

USDA. FOREST SERVICE
 COLUMBIA RIVER GORGE NATIONAL SCENIC AREA
 902 WASCO AVENUE, SUITE 200
 HOOD RIVER, OR 97031

Telephone: 541-308-1700
Fax: 541-386-1916

PROJECT REVIEW APPLICATION

DATE OF APPLICATION: 10/18/2007
 30-DAY NOTICE REQUIRED---**CD-07-09-S**

DATE COMPLETE: 10/24/2007

APPLICANT(S)			PROPERTY OWNERS		
Lower Columbia Fish Enhancement Group			USA		
MAILING ADDRESS			MAILING ADDRESS		
12404 SE Evergreen Highway			902 Wasco Avenue, Suite 200		
Vancouver, WA 98683			Hood River, Oregon 97031		
APPLICANT'S SIGNATURE AND DATE			PROPERTY OWNER'S SIGNATURE AND DATE		
/S/ Tony Meyer			/S/ Chuti Fiedler		
10/18/2007			10/18/2007		
PHONE: 360-882-6671			PHONE: 541-308-1718		
E-MAIL: cwfish@comcast.net			E-MAIL: cfiedler@fs.fed.us		
LOCATION OF PROPERTY			PROPERTY ADDRESS (IF APPLICABLE)		
TOWNSHIP: 2N	RANGE: 6E	SECTION: 34	Sams Walker Day-Use Area		
QUARTER SECTION: SW		TAX LOT: 1400			
PARCEL SIZE (ACRES):			COUNTY: Skamania		
EXISTING LAND USE: Recreation/wildlife			STATE: WA		

PROJECT DESCRIPTION: Describe your proposed project, including details on structures to be built, location and types of utilities and infrastructure, drainfields, accessory buildings, ground leveling, and filling, or any other relevant activity or mitigation measures proposed. Use additional sheets as necessary:

Project Background:

Duncan Creek enters the Columbia River just below Bonneville Dam. A small dam was constructed at the mouth of the creek in 1963. The dam impounds water during the spring and summer months, forming a small lake (known as Woodys Lake). At the head of the lake (where Duncan Creek enters) there is a series of springs and channels. Chum salmon historically used these channels until the dam was constructed. In 2001, the dam was retrofitted for fish passage and a spawning channel was excavated in the area of the springs. This work was funded by Bonneville Power Administration (BPA) and implemented by KPF Consulting Engineers. The Washington

Department of Fish and Wildlife (WDFW) has been monitoring chum usage of the channels and have transplanted chum into the channels in an attempt to enhance the run. Some of the channels have sufficient flow for fish to spawn, but others sections of the channel are dry and, more importantly, sections downstream of areas where chum have spawned are dry.

WDFW identified the potential opportunity to increase salmon habitat downstream of Hwy 14 in the delta formed by Duncan Creek at the confluence with Woodys Lake. This restoration could include placement of LWD, creation of additional chum channels and off-channel rearing habitat for coho salmon. The LCFEG is contracting with the USFS to provide funds to investigate this potential through a feasibility study that would include collection of topographical, groundwater and sediment data which will be incorporated into final restoration designs. This work will start in August of 2007 and be completed in June of 2009.

The initial phase of this work will include groundwater investigations and potential pump tests to measure the flow potential to expand chum spawning opportunities or provide off channel rearing habitat in Duncan Creek. Additional tests may be required in the summer of 2008 depending on discoveries made during the assessment and discussions with the project work group. Engineering and Biological Design Criteria for the development of side channel or off channel habitat is documented in *Stream Habitat Restoration Guidelines, WDFW, 2004*. The LCFEG has contracted Waterfall Engineering, LLC to conduct the assessment. Waterfall staff have developed over 20 groundwater fed projects which included the pre-project analysis and monitoring of groundwater data.

Project Proposal:

The LCFEG, in partnership with the USFS, proposes to excavate three to four holes (8 to 10 feet deep) at locations shown on the drawings (see Duncan Creek Assessment Sheets 1 and 2). If adequate water and substrate are discovered, pumps tests will be conducted using the following methodology:

1. Survey the site and set a project benchmark and temporary benchmarks (TBM), on Duncan Creek. Record the Columbia River stage. Set TBMs near selected test pump sites. Sites should be near the proposed channel centerline, and at the middle, and upper ends of the channel. All elevations recorded during pump tests are tied to the project benchmark. To minimize required volume of excavation, select pit locations at a low ground elevation near the proposed project alignment. The pump site should be outside of the alignment in order to preserve it for studies following construction.

