

# DEQ DIVISION 33 APPLICATION REVIEW SHEET

Recommendations for Water Right Applications that may affect the  
Habitat of Sensitive, Threatened or Endangered Fish Species, OAR 690-33-310 through 340.

Application #: S 88126 Applicant's Name: James Farmer, Charles Farmer, Margaret Farmer, and Fort Boise Produce

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1) Is there a connection to a 303(d) listed water quality limited water body?  NO  YES

Explain: The applicant proposes to withdraw 4.73 cfs from an unnamed spring, unnamed stream, tributaries of Locket Gulch, and Locket Gulch, from February 1<sup>st</sup> to October 31<sup>st</sup> each year. The drainage ditches are within the Moores Hollow-Snake River watershed (5<sup>th</sup> Field HUC). Within this watershed, the Snake River is water quality limited for several parameters: mercury (year round), chlorophyll A (year round), temperature (summer), phosphorus (year round), dissolved oxygen (year round), sedimentation (year round), DDT 4,4 (year round), DDE 4,4 (year round), DDD 4,4 (year round), and Dieldrin (year round).

In addition, the applicant proposes to use the water to irrigate land within the Northern Malheur County Groundwater Management Area (NMC GWMA). The NMC GWMA is an area designated by DEQ due to concentrations of nitrate and other pollutants in the groundwater that exceed or are close to exceeding drinking water standards.

2) What is the potential for this use to impact a water quality limited water body:  HIGH  MEDIUM  LOW

Explain: The applicant proposes to divert water that would otherwise contribute to the Snake River.

3) If the answer to question (2) is HIGH or MEDIUM, will the proposed use still result in diminution of water quality for the habitat of sensitive, threatened, or endangered fish species?  NO  YES

If YES, how?

The applicant proposes to divert water that would otherwise contribute to the Snake River. The reduction in flow can negatively impact the Snake River. The following are impairments on the Snake River that would be exacerbated by a reduction in flow.

## Phosphorus

Phosphorus is an essential plant nutrient, but an excess of phosphorus can be detrimental to aquatic life. High phosphorus concentrations can lead to eutrophication, a situation where aquatic plants grow so rapidly that dissolved oxygen concentrations drop below the levels needed to sustain fish and other aquatic life. The Snake River is already known to have an excess of phosphorus. A reduction in streamflow will increase phosphorus concentrations. This would cause longer or more severe instances of oxygen depletion, resulting in a diminution of water quality for the habitat of sensitive, threatened, or endangered fish species.

## Dissolved Oxygen

Fish and other aquatic organisms require different concentrations of dissolved oxygen based on their species and life history stage. Oregon's dissolved oxygen standards are based on the most sensitive species and life history stage at the location and season of concern. Dissolved oxygen levels are affected by temperature, flow, nutrient loading, algae growth, and other factors. If dissolved oxygen drops to low enough levels, it can result in fish kills. The Snake River is already known to have insufficient dissolved oxygen concentrations for the habitat of sensitive, threatened, and endangered fish. Any additional reduction in dissolved oxygen concentrations would result in the diminution of habitat.

## Toxics (DDT 4,4; DDE 4,4; DDD 4,4; Dieldrin)

Water quality criteria for toxic pollutants have been established to protect aquatic life (Table 30 and 31). These criteria are developed to protect aquatic species such as fish, shellfish and aquatic insects. The aquatic life toxics criteria for each pollutant are typically comprised of four values: acute and chronic values for freshwater, and acute and chronic values for saltwater protection. A reduction in streamflow will lead to an increased rate of evaporation in warm weather, resulting in increased concentration of toxic pollutants in the stream. This would result in the diminution of water quality for the habitat of sensitive, threatened, or endangered fish species.

The proposed use includes flood irrigation of onions in a designated Groundwater Management Area. Flood irrigation increases sediment, phosphorus, fertilizer, and herbicide inputs to downstream waterbodies.

Flood irrigation of crops to which fertilizer and herbicides are typically applied also leaches nitrates and herbicides to the groundwater. This would result in worsened groundwater quality in an area already designated for its human health concerns.

4) Can conditions be applied to mitigate the impact of the use?

NO

YES; recommend from Menu of Conditions and skip to question 7.

OWRD has determined that this proposed use is not allowable. If the facts of the application change, DEQ should be notified and given the opportunity to submit updated comments.

5) If conditions cannot be identified to offset impacts, would the proposed use affect the Habitat of Sensitive, Threatened, or Endangered Fish Species?  NO  YES

If YES, please explain: See responses to #2 and #3

6) If a permit is issued, are there any conditions you would like to see included in the permit?

