Memorandum

Oregon Department of Fish and Wildlife

Date: September 6, 2022

To: Oregon Fish and Wildlife Commission

From: Dave Banks and Katherine Nordholm

Subject: Amendment to the July 21, 2021, Benefit Analyses for fish passage exemptions on Jump Creek, a tributary to Silvies River

The Department's original benefit analysis associated with the 10 exemption requests was written on July 21, 2021. The analysis found that there would be no appreciable benefit to providing passage for native migratory fish (NMF) at the locations of the ten proposed fish passage exemptions on Jump Creek based on the following:

1. Lack of capturing native migratory fish during two sampling events in 2019 and 2021.
2. The poor habitat quality that exists above the reservoir.
3. Professional judgement that sufficient water to support native fishes is lacking upstream of the reservoir (Picture 1a and 1b).

Picture 1a and 1b. Jump Creek upstream of Silvies Valley Ranch property. Pictures taken on 8/24/2022. Pictures show that Jump Creek is dry in August and does not currently have sufficient aquatic habitat to support fish year-round.

All ten exemption requests are located upstream of a dam on Jump Creek. The dam is a complete fish passage barrier located on Jump Creek downstream of the sites that are proposed for fish passage exemptions. The dam was mentioned in the benefit analysis and the presentation to the Commission as partial justification for the finding of no appreciable benefit. The dam is a prominent landscape feature on Jump creek and an obvious barrier to upstream migration.

During the Commission meeting in January, questions were asked about the legality of the dam. The Commission asked the Department to return with more information specific to the status of the dam. Oregon Water Resources Department visited the dam on June 23, 2022 and determined that the dam was storing surface water from Jump Creek without the benefit of a water right. Silvies Valley Ranch must address the unpermitted storage.

The finding by OWRD, however, does not alter the Departments conclusion that there will be no appreciable benefit to providing fish passage at the 10 sites under consideration. Regardless of the outcome of the permit status of the dam (e.g., even if the dam were removed), the remaining issues are sufficient to preclude a finding of appreciable benefit.

1. The habitat quality and flow in Jump Creek remain inadequate to sustain NMF in the system. The channel is simplified, lacks depth and riparian canopy, and is prone to frequent drying.
2. NMF are not currently present. The Department conducted two sampling events, in 2019 and 2021, and did not find NMF in Jump Creek (Attachment 5 and 6).
3. NMF cannot currently access Jump Creek. However, the dam is not the only impediment preventing NMF from accessing habitat in Jump Creek. There are three additional features that would prevent NMF from entering Jump Creek, even if the Dam were not present. These include:
    a. A road and legally permitted irrigation canal block the historic connection between Jump Creek and the Silvies River. Water is diverted from the Silvies River into an irrigation canal that runs parallel to the Silvies River and perpendicular to Jump Creek. The canal and the road along the canal effectively act as barriers to a connection between Jump Creek and the Silvies River. (Figure 1)

