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12.5 Terms and Conditions

Term and Conditions 5d

5. In order to minimize the likelihood of incidental take through implementation of ecosystem restoration features (see Table 8-2 of the 2001 BA), the Corps shall:

d. Tide gate retrofits:

i. The Corps shall enter into an agreement with the Project sponsors that will require the sponsors to ensure future maintenance of retrofitted tidegates. In addition, the Corps will require guarantees from the Project sponsors that volitional fish passage, via timely operation of the tidegate passage features, will occur during key salmonid migration periods. The Corps will coordinate fish design for tidegate retrofits with Service fish passage engineers.

ii. The Corps shall coordinate fish passage designs for tidegate retrofits with NMFS fish passage engineers.

Action Plan: The Corps will coordinate the development tide box retrofits for fish passage with NOAA Fisheries and USFWS. When the agreement for future maintenance of the tide box retrofits are developed with the project sponsors a copy will be provided to NOAA Fisheries and USFWS.

The construction of dikes along the lower Columbia River has resulted in the partial or complete blockage of small tributaries to the Columbia River or other rivers. These streams supported runs of salmon, steelhead and cutthroat trout. Tide gates installed in these dikes allow for drainage of water from blocked streams. Currently, the tide gates may not be open at the appropriate times for juvenile or adult fish passage.

The ecosystem restoration action would entail installation of fish slides. A fish slide is a rectangular opening of approximately 12 inches by 15 inches in size that can be manually operated by opening or closing a slide gate. The slide gate and opening are constructed on the existing tidegate. The fish slide, when open, allows water to continuously flow through the tidegate thus allowing for upstream and downstream passage of salmonids without delays imposed by normal tidegate operations. The fish slide can be closed off during flood events.

The ecosystem restoration action would entail retrofitting existing tide gates at identified diking districts along the lower Columbia River where salmonid runs occur or potentially could occur if reintroduced. The ODFW provided maps of anadromous salmonid rearing and spawning habitat along the lower Columbia River. Through correlation of the

ODFW salmonid maps with maps of known diking districts, three Oregon tributary streams where fish passage may be either blocked or impeded by tidegates were identified. These streams were Tide Creek in the Deer Island Drainage District, Grizzly Slough in Clatsop County Drainage District No. 1, and Fertile Valley Creek (also known as Hall or Warren Creek) in Clatsop County Diking District No. 12.

Tide Creek has about 11.5 miles of stream, including tributaries, upstream of Deer Island-Highway 30 which, barring natural barriers, would be available to salmonids for spawning and rearing use. Stream miles available for salmonids were approximated from review of USGS topographic maps. Fertile Valley Creek has potentially 5.5 miles of stream available for spawning and rearing habitat (barring natural barriers). Grizzly Slough contains about 10 miles of habitat for salmonids, principally rearing or overwintering habitat with less than one mile of stream potentially useful for spawning habitat.

The WDFW identified three streams where fish passage improvement could be an appropriate action. Streams identified were Gee and Burris Creeks and Deep River. The Gee Creek location does not contain a dike or tidegate structure. Gee Creek is located in the Lake River delta and its outlet to Lancaster Lake flows through a 36-foot corrugated metal pipe. Since the Gee Creek location does not involve a tidegate and the fish passage problem is undefined, it was dropped from further consideration.
Burris Creek is located in Cowlitz County Consolidated Diking Improvement District No. 2 near Woodland, Washington (figure 4-6). The WDFW identified tidegates on Deep River tributaries below the old log dumpsite near the town of Deep River as the third location. The dikes at the Deep River locations were apparently privately constructed as no information was located in Corps records. These dikes, in concert with Highway 4, which is a raised roadbed at this location, block Rangila Slough and upstream portions of Deep River and associated tributaries.

Deep River and tributaries upstream of the dike closure contain about five miles of stream, which barring natural barriers would be available to salmonids for spawning and rearing use. About one mile of stream is associated with Rangila Slough. Burris Creek contains about five miles of streambed available to salmonids for spawning and rearing activities, barring natural barriers.

The number of fish benefiting from the proposed action would vary annually and is dependent upon many variables external to the project area. Provision of restored fish passage at the tide gates would allow salmon and steelhead improved access to spawning habitat and could ensure juvenile out-migration at the appropriate times. Benefits, principally increased run size for each species at each tributary, would be anticipated from the proposed action (Final IFR/EIS 1998, pages 4-74-75).

Except for the Burris Creek tidegate retrofit, there has been no revision to the tidegate ecosystem restoration feature as detailed in the 1999 Final IFR/EIS (see Figure S4-7). The tidegate at the downstream end of the Cowlitz County Consolidated Diking Improvement District No. 2, through which Burris Creek waters were formerly exhausted

to the Columbia River, has been plugged with concrete. The District currently uses their pump station to exhaust Burris Creek and internal drainage waters. Implementation of the Burris Creek tidegate component of this ecosystem restoration feature would entail construction of a new culvert with tidegate through the flood control levee. Burris Creek waters would be directed to flow through this new tidegate. Flood flows from Burris Creek that exceed the flood storage capacity of the immediately adjacent 97 acre wetland development (a wildlife mitigation feature) would be directed through an overflow structure in the wetland perimeter levee to the current pumping station. The proposed action would allow for restoration of Coho and coastal cutthroat trout runs to the stream. (Final SEIS, 2003, page 4-27).

Schedule: Warren Slough (Hall Creek) has been constructed by USFWS and completed in FFY03. The Corps has not initiated any action relative to this T&C to date. Burris Creek tidegate work will be concurrent with Woodland Bottoms wildlife mitigation P&S and construction; P&S to be initiated in FY07 with construction in FY08. Anticipate startup in 1st quarter of FY09 for balance of tidegate locations. Submit plan to NOAA Fisheries and the USFWS when construction contracts are in draft state.