



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office
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In Reply Refer To:

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Michael Lidgard, Manager
Office of Water and Watersheds, OWW-130
U.S. EPA – Region 10
1200 6th Avenue, Suite 900
Seattle, Washington 98101-3140

Dear Mr. Lidgard:

Subject: Informal ESA Consultation – EPA Issuance of NPDES Permit No. WAS-026638,
Joint Base Lewis-McChord, Thurston and Pierce Counties, Washington

On April 24, 2013, we received your cover letter and Biological Evaluation (BE), dated April 22, 2013, addressing the U.S. Environmental Protection Agency's (EPA) proposal to issue a National Pollutant Discharge Elimination System (NPDES) permit to the Joint Base Lewis-McChord (JBLM) Public Works Environmental Division. The proposed NPDES permit would authorize and regulate discharge of stormwater from the municipal separate storm sewer system, or systems (MS4s), owned and operated by JBLM in Thurston and Pierce Counties, Washington. Your BE provides information in support of "may affect, not likely to adversely affect" determinations for the bull trout (*Salvelinus confluentus*) and designated bull trout critical habitat. This informal consultation has been completed in accordance with section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

The EPA has made "no effect" determinations for additional species and critical habitat known to occur in Thurston and Pierce Counties, including the Mazama pocket gopher (*Thomomys mazama ssp.*, proposed threatened), streaked horned lark (*Eremophila alpestris strigata*, proposed threatened), Taylor's checkerspot butterfly (*Euphydryas editha taylori*, proposed endangered), and proposed critical habitat for these species. There is no requirement for U.S. Fish and Wildlife Service (Service) concurrence on "no effect" determinations. Your determinations that the proposed action will have no effect on these species and critical habitat rest with the Federal action agency.

JBLM owns and operates an MS4 which drains, collects, conveys, treats, infiltrates, and discharges stormwater and surface runoff originating from more than 5,500 acres of impervious surface within the developed base cantonment areas. JBLM also owns and maintains a relatively undeveloped 75,500 acre military training area, which is not part of the MS4. JBLM's developed cantonment areas and MS4 are located within two watersheds, the Murray Creek-American Lake-Sequalitchew Lake-Sequalitchew Creek sub-basin ("Basin 1-Sequalitchew"), and the Clover Creek-Lake Steilacoom-Chambers Creek sub-basin ("Basin 2-Chambers"). Within the developed cantonment areas, JBLM operates industrial facilities which are also subject to the NPDES permit requirements of the Multi-Sector General Permit for industrial activities, including McChord and Gray Army Airfields.

The EPA's draft permit (NPDES Permit No. WAS-026638) establishes conditions, prohibitions, and best management practices designed to control pollutants in discharges from the MS4s to the maximum extent practicable. The draft permit requires implementation of a comprehensive municipal stormwater management program, which includes: public involvement, education, and outreach; system inventory/mapping, and illicit discharge detection and elimination; controls for construction site stormwater runoff; minimum requirements for stormwater management associated with new development and redevelopment; "pollution prevention and good housekeeping" (i.e., MS4 inspection, operation, and maintenance programs); a stormwater retrofit plan; and, monitoring, recordkeeping, and annual reporting. The proposed NPDES permit would have a term of five years (2013 through 2018).

JBLM's MS4 treats and/or infiltrates stormwater and surface runoff originating from more than 4,100 acres of impervious surface within the developed cantonment areas, which equates to approximately 75 percent of the total impervious surface area. JBLM operates two large and relatively new stormwater treatment and infiltration facilities serving approximately 2,800 acres in Basin 1-Sequalitchew (JBLM-Main and JBLM-North). Discharges from these facilities are conveyed to a complex of named marshes and wetlands, and to American Lake and Sequalitchew Lake, before ultimately draining to the Puget Sound (near Solo Point) by means of the JBLM Stormwater Canal. Two additional facilities located in Basin 1-Sequalitchew provide treatment and/or infiltration for stormwater and surface runoff originating from an additional 940 acres (JBLM-North). In Basin 2-Chambers, JBLM operates a de-centralized system of oil/water separators serving more than 400 acres (JBLM-McChord Field). JBLM's MS4 also includes a de-centralized system of more than 1,000 shallow, "Class V" drainage or dry wells subject to underground injection control design and permitting requirements. To the best of their knowledge, the EPA and JBLM have determined that the undeveloped military training area is not serviced by a regulated MS4.