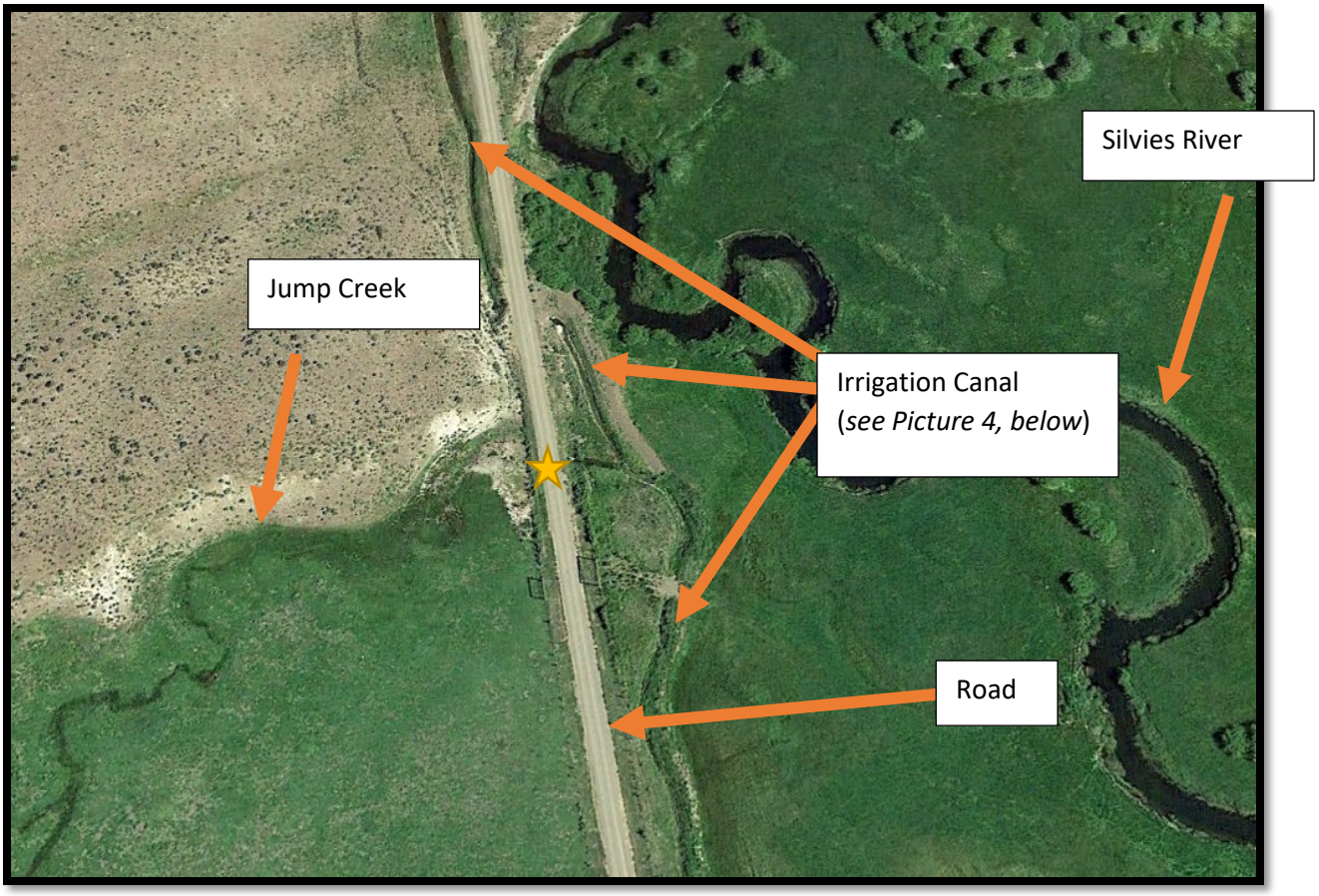

Figure 1. Map showing the location of the road and irrigation canal between Jump Creek and the Silvies River. The yellow star shows the location of Picture 4, below.

b. There is a lack of hydraulic connection between Jump Creek and the Silvies River. Jump Creek has a small drainage area and receives limited precipitation. Maximum flow occurs during the spring runoff between March and early June each year.

   The site visit in 2021 occurred during the wettest time of the year; however, there was no flowing water at the lower end of Jump Creek. During the spring 2021 survey, flow was documented below the dam but became intermittent and eventually disappeared before reaching the historic confluence with the Silvies River. Surface water does not make it to the road, irrigation ditch, or the Silvies River.

   Department observations in 2019 and 2021 suggest that the time when Jump Creek flow conditions are sufficient to support fish is limited. Under current flow, climate, physical stream characteristics and infrastructure conditions, a connection between the Silvies River and Jump Creek is unlikely in the foreseeable future.

c. The Silvies River has eroded from its historic elevations, leading to incision that further limits connection with Jump Creek. The Silvies River through Silvies Valley Ranch is estimated to be incised by 4-5 feet. Pictures 2 and 3 below show areas of incision

upstream and downstream of the Silvies Valley Ranch, Picture 4 shows the Silvies River just downstream of Jump Creek. Due to the elevation change, it is unlikely that the flow in the Silvies River would meet the confluence with Jump Creek often enough to allow for upstream fish passage without significant restoration in both systems.

Pictures 2a and 2b. Taken on 8/22/2022 upstream of Silvies Valley Ranch at approximately 44.06832, -118.970748.

2a. Wide angle and zoomed image looking upstream, showing the Silvies River incised approximately four feet from the historic floodplain. The yellow arrow shows the location of the ordinary high-water mark.

2b. Wide angle and zoomed image looking downstream, showing the Silvies River incised approximately four feet from the historic floodplain. The yellow arrow shows the location of the ordinary high-water mark.

Picture 3. Wide angle and zoomed images taken on 8/24/2022 downstream of Silvies Valley Ranch at approximately 43.922743 -118.958155. The images show approximately 5 feet of incision at this location.

Picture 4. Taken at the location of the confluence with Jump Creek in May 2021 during high flows. The Silvies River is in the background and the irrigation canal is in the foreground. The orange arrow points to the incised channel on the Silvies River just downstream from Jump Creek.