



Oregon

Kate Brown, Governor

Department of Fish and Wildlife

Fish Division
4034 Fairview Industrial Drive SE
Salem, OR 97302
(503) 947-6201
FAX (503) 947-6202
www.dfw.state.or.us/

August 7, 2018

Josh Heacock, Project Manager
Douglas County
1036 SE Douglas Ave
Courthouse RM 304
Roseburg, OR 97470



Mr. Heacock,

The Oregon Department of Fish and Wildlife's (ODFW) Fish Passage Program staff have reviewed the design plans and drawings where you propose to replace two bridges (North Bridge and South Bridge) over Davis Creek on Old Highway 99 in the town of Winchester, Oregon. At the Upstream Bridge (south) location an existing concrete stringer/girder type bridge will be replaced with a single span bridge that is 51 foot wide and 39 feet in length. The majority of riprap placed for scour protection is placed above the ordinary high water (OHW) elevation except for a small area along the SW corner of the bridge abutment. At the Downstream Bridge (north) location an existing concrete stringer/girder type bridge will be replaced with a single span bridge that is 55 foot wide and 37 feet in length. In addition, the proposed plan at the Downstream Bridge will change the alignment of the stream channel, install Class 50 riprap across the channel bottom to a depth of three feet and reconstruct the streambed with two feet of material, and place riprap along the banks to provide scour protection.

These actions have triggered the state's fish passage rules and regulations, administered by ODFW. As such, ODFW has reviewed the design engineered project plans for the different project components submitted by David Evans and Associates, Inc. From our review we have determined the design plans for the two bridge replacements and the channel re-alignment are consistent with the state's fish passage design criteria, as defined in OAR 635-412-0035 (1), (3), (8), and (10) and therefore approve these project components as required by Oregon Fish passage law (ORS 509.585).

The Upstream Bridge (south) over Davis Creek is primarily outside of the OHW except for some riprap along the SW corner bridge abutment. Placement of this riprap does not appear to interfere with channel constriction that would deter fish passage and may reduce water velocity along the channel margin to improve fish passage because of increased bank roughness. Therefore ODFW approves the Downstream Bridge construction with no exceptions as set forth in PA-16-0051.

The Downstream Bridge (north) over Davis Creek includes several project components. Bridge replacement and channel realignment require this project to meet fish passage design criteria. The proposed condition appears to improve fish passage at this site based on the provided hydraulic estimates. There is however considerable uncertainty associated with the StreamStats regression estimates at this site because of the altered channel dimensions. The

proposed condition may reduce high and low fish passage flow velocities due to a wider hydraulic opening and increased channel roughness, however there is a risk that water could go subsurface and result in decreased water depth that would preclude fish passage. The slope of the channel at the North Bridge is intended to match the existing channel grades at the upstream and downstream ends of the disturbed area. Therefore the North Bridge channel realignment fish passage authorization (PA-16-0052) is contingent on specific operational provisions identified in this fish passage authorization including maintenance and monitoring requirements as established in ORS 509.610.

These ODFW fish passage approvals (PA-16-0051 and PA-16-0052) are contingent on specific operational provisions, which include:

1. All in-channel work associated with the project shall be performed during the ODFW in-water work period (July 1- September 15) or as negotiated with ODFW Umpqua District staff.
2. Downstream fish passage during construction is required as a condition of this approval. In addition, stream flow is proposed to be bypassed around the work area and shall be sized to convey Davis Creek flows during the construction period.
3. Pursuant to OAR 635-412-0035 (10e), prior to in-stream construction activities, all fish must be safely collected, removed from the construction site or dewatered reach, and placed in the flowing stream by an authorized person in possession of a separate valid permit issued by ODFW.
4. After construction, the de-watered area and construction reach shall be re-watered in a manner to prevent loss of downstream surface water flow and thereby precluding fish passage or dewatering aquatic habitat (OAR 635-412-0035.10.f)
5. For the duration of this Approval, Douglas County shall be responsible for all maintenance required such that the project provides adequate passage for native migratory fish. Adequate fish passage is defined as volitional fish passage of native migratory fish species between the fish passage design flows (5% to the 95% exceedance flows) for the project. If monitoring by the Applicant or the ODFW indicates that adequate fish passage is not being provided, the Applicant, in consultation with ODFW, shall determine the cause and, during a work period approved by ODFW, shall modify the project to rectify problems as necessary. Failure to maintain fish passage for the duration of this approval shall constitute a violation of this approval and applicable fish passage laws (ORS 509.610).
6. Monitoring and reporting on the effectiveness of upstream passage of fish is required at the old highway 99 north bridge channel realignment. This shall entail monitoring to determine whether or not the reconstructed stream channel functions as it was designed to function for fish passage. Fish passage monitoring reports shall report on channel bed stability of the reconstructed channel solution, confirmation of water depth and velocities, and the effectiveness of fish passage of native migratory fish at a variety of fish passage flows when these fish are migrating through the project area(s). Monitoring and reporting shall be based on visual observations, established photo points, water depth and flow velocity characteristics, or other means; particularly with regards to fish passage conditions and fish passage performance through the project. Reporting shall consist of a one year post construction monitoring summary and a year two comparison to as-built conditions.