Equipment Needed: Excavator with 15 foot reach, 50 to 200 gpm portable pump, 100 feet hose, 20 ft intake hose, bucket for priming pump, stopwatch, 30 gal container of known volume, survey rod and level, 4 inch PVC standpipe 10 feet long with/cap (lower 6 feet with 3/8 inch holes, 4 inches on center and filter fabric to wrap lower 6 feet), 5 gallon bucket for soil sample and debris net.

2. Dig test pit about 3 feet below static water level. Select cleaner granular material while digging and store separately for backfill. Slope banks to prevent material from falling into the pit as it is pumped down.
3. Select a 5 lb soil sample representative of soil near static water surface level to develop a grain size distribution curve.

4. Record static water surface level relative to TBM. Record the radius of the hole at the water surface. Record the bottom elevation of the hole. Analysis of results requires the computation of contributing flow area, which can be estimated by a parabolic shape.
5. Record soil descriptions and strata through depth of cut. Record strata elevations relative to TBM.
6. Record river water surface elevations. Record time of measurement. If available, read nearby stream gauges.
7. Set a staff gage in the test hole (anchored to a fence post or other), and record the initial (static) water surface elevation.
8. Pump the test pit at a minimum 200 gpm.
9. Record the water surface elevation and time as the water surface drops. Record at 30-second intervals if there is a rapid water level response. If the drawdown exceeds 0.5 feet in one minute, stop pumping; allow the water level to recover to its initial static level and resume pumping at a rate about half the first pumping rate. Continue pumping for one hour or until the water elevation stabilizes for at least 10 minutes, whichever comes first. It is important to continue pumping for at least 10 minutes after the water surface has apparently stabilized.
10. Measure the hole radius at the drawn down stabilized water surface.
11. Stop pumping and record time. Record water surfaces and times as the hole refills at a frequency similar to the drawdown procedure described above.
12. Collect appropriate water samples if lab analysis is required.
13. Secure a 4 inch PVC standpipe with the lower portion covered with filter fabric. Backfill and cut off the pipe one foot above the ground surface. Record the elevation of the top of the standpipe for future measure downs.

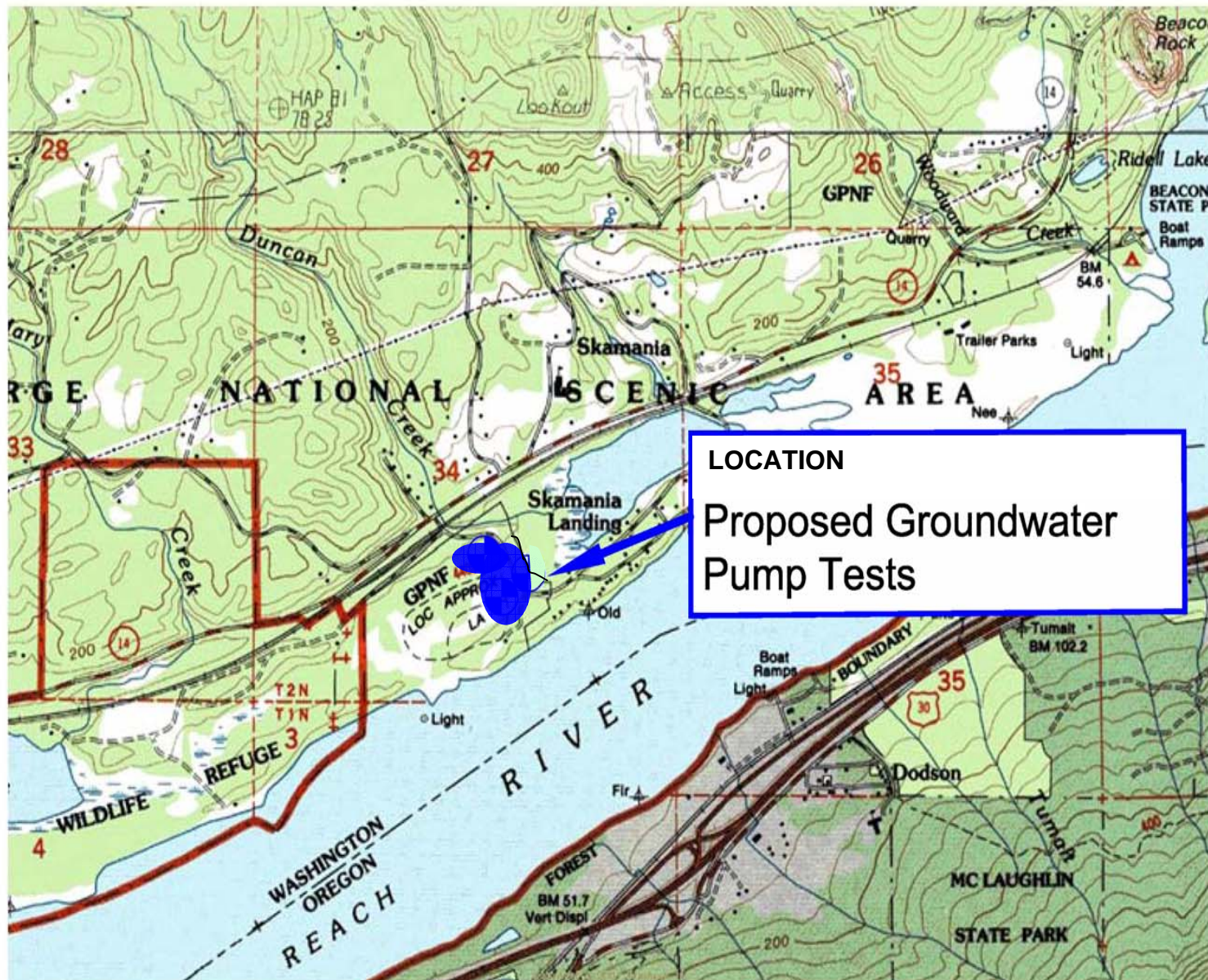
If adequate groundwater sources are discovered, water surface elevations will be measured through the winter and summer to establish rating curves. The work will be conducted by the LCFEG and Waterfall Engineering. A report summarizing the investigations will be completed by December of 2007.

