Alpine Satellite Development Plan

Final Environmental Impact Statement

Appendix N

Essential Fish Habitat Assessment for the Alpine Satellite Development Plan

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1.0 INTRODUCTION

The only fresh water bodies identified as EFH (chum and pink salmon only) within the Plan Area are Judy Creek, Fish Creek, the Ublutuoch River, and the Colville River. Estuarine and marine waters bordering the Plan Area are EFH for all five species of salmon.

ConocoPhillips Alaska, Inc. has proposed development of 5 satellite production pads to be linked to its Alpine Processing Facility. The company's proposal, Alternative A (see Figure 2.3.3.1-1) involves constructing and operating a network of production pads, roads, and pipelines and an airstrip to produce hydrocarbon reserves in the Colville River Delta and Fish Creek Drainage (see Figure 2.3.3.1-1).

Within the Plan Area, the primary concern for fish is maintaining adequate winter habitat, which is the most crucial habitat to arctic fish (see Section 3.3.2). Other high priorities are maintaining suitable feeding and spawning areas and the ability to access these areas, which are often in different geographic locations (for example, broad whitefish spawn in river channels whereas drainage and frequent flooding of perched lakes provide overwintering and rearing areas).

Key issues on fish habitats and populations include the effects of water withdrawal; alteration of flow patterns; release of contaminants during the life of the project; alteration to water quality, especially during winter; and the impacts of oil spills. Special consideration should be given to certain crucial locations and habitats within the Plan Area (see Section 3.3.2.2).

2.0 DESCRIPTION OF THE PROPOSED ACTION

A description of the Preferred Alternative (Alternative F) can be found in Section 2 of this Final EIS. Section 2.3 describe features of the development common to all alternatives. Section 2.4.6 describes specific features of the Preferred Alternative.

3.0 ANALYSIS OF THE POTENTIAL ADVERSE EFFECTS

The primary Essential Fish Habitat (EFH) concerns in Preferred Alternative include potential effects on salmon associated with water withdrawal, alteration of flow patterns (for example, by bridge approaches in floodplains), release of contaminants, project-induced erosion, and oil spills.

Bridges would be used at the major stream and lake crossings as described in Section 2.3.10, and culverts would be installed in other areas. The placement of roads, culvert failure, and the placement of bridge approaches within river terraces could alter hydrology. However, salmon would not be expected to be present in the Nigliq Channel in winter; therefore, construction of the Nigliq Channel bridge would not be expected to affect EFH. Winter construction of the bridge across the Ublutuoch River could affect chum or pink salmon if they use the immediate area for overwintering or spawning.

Potential impacts of oil spills are addressed in Section 4.3.

A complete assessment of impacts of the Preferred Alternative to fish and fish habitats can be found in Section 4F.3.2 and are summarized in Section 4F.3.2.2. Impacts to EFH is highlighted at the end of Section 4F.3.2.2.

4.0 ASSESSMENT OF IMPACTS

Because most activities and development will occur near the proposed facilities, estuarine and marine EFH areas would not be affected except in the case of a very large spill. (See Section 4.3.4.6. The effects of water withdrawal, bridge construction, culvert placement, project induced erosion, alterations of flow patterns, release of contaminates, and oil spills would impact EFH for salmon in the project area. These impacts would be minimal through the application of sound mitigating measures.

4.0 PROPOSED MITIGATION

The Preferred Alternative incorporates some important mitigative features relevant to EFH. The Nigliq Channel and the Ublutuoch River bridges would span those waterbodies from bank to bank. The approaches to both of these bridges are also to provide for natural water flow so that water levels on the upstream side of structures are not raised by more than 6 inches compared to the downstream side of the structure for more than a week after peak discharge. Protection of fish is also enhanced by application of the State's fish passage criteria (A.S. 41.14.840) that requires that any fish passage way will be "kept open, unobstructed, and supplied with a sufficient quantity of water to admit freely the passage of fish through it." Properly designed and sized culverts will ensure accessibility among area habitats. While contaminants likely would be released in conjunction with normal operations, a strong commitment to spill and emissions control and rigorous spill response protocols should prevent EFH water bodies from being adversely affected. Project-induced erosion would be minimized by construction methods and design. Project facilities such as pads and roads would be situated on high ground to the extent possible and designed to minimize potential erosion (armoring, wing-walls at bridge abutments, etc.—see Section 2).

Effects of water withdrawal have been mitigated by restricting the withdrawals to permitted levels established to afford protection to resident fish. Further, monitoring of these withdrawals is planned to ensure that permitted levels are not exceeded.

Section 4F.3.2.3 lists additional potential mitigation measures that agencies may adopt. Section 4F.3.2.4 provides a discussion of the effectiveness of various protective measures, including those contained in the Northeast National Petroleum Reserve-Alaska IAP/EIS ROD.