicle cleaning and

use of weed-free materials, and the wheel wash station is designed to make that process simpler and more effective. The Mt. Hood National Forest currently requires the cleaning of all project vehicles before entering the Management Unit. The wheel wash station is expected to be operational in summer 2013.

PWB staff continues to monitor sites where road construction projects have taken place in the recent past, and continues to monitor and control some of the most aggressive invasive plant species that occur inside the watershed along the primary roadways.

G. NATURAL RESOURCES - AQUATIC

Bull Run Lake

PWB operates and maintains drinking-water supply facilities at Bull Run Lake under a 20-year easement with the Mt. Hood National Forest. The bureau implements mitigation and monitoring measures as required by the easement and the Bull Run Lake Mitigation and Monitoring Implementation Plan.

Aquatic monitoring was conducted at Bull Run Lake from 1998 through 2012, and it is anticipated to continue during the easement term. The goal of the monitoring efforts is to assess potential effects of lake water withdrawals on the fish population and provide information for mitigation efforts. Spawning surveys are typically conducted in the tributaries of Bull Run Lake each spring and summer documenting adult abundance, spawning timing and redd counts of coastal cutthroat trout. The spawning surveys are mostly conducted by Forest Service personnel from the Zigzag Ranger District. During five years (2004, and 2009-2012), a contractor was hired by PWB to complete the surveys. PWB plans to utilize a contractor to conduct spawning surveys in May/June of 2013.

The annual spawning surveys have shown a somewhat statistically significant relationship between lake water surface elevation and cutthroat trout spawning success. Cutthroat redd counts in years when water surface elevation reached or exceeded 3174' were greater than in other years. PWB has also been conducting lake hydro-acoustic surveys documenting fish population size. To date, these surveys show no significant change in the lake's cutthroat trout population over time. The surveys will continue into the foreseeable future.

The Forest Service and the Water Bureau have continually coordinated to evaluate the current monitoring and mitigation plan. A new plan was created in September 2012 and was signed by the Forest Service in April 2013. The new plan expires with the term of the easement in 2017.

Amphibian Surveys at Goodfellows Lakes

No amphibian surveys were conducted at Goodfellows Lakes in 2012. Amphibian surveys conducted in two of the three Goodfellows Lakes in 2011 found Malone Jumping slugs (*Hemphillia malonei*) in the riparian areas of the upper lake. Based on these preliminary results, more presence/absence amphibian studies are recommended.

Salmon & Steelhead Monitoring in Little Sandy River

The Water Bureau continues to do two activities in the Little Sandy River: 1) maintenance of a smolt trap just upstream of the former Little Sandy Dam site, and 2) fish habitat surveys and snorkel surveys from the mouth of the river to the former dam site. The smolt trap was operated from roughly late March through mid-June and the results of the fish trapping effort are summarized in the 2012 Compliance Report for the Bull Run Water Supply Habitat Conservation Plan.

Oregon Department of Fish and Wildlife (ODFW) continues to conduct spawning surveys for spring Chinook, coho, and winter steelhead above and below the former Little Sandy Dam site. All three species have been documented above the former dam site and appear to be re-colonizing their former habitat.

Johnson's Hairstreak Butterfly Surveys

The Johnson's Hairstreak (*Callophrys johnsoni*) is a rare butterfly that inhabits the Pacific Northwest region of the United States of America. This butterfly is a "Sensitive" special status species in Washington and Oregon. The Forest Service fisheries program conducted larval butterfly surveys in the Bull Run Watershed Management Unit by collecting western hemlock dwarf mistletoe, the host plant. No larvae were detected in 2012 as dwarf mistletoe was lacking in the understory due to less than optimal growing for the parasitic plant.