KEY VIEWING AREAS: Key viewing areas are important public viewpoints and areas that afford opportunities to view the Gorge scenery. Key viewing areas are listed below. Please check those sites which can be seen from your property.

- Historic Columbia River Highway
- Sandy River
- Portland Women's Forum State Park
- Crown Point
- Rooster Rock State Park
- Multnomah Falls
- Larch Mountain
- Highway I-84, including rest stops
- Bonneville Dam Visitor Centers
- Sherrard Point on Larch Mountain
- Rowena Plateau/Nature Conservancy Viewpoint
- Larch Mountain Road
- Wyeth Bench Road
- County Road 1230 (Old WA St. Route 14)
- Washington State Route 14
- Washington State Route 142
- Washington State Route 141
- Cook-Underwood Road
- Dog Mountain Trail
- Beacon Rock
- Cape Horn
- Columbia River
- Pacific Crest Trail Oregon Highway 35

**ADJACENT PROPERTY OWNERS AND EXISTING LAND USE
ON ADJACENT PARCELS WITHIN 200 FEET OF PROJECT PROPERTY:**

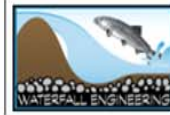
<u>TOWNSHIP, RANGE, SECTION, TAX LOT</u>	<u>NAME AND ADDRESS</u>	<u>EXISTING LAND USE</u>
T2N, R6E, Sec.34, Tax Lot 2000	Skamania Landing Owner's Association, PO Box,791, Stevenson, WA 98648	wetland/Woody's Lake
T2N, R6E, Sec.34, Tax Lot 1300	Leonard and Suzanne Farnsworth 20310 12 th NW, Shoreline, WA 98177	natural wetland
T2N, R6E, Sec.34, Tax Lot 1800	Sandra and Robert Hazard Skamania Landing PO Box 231 N Bonneville, WA 98639	Residential
T2N, R6E, Sec.34, Tax Lot 1900, 1902	US Fish and Wildlife Service USA	Wildlife refuge