The EPA has provided sufficient information to determine the effects of the proposed action to federally listed species, and to conclude whether the action is likely to adversely affect those species. Our concurrence is based on information included in the BE and draft NPDES permit, and complete and successful implementation of the agreed upon conservation measures. Our concurrence with your "may affect, not likely to adversely affect" determinations is based on the following rationale:

Bull Trout and Designated Bull Trout Critical Habitat

The action area includes JBLM's developed cantonment areas and undeveloped military training area, the wetlands and receiving waterbodies of Basin 1-Sequalitchew (including Kennedy, Bell, Hamer, Elliot, and McKay marshes), the wetlands and receiving waterbodies of Basin 2-Chambers, and the nearshore waters of the Puget Sound in the vicinity of Solo Point and the outfall from the JBLM Stormwater Canal. Muck Creek and the Nisqually River pass through a portion of the undeveloped training area.

The wetlands and receiving waterbodies of Basin 1-Sequalitchew and Basin 2-Chambers do not support bull trout, and likely provide little or no suitable habitat for the species. The lower portions of Sequalitchew and Chambers Creek do support coho salmon (*Oncorhynchus kisutch*) and steelhead trout (*O. tshawytscha*), but habitat and fish passage conditions are more severely degraded throughout the middle portions of Basin 1-Sequalitchew and Basin 2-Chambers. The action area does support and produce prey resources which may be important to the bull trout.

The nearshore waters of Puget Sound, in the vicinity of Solo Point and the outfall from the JBLM Stormwater Canal, are used by bull trout for foraging and migration. These nearshore waters are also designated bull trout critical habitat and provide five of the nine primary constituent elements (PCEs) of critical habitat (PCE #s 2-5, and 8). These waters most likely support bull trout originating from the Puyallup River core area and local populations. The nearest bull trout spawning and early rearing habitats are located at mid- to high-elevations in the Puyallup River basin. Bull trout may utilize habitats surrounding the outfall from the JBLM Stormwater Canal, infrequently and in low numbers.

Available information indicates that JBLM's MS4 effectively treats and/or infiltrates much of the stormwater and surface runoff originating from within the developed cantonment areas. Some areas have not been retrofitted for stormwater treatment or flow control, but routine discharges from these areas are conveyed and discharged to wetlands and waterbodies that do not support bull trout, and that lie a significant distance from the nearest waters that do support bull trout. Even where the MS4 provides comparatively less treatment for stormwater (e.g., areas draining to Clover Creek), available monitoring data indicate little measurable water quality impairment attributable to uncontrolled stormwater discharges.

The JBLM Stormwater Canal drains and conveys surface runoff originating from most of Basin 1-Sequalitchew, including large developed and undeveloped areas both on and off the JBLM military installation. Much of this runoff passes through named marshes and wetlands as overland flow, and/or is conveyed through American and Sequalitchew Lakes, before ultimately draining into Puget Sound near Solo Point. American Lake is included on the Washington State 303(d) list of impaired waterbodies for exceedances of the phosphorus criteria, but otherwise the wetlands and receiving waterbodies of Basin 1-Sequalitchew exhibit good ambient water quality. Except for during a few, large, winter storm events per year, overflow from Sequalitchew Lake accounts for an estimated 80 to 90 percent of the runoff conveyed and discharged by the JBLM

Stormwater Canal. There is little available information with which to characterize the quality of discharges from the engineered conveyance, but under all conditions stormwater originating from the developed cantonment areas is very substantially diluted before discharging to the nearshore waters of Puget Sound.

The Service expects that the EPA's draft permit (NPDES Permit No. WAS-026638), and JBLM's comprehensive municipal stormwater management program, provides meaningful and adequate controls for discharges from the regulated MS4. Available information indicates that JBLM's MS4 already effectively treats and/or infiltrates much of this stormwater and surface runoff, and we expect that the requirements of the permit, notably the requirements for development and/or redevelopment of a stormwater retrofit plan, will measurably improve the quality of the MS4's discharges over the permit term. The EPA's draft permit includes a requirement for ambient water quality monitoring at the JBLM Stormwater Canal, and a requirement to further map and inventory the undeveloped military training area. We expect that the EPA and JBLM will, in the future, have better and more complete data with which to characterize the quality of discharges from the JBLM Stormwater Canal, and to describe any regulated MS4 operating off the developed cantonment areas.

