

**Addendum to the Daybreak Mine Expansion and Habitat
Enhancement Project
Habitat Conservation Plan (November 2003)
March 31, 2004**

Conservation Measure 09

The draft and final HCP CM-09 includes monitoring of channel migration and responses to the threat of an avulsion. CM-09 recognized that, should an avulsion occur, the most likely points of avulsion were at locations G, H, and J (Figure 3-33). Since the initial drafting of the HCP, in consultation and cooperation with the Services in August 1998, the EFLR has migrated approximately 200 to 300 feet north in the vicinity of site C, toward the abandoned Clark County Pit No. 2, i.e., site D, with potential access to the site G avulsion point (see Figure 3-33). Given this recent migration and the potential for avulsion into existing Pond 1, Storedahl will initiate design and permitting of bank protection along the Storedahl Pit Road, to be constructed as soon as the ITP and all necessary permits are issued. The design of the bank protection will be developed in consultation with the Services, WDFW, Clark County, and the Corps of Engineers.

Timely placement of the bank protection will insure that the reconfiguration and infill of the existing ponds (CM-08), and the creation of forested and emergent wetlands on the fill material, will be protected from avulsion while the vegetative cover and root structure develops and matures. Monitoring and Evaluation Measure 07 lists adaptive management responses, including the modification and removal of engineered structural controls at the close of operations and/or reclamation. Storedahl will modify and/or remove the engineered structures if, in consultation with the Services, and in coordination with WDFW and Clark County, it is determined that modification and/or removal of structural controls is considered beneficial to the covered species.

Monitoring and Evaluation Measure 02

Storedahl is required to monitor the temperature of pond surface water discharge on a weekly basis during the months of July, August and September under their NPDES permit (WAG-50-1359), and report the results of this monitoring to Ecology and the Services. In response to comments regarding the potential effects of groundwater discharges from the site, Storedahl has voluntarily agreed to add temperature monitoring of Piezometer-3, downgradient from Pond 5, to coincide with the summer NPDES monitoring of surface water discharge, and to provide these monitoring results to the Services per the reporting schedule described in Section 5.3.2 in the FHCP.

Section 3.4.1 Daybreak Mine-Existing Conditions

Section 3.4.1 of the FHCP includes a description of the facilities and equipment in the processing area at the Daybreak site. Included in the description are the process water treatment system and fuel storage. The process water treatment system includes a portable 5,100-gallon double walled tank for the storage of process water treatment additives and a portable metal building (with containment), which is used for the storage of additives and to house the metering pumps employed in the additive dosing. The

treatment system is currently located adjacent to the southwest corner of Pond 1, within the 100-year floodplain and the area of shorelines jurisdiction. The fuel storage tanks include a 15,000-gallon double walled diesel tank and a 1,100-gallon double walled gasoline tank. These fuel tanks are located on the north side of the shop on a concrete pad with curbing for additional containment. The fuel tanks are outside the 100-year floodplain, but within the area of shorelines jurisdiction (i.e., within 200-feet of the floodway boundary).

Under CM-01 Washwater clarification, Storedahl is committed to installing and implementing a closed-loop clarifier system for the treatment of process water by year three of operation at the site. That system would be located near the existing sand classifier, which is in the process area and above the 100-year floodplain and landward of the shorelines boundary. Buried lines would then lead to Pond 1 to deliver the treatment additives. With startup of the closed-loop clarifier, Storedahl would move the existing additive storage tank and metal storage building to the location of the clarifier. However, some comments received on previous drafts and the FHCP have raised concerns regarding potential spills or accidental releases of the stored additives in the 100-year floodplain, and in close proximity to the existing ponds. To address these concerns, Storedahl has voluntarily agreed to move these additive storage facilities to a location in the processing area above the 100-year floodplain, and outside the shorelines area prior to the startup of mining and wet processing at the Daybreak site.