LOCATION
Proposed Groundwater Pump Tests



Duncan Creek Assessment

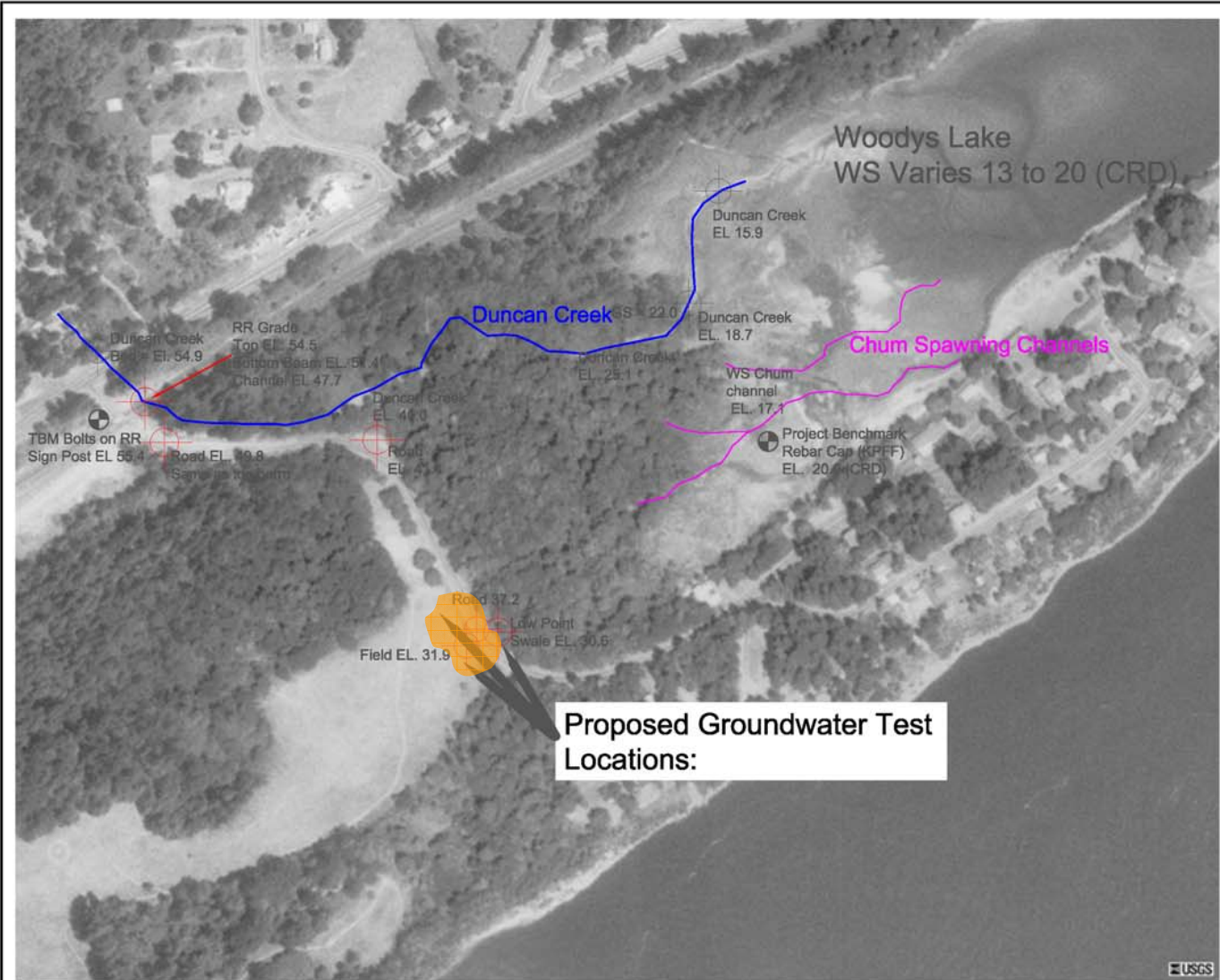


DESIGNED BY: _____
 DRAWN BY: _____
 CHECKED BY: _____
 APPROVED BY: _____
 FILE: _____
 DATE: 08-01-07

Groundwater Test Locations

Topo Map

SHEET NO. **1**
 OF **2**



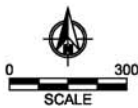
Elevations from LCFEG Survey:
April 17, 2007
Elevations relative to Columbia River Datum (CRD).

Denotes Point Elevation

Test excavation areas are typically holes excavated by a tire or track mounted excavator. Hole depth varies 6 to 10 feet. Top width 15 to 20 feet. 4" PVC pipes will be inserted in the test holes and then backfilled with native material within hours of testing.



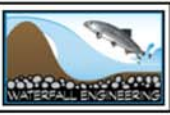
Typical test hole showing excavator, staff gage and suction hose.



Proposed Groundwater Test Locations:



Duncan Creek Assessment



DESIGNED BY: _____
 DRAWN BY: _____
 CHECKED BY: _____
 APPROVED BY: _____
 FILE: _____
 DATE: 28-01-07

Groundwater Test Locations

SITE PLAN

SHEET NO. **2**
 OF **2**