Blue Lake Cutthroat Trout Survey

The Forest Service conducted a fish survey of Blue Lake, a 12-acre lake located in the headwaters of Log Creek, on July 2, 2012. Blue Lake has 0.48 miles of shoreline, a 250 acre-ft. volume, 60 ft. maximum depth, and 21 ft. average depth and lies within the Bull Run Watershed with a drainage basin of 0.32 mi². Blue Lake has three tributaries on the south end and one outlet forming Log Creek, which has an average discharge of < 1 cfs, based on a survey conducted by the Forest Service in 1995. During the July 2nd survey, shoal spawning surveys were conducted the entire length of the shoreline and hook and line surveys were conducted from the north shoreline. A total of 13 fish were collected with a hook and line ranging in length from 5.5 to 10.5 inches. Scales were collected for age and growth analyses and an upper caudal fin clip was collected

for genetic analysis. Spawning was observed along the shoreline and in the three tributaries to Blue Lake. A gabion structure dam was observed at the outlet of the lake, which is artificially holding the lake at a higher water elevation and blocking upstream fish passage from Log Creek.

H. CONSERVATION EDUCATION

The Portland Water Bureau offers educational field trips and tours of the Bull Run watershed for students and the general public. All tours are planned and guided by a professional Water Resources Educator.

Participants on adult tours learn about the history of the watershed, its natural resources, water supply infrastructure and operations, and the cooperative partnership between PWB and the Mt. Hood National Forest. These tours generally occur June through September.

Tours for school groups are generally scheduled in May, June, September, and October. During PWB's tours for school groups, students are divided into small groups at Bull Run Dam No. 1 to tour the dam, to measure the turbidity of a reservoir water sample, and to learn about the role of forest protection in providing high-quality raw water.

PWB led a total of 12 tours in the Bull Run between October 11, 2012 (the date of the last semi-annual report) and April 22, 2013.

I. ADMINISTRATIVE USE TRAILS

Several trails in the BRWMU provide access to stream gauges operated by the U.S. Geological Survey (USGS) and water-quality monitoring stations maintained by PWB. PWB plans to perform routine maintenance on several of these trails in during the 2013 field season.

J. LAND OWNERSHIP and LAND OCCUPANCY ARRANGEMENTS

Land Exchange

A Land Exchange has been proposed between the Forest Service and City of Portland.

The primary purpose of the exchange is to eliminate intermingled ownerships and isolated parcels within the Management Unit, which would allow for more efficient operations by the Forest Service and the City. Lands acquired by the Forest Service would be high quality habitat lands that would be managed for natural resource

protection, as well as continuing to meet the objective of providing pure, clean potable water for the City. Lands acquired by the City would include most of its water production facilities, including reservoirs, and would improve its management efficiency in providing water for the Portland metropolitan area.

In 2010 the Portland Water Bureau and the Forest Service signed an Agreement to Initiate (ATI) which expresses the intent of the two parties to pursue the proposed land exchange and marks the beginning of the process.

Public scoping for the NEPA process associated with the land exchange occurred in August and September 2010. The Forest Service has assembled its team of specialists to conduct the environmental analysis of the exchange. Completion of the NEPA documentation is expected by winter 2013/14.

Bull Run Lake Cabins

No work was done on the cabins from October 2012-March 2013.

Little Bear Creek House

Repair of Little Bear Creek House has been proposed in the Water Bureau's FY 2013-14 budget. The house was built in 1927 to support construction of Dam 1 and is in poor condition due to deferred maintenance.

The Water Bureau is working through the Section 106 process with the Forest Service to perform limited routine maintenance to the property. The bureau's final budget will be considered and voted on by the Portland City Council in early May.

K. OTHER ACTIVITIES

Dam 2 Tower Improvement Project

Construction on the Dam 2 Tower improvement project, which modifies the north tower so that water from the reservoir can be accessed at three different depths to access raw water of varied temperatures, began in the spring of 2012. The project is a component of Measure T-2 of the Bull Run Water Supply Habitat Conservation Plan (HCP). Currently, both of the towers have intakes at the bottom of the reservoir only. Modifications to the north tower will address the problem associated with early depletion of the coldest water in the reservoir during the summer months.

This project also includes piping improvements in the Headworks area to allow colder water from the South Tower to bypass the existing treatment facility and be directly discharged into the Bull Run River below Dam 2.

The tower modification and piping improvements will allow the Water Bureau to

regulate the withdrawal level and retain a sufficient supply of cold water from the lowest levels of the reservoir for late summer and fall to maintain cooler temperatures in the lower Bull Run River for fish habitat. Construction will continue through early 2014.