7) Your recommendation under OAR 690-033-0330 (2):  Approval with conditions  
 Approval without conditions  
 Denial

DEQ Representative signature:  Date: 6/23/2016

WRD Contact: **Caseworker:** Kim French, Water Rights Division, 503-986-0900 / Fax 503-986-0901

## MENU OF CONDITIONS FOR WRD, ODFW, DEQ AND AG

**The following condition will be included in any permit issued unless ODFW explicitly requests that it be omitted:**

The permittee shall not construct, operate or maintain any dam or artificial obstruction to fish passage in the channel of the subject stream without providing a fishway to ensure adequate upstream and downstream passage for fish, unless the permittee has requested and been granted a fish passage waiver or exemption through the Oregon Department of Fish and Wildlife. The permittee is hereby directed to contact an Oregon Department of Fish and Wildlife Fish Passage Coordinator before beginning construction of any in-channel obstruction.

- fishself** The permittee shall install, maintain, and operate fish screening and by-pass devices consistent with current Oregon Department of Fish and Wildlife (ODFW) standards. Fish screening is to prevent fish from entering the proposed diversion while by-pass devices provide adequate upstream and downstream passage for fish. The required screen and by-pass devices are to be in place and functional prior to diversion of any water. Permittee shall obtain written approval from ODFW that the installation of the required screen and by-pass devices meets the state's criteria or the permittee shall submit documentation that ODFW has determined screens and/or by-pass devices are not necessary.
- fishapprove** The permittee shall install, maintain, and operate fish screening and by-pass devices consistent with current Oregon Department of Fish and Wildlife (ODFW) standards. Fish screening is to prevent fish from entering the proposed diversion while by-pass devices provide adequate upstream and downstream passage for fish. The required screen and by-pass devices are to be in place and functional, and approved in writing by ODFW prior to diversion of any water. The permittee may submit evidence in writing that ODFW has determined screens and/or by-pass devices are not necessary.
- fishdiv33** If the riparian area is disturbed in the process of developing a point of diversion, the permittee shall be responsible for restoration and enhancement of such riparian area in accordance with ODFW's Fish and Wildlife Habitat Mitigation Policy OAR 635-415. For purposes of mitigation, the ODFW Fish and Wildlife Habitat Mitigation Goals and Standards, OAR 635-415, shall be followed.
- The use may be restricted if the quality of the source stream or downstream waters decrease to the point that those waters no longer meet existing state or federal water quality standards due to reduced flows.
- The permittee shall install, maintain, and operate fish screening and by-pass devices consistent with current Oregon Department of Fish and Wildlife (ODFW) standards. Fish screening is to prevent fish from entering the proposed diversion while by-pass devices provide adequate upstream and downstream passage for fish. The required screen and by-pass devices are to be in place and functional, and approved in writing by ODFW prior to diversion of any water. The permittee may submit evidence in writing that ODFW has determined screens and/or by-pass devices are not necessary.
- fishmay** Notwithstanding that ODFW has made a determination that fish screens and/or by-pass devices are not necessary at the time of permit issuance, the permittee may be required in the future to install, maintain, and operate fish screening and by-pass devices to prevent fish from entering the proposed diversion and to provide adequate upstream and downstream passage for fish.
- b52** Water may be diverted only when Department of Environmental Quality sediment standards are being met.
- b5** The water user shall install and maintain adequate treatment facilities meeting current DEQ requirements to remove sediment before returning the water to the stream.
- b51a** The period of use has been limited to \_\_\_\_\_ through \_\_\_\_\_.
- b57** Before water use may begin under this permit, a totalizing flow meter must be installed at each diversion point.
- b58** Before water use may begin under this permit, a staff gage that measures the entire range and stage between full reservoir level dead pool storage must be installed in the reservoir. The staff gage shall be United States Geological Survey style porcelain enamel iron staff gage style A, C, E or I. Additionally, before water use may begin under this permit, if the reservoir is located in channel then weirs or other suitable measuring devices must be installed upstream and downstream of the reservoir, and, a gated valve outlet must be installed. A written waiver may be obtained from the local Watermaster if in his judgment the installation of the weir(s) will provide no public benefit.
- futile call** The use of water allowed herein may be made only at times when waters from the (NAME OF SURFACE WATER) would not otherwise flow into a tributary of the \_\_\_\_\_ River or sufficient water is available to satisfy all prior rights, including rights for maintaining instream flows.
- riparian** If the riparian area is disturbed in the process of developing a point of diversion, the permittee shall be responsible for restoration and enhancement of such riparian area in accordance with ODFW's Fish and Wildlife Habitat Mitigation Policy OAR 635-415. For purposes of mitigation, the ODFW Fish and Wildlife Habitat Mitigation Goals and Standards, OAR 635-415, shall be followed.
- wq** The use may be restricted if the quality of the source stream or downstream waters decrease to the point that those waters no longer meet existing state or federal water quality standards due to reduced flows.
- fence** The stream and its adjacent riparian area shall be fenced to exclude livestock.
- blv** Water must be diverted to a trough or tank through an enclosed water delivery system. The delivery system must be equipped with an automatic shutoff or limiting flow control mechanism or include a means for returning water to the stream source through an enclosed delivery system. The use of water shall not exceed 0.10 cubic feet per second per 1000 head of livestock.