7. The Department shall be allowed to inspect the project at reasonable times for the duration of this approval. Unless prompted by emergency or other exigent circumstances, inspection shall be limited to regular and usual business hours, including weekends.
8. This Approval, as required by ORS 509.585, only provides fish passage approval under the authority administered by ODFW.
9. It is the responsibility of the Applicant to comply with all necessary and required local, county, state, and federal approvals and permits.
10. This Approval remains in effect until such time as the artificial obstruction triggers (new construction, fundamental change in permit status, or abandonment) fish passage laws again (ORS 509.585).

Please retain this fish passage authorization for your records, as this documents ODFW's approval and fish passage design provisions associated with the project. If you have any questions, please contact me at 503-947-6217

Respectfully,



Kregg Smith
Asst. Fish Passage Coordinator
ODFW
4034 Fairview Industrial Dr SE
Salem, OR 97302

Cc: Loren Sucker, David Evans and Associates Inc.
Greg Huchko, ODFW Umpqua Watershed District Fish Biologist
Jason Brandt, ODFW Umpqua Watershed Assistant Fish Biologist
Alan Ritchey, ODFW Screens and Passage Program Manager
Greg Apke, ODFW Fish Passage Program Leader
Project Files (PA-16-0051 and PA-16-0052)

ODFW FISH PASSAGE APPROVAL #PA-16-0051

Old Highway 99 South Bridge over Davis Creek

• ODFW has used the following criteria to determine the level of review required.

For ODFW Use Only

	YES	NO	N/A
1. Is the bed within the crossing as wide as the active channel:.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is the bed within the culvert at the same slope, and at grades continuous with, the surrounding stream:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3a. If the crossing is open-bottomed, is there 3 feet of vertical clearance between the active channel width elevation and the inside top of the crossing:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OR			
3b. If the crossing is closed-bottomed, will bed depth within the culvert be 20-50% of the crossing height:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Is the bed material that will be used sufficient to assure water depth will be similar to that in the surrounding stream (i.e., will not go sub-surface prematurely):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Are the bed material or retention measures that will be used sufficient to assure that the bed will be maintained through time:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. If the crossing is longer than 40 feet, will partially-buried, over-sized rock be placed within the crossing's bed:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Will the bed within the crossing be placed during construction:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. If trash racks are present, are they above the active channel width elevation and do vertical bars have at least 9 inches of clear space between them:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. If there is an upstream pond, wetland, or backwater area, has its desired state after construction been determined, and have these considerations been addressed in the design:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Are upstream grade control measures satisfactory:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. Are the construction timing and measures adequate based on the location:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Are there plans to maintain the crossing:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Does #11 identify appropriate temporary water management and fish salvage measures?
- If all answers are "Yes" or "Not Applicable", this plan is eligible for approval by an ODFW biologist.
- If any answer is "No" or there are other concerns, consult with the Fish Passage Coordinator.

APPLICATION IDENTIFIER: Old hwy 99 South Bridge crossing Davis Creek ODFW # PA-16-0051

DATE RECEIVED: June 15, 2018

APPROVED **SIGNATURE:** *Kay Smith* **DATE:** 08/07/2018

DENIED **TITLE:** ODFW Asst. Fish Passage Coordinator

CONDITIONS: CONTACT DISTRICT BIOLOGIST PRIOR TO ANY WORK ALTERATIONS THAT MAY REQUIRE NOTIFICATION FOR TIMING OF IN-WATER WORK REGULATIONS.


**ODFW FISH PASSAGE APPROVAL #PA-16-0052
Old Highway 99 North Bridge Crossing Davis Creek**

• ODFW has used the following criteria to determine the level of review required.

For ODFW Use Only

	YES	NO	N/A
1. Is the bed within the crossing as wide as the active channel:.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is the bed within the culvert at the same slope, and at grades continuous with, the surrounding stream:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3a. If the crossing is open-bottomed, is there 3 feet of vertical clearance between the active channel width elevation and the inside top of the crossing:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OR			
3b. If the crossing is closed-bottomed, will bed depth within the culvert be 20-50% of the crossing height:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Is the bed material that will be used sufficient to assure water depth will be similar to that in the surrounding stream (i.e., will not go sub-surface prematurely):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Are the bed material or retention measures that will be used sufficient to assure that the bed will be maintained through time:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. If the crossing is longer than 40 feet, will partially-buried, over-sized rock be placed within the crossing's bed:.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Will the bed within the crossing be placed during construction:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. If trash racks are present, are they above the active channel width elevation and do vertical bars have at least 9 inches of clear space between them:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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12. Are there plans to maintain the crossing:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Does #11 identify appropriate temporary water management and fish salvage measures?
- If all answers are "Yes" or "Not Applicable", this plan is eligible for approval by an ODFW biologist.
- If any answer is "No" or there are other concerns, consult with the Fish Passage Coordinator.

APPLICATION IDENTIFIER:	Old hwy 99 North Bridge Crossing Davis Creek ODFW # PA-16-0052		
DATE RECEIVED:	June 15, 2018		
APPROVED <input checked="" type="checkbox"/>	SIGNATURE:		DATE: 08/07/2018
DENIED <input type="checkbox"/>	TITLE:	ODFW Asst. Fish Passage Coordinator	
CONDITIONS: MONITORING OF CHANNEL REALIGNMENT TO VERIFY BED MATERIAL WILL BE MAINTAINED THROUGH TIME AND WATER LOSS DOES NOT DECREASE WATER DEPTH DURING FISH PASSAGE AT LOW FLOWS.			