Similarly, commenters raised concerns regarding potential spills or accidental release(s) of fuel(s) stored at the site. In response to these concerns, Storedahl has emptied and decommissioned the 15,000-gallon diesel and the 1,100-gallon gasoline tanks. Storedahl has also volunteered to remove these tanks altogether from the site prior to the startup of mining and processing at the Daybreak site. Fueling during mining and processing would be conducted by a portable tank truck.

Section 6.12.4 Estimation of Take

Since the completion of the FHCP the Ecosystem Diagnosis & Treatment (EDT) model outputs for the EFLR have been updated by WDFW/LCFRB to include additional data inputs. In order to assure the most recent data regarding potential effects in the lower EFLR in the FHCP that information is provided on Table 6-6.

Table 6-6 includes the relative percentage decline in population abundance with increased degradation for all reaches from the Columbia River to the beginning of the canyon on the EFLR at approximately RM 16.2. The table also includes an estimate of the reduction in population abundance based on recent (4-year average) returns. The actual decline in numbers of adults would differ depending on the escapement in any given year.

EDT includes an evaluation of degradation effects to key habitat quantity, habitat diversity, channel stability, sediment load, temperature, and predation, among others. The FHCP focused on potential effects in Reaches 5 and 6, i.e., downstream to Dean Creek and upstream to Manley Creek. However, since potential effects of an avulsion,

and subsequent sediment release under existing, baseline or future conditions could reach downstream to the Columbia River, and a headcut and/or channel instability could reach upstream to the bedrock canyon, Table 6-6 has been expanded to include this entire area. However, as noted in the FHCP avulsion is largely a risk of existing conditions and numerous conservation measures have been developed to minimize and mitigate take to the maximum extent practicable, and with implementation should result in reduced effects to the covered species.

Table 6-6. East Fork Lewis River Decline in Productivity with Degradation.

EFLR Reach	Chum (%)	Chum (No.)	FChin (%)	FChin (No.)	WStlhd (%)	WStlhd (No.)	SStlhd (%)	SStlhd (No.)
Tidal	1.0	1.13	1.1	2.59	0.7	0.53	0.1	0.10
1	1.5	1.69	1.6	3.76	0.6	0.45	0.1	0.10
2	0.5	0.56	1.2	2.82	0.4	0.03	0.0	0.00
3	0.5	0.56	3.5	8.23	0.8	0.60	0.1	0.10
4	2.5	2.81	4.5	10.58	0.8	0.60	0.1	0.10
5	6.0	6.75	14.9	35.02	1.5	1.13	0.1	0.10
6	3.0	3.37	4.2	9.87	0.3	0.23	0.1	0.10
7	10.5	11.81	15.9	37.37	3.5	2.63	0.4	0.38
8	21.5	24.19	49.4	116.09	18.1	13.58	3.9	3.74
Total	47.0	52.88	96.3	226.33	26.7	19.78	4.9	4.72

Notes: Population No. based on 4-year average return with Fall Chinook (235), winter steelhead (75), and summer steelhead (96). Chum salmon includes default value for EFLR with 75% of the 150 fish used in LCFRB (2003) projections.

Reach								
Tidal	Columbia River	to	EFLR					
1	Mouth EFLR	to	McCormick Creek					
2	McCormick Cr.	to	Breeze Creek					
3	Breeze Creek	to	Lockwood Creek					
4	Lockwood Cr.	to	Mason Creek					
5	Mason Creek	to	Dean Creek					
6	Dean Creek	to	Manley Creek					
7	Manley Creek	to	Mill Creek					
8	Mill Creek	to	Rock Creek					

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Table 3-3. Linking potential HCP effects of water quality to impacts on coho salmon, chum salmon and cutthroat trout referencing: Water Temperature of Groundwater and Hyporheic Water, Potential Effects from Actions, should read No effect, No effect, No effect, No effect.

Table 3-5. Linking potential HCP effects of water quality to impacts on Pacific and river lamprey referencing: Water Temperature of Groundwater and Hyporheic Water, Potential Effects from Actions, should read No effect, No effect, No effect, No effect.