The Service concludes that discharges from JBLM's regulated MS4 are not a source or cause for measurable effects to the bull trout or designated bull trout critical habitat. It is extremely unlikely that bull trout are, or will be, exposed to stormwater originating from within Basin 2-Chambers or the undeveloped military training area. Bull trout present near the outfall from the JBLM Stormwater Canal may occasionally be exposed to very substantially diluted, treated and untreated, stormwater runoff. However, available information leads us to conclude that any such exposures would be temporary, intermittent, and of very low intensity. We expect that potential temporary exposures at or near the JBLM Stormwater Canal do not, and will not, cause a measurable disruption to normal bull trout behaviors (i.e., the ability to successfully feed, move, and/or shelter). Potential direct exposures and effects are extremely unlikely (discountable), or will not measurably and significantly affect bull trout, and are therefore considered insignificant.

The Service concludes that discharges from JBLM's regulated MS4 currently do not and will not impair the function of bull trout habitat, or the productivity and availability of bull trout prey resources in the future. We expect that the EPA's draft permit, and JBLM's comprehensive municipal stormwater management program, will function to maintain and not further degrade the baseline environmental conditions. The foreseeable direct and indirect effects to bull trout habitat and prey resources are therefore considered insignificant.

Discharges from JBLM's regulated MS4 do not, and will not, have any measurable adverse effects to the PCEs of designated bull trout critical habitat. The action will have no effect to PCE #s 1, 6, 7, and 9. The action's foreseeable direct and indirect effects to PCE #s 2-5 and 8 will not be measurable, or will be beneficial, and are therefore considered insignificant:

PCE #2 – *Migration habitats*. Discharges from the JBLM Stormwater Canal do not measurably impair current function of the nearshore marine migratory corridor. The action will maintain or improve the current function of the migratory corridor.

PCE #3 – *An abundant food base*. Discharges from JBLM's regulated MS4 will not measurably affect the productivity or availability of bull trout prey resources. The action will maintain or improve current function of PCE #3 at the scale of the action area.

PCE #4 – *Complex shoreline aquatic environments and processes*. Discharges from the JBLM Stormwater Canal do not measurably impair current function of nearshore marine habitats, or the processes that create and maintain functioning shoreline habitats. The action will not alter the current condition of the shoreline at the outfall or affect the function of PCE #4 at the scale of the action area.

PCE #s 5 and 8 – *Water temperatures with adequate thermal refugia; and, water quality and quantity*. We expect that the EPA's draft permit, and JBLM's comprehensive municipal stormwater management program, will provide meaningful improvement controls for discharges from the regulated MS4. Available information indicates that JBLM's MS4 already effectively treats and/or infiltrates much of this stormwater and surface runoff, and we expect that the requirements of the permit will measurably improve the quality of the MS4's discharges over the permit term. Discharges from JBLM's regulated MS4 are not a source or cause for measurable effects to PCE #s 5 and 8. The action will maintain or improve current function of these PCEs at the scale of the action area, and will not measurably affect or degrade important thermal refugia.

Conservation Recommendation

The EPA's draft permit (NPDES Permit No. WAS-026638) includes a requirement for water quality monitoring at the JBLM Stormwater Canal (pp. 35, 36): "... the Permittee must sample at least once per year from a location and during a storm event which represents a peak flow storm event discharging through the JBLM Stormwater Canal." The Service is concerned that a single monitoring event per year of the permit term will not be adequate to obtain representative data meeting normal quality assurance/quality control requirements. The Service therefore recommends to the EPA and JBLM that the monitoring plan should be reconsidered and revised to ensure that monitoring conducted over the permit term does produce reliable information about the quality of these discharges, and variation in quality. Please offer a response in writing to this Conservation Recommendation. Thank you.

This action should be reanalyzed if new information reveals effects of the action that may affect listed species or critical habitat in a manner, or to an extent, not considered in this consultation. This action should also be reanalyzed if subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this consultation, and/or a new species is listed or critical habitat is designated that may be affected by the action.

If you have any questions about this letter or our shared responsibilities under the Endangered Species Act of 1973, please contact Ryan McReynolds at (360) 753-6047 or Martha Jensen at (360) 753-9000, of this office.

Sincerely,

Martha L. Jensen

for

Ken S. Berg, Manager
Washington Fish and Wildlife Office

cc:

EPA, Seattle, WA (J. Palmer, M. Vakoc)
JBLM-ENRD, Fort Lewis, WA (P. Steucke)
NMFS, Lacey, WA (S. Anderson)
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