

Finding of No Significant Impact
Tree Clearing in McChord Field's Primary Surface Zone,
Joint Base Lewis-McChord, Washington

Introduction

The Department of Army (Army), in coordination with the U.S. Air Force (USAF), is addressing issues surrounding vegetation management and airfield obstructions at McChord Field Airfield, located at Joint Base Lewis-McChord (JBLM). Vegetation management is a critical component to safe navigation and safe flight operations at McChord Field because of their impact to airfield clearance and instrument procedure. In 2010, a Light Detecting and Ranging (LiDAR) analysis was conducted of vegetation around McChord Field, to identify existing and potential tree obstacles around the airfield that are in violation of UFC regulations.

An Environmental Assessment (EA) was prepared to evaluate the proposed removal of tree obstacles at McChord Field, in accordance with the National Environmental Policy Act of 1969; regulations issued by the Council on Environmental Quality (CEQ), 40 CFR Part 1500-1508; and the Army's implementing procedures published in 32 CFR 651, *Environmental Analysis of Army Actions*.

Purpose and Need

The purpose of the proposed action is to ensure pilot safety by addressing obstructions within McChord Field's Primary Imaginary Surface, while balancing the needs of sensitive environmental resources and the surrounding human environment. The proposed action is needed to ensure compliance with Unified Facilities Criteria (UFC) 3-260-01, Airfield and Heliport Planning and Design, and AFI 32-1076, Visual Air Navigation Facilities.

Description of the Proposed Action and Alternatives

The DoD's Proposed Action (Preferred Alternative) involves clear cutting all trees within the boundaries of the runways 1,000 foot Primary Surface area (see the blue shaded area in Figure 1). The Primary Surface area is required to be level with the runway and have a 0% slope. Under the Preferred Alternative, the DoD would remove all trees and vegetation in non-environmentally sensitive areas, currently penetrating, or having the potential to penetrate, the approach/departure airspace imaginary surface, including those trees within the Clover Creek and Morey wetlands. The proposed action would also implement a mitigation project along Clover Creek to increase the riparian area buffer.

The clearing of the Primary Surface Zone would remove approximately 100 trees east of the runway (Appendix E). The trees range in size from three (3) to thirty six (36) inches diameter breast height, and will be removed in a way to minimize the environmental impact. In all areas outside of the Morey Pond and Clover Creek riparian areas, the project will include cutting and grinding stumps flush with existing grade. Trees will be felled and skid in a manner that preserves and prevents damage to surrounding vegetation, soil and infrastructure.

Many trees within the Clover Creek riparian area will not be able to be cut at grade. In cases where the tree roots have established themselves within the creek bed, or otherwise have

established themselves and/or provide stability to the Creek's slope, the trees will be cut in a manner that maintains the integrity of the creek (this is a top priority for the Air Force and Army).

Merchantable timber will be cut, and any excess (branches, large twigs, and stumps) will be cut for firewood or chipped and moved off-site for composting.

The proposed clearing of the Primary Surface Zone will also implemented the following restrictions/requirements that will be included within the project proposal. The restrictions include:

- Removal of all bluebird boxes that are within the Primary Surface Area. Either bluebird boxes will be relocated to the east, just outside of the 1,000 foot clearance area; or a six (6) to seven (7) foot stump will be retained for those trees with bird boxes.
- All tree cutting outside of the riparian area would be required to be completed between September 1 and March 31 to avoid disturbance to nesting streaked horned lark.
- All removal of Oregon white oaks with a DBH equal to or greater than four (4) inches will be mitigated at a 6:1 ratio. Plantings of the trees will be included within the projects costs and will be at least two (2) inch caliper. Mitigated trees will be planted at the direction of the installation's Fish and Wildlife Program Manager.
- All trees outside of the Primary Surface, that have not been previously cut (i.e. are not already part of the Air Field Maintenance Contract), will be preserved through a Waiver obtained by the Air Field.
- Any landscape features scarred or damaged by the Contractor's equipment or operations shall be restored to the projects natural condition/grade. All skidding damage or ruts and tracks from any source shall be restored to their original condition (topography) and planted with Roemer's fescue (*Festuca roemerii*) at the proper planting period during the year.
- Roemer's fescue will be planted in the two areas (4.05 and 2.93 acres) where all vegetation will be removed. This will be done during the proper planting period during the year.
- The proposed tree cutting around the riparian area will remove trees between July 16th and October 30th, which is the dry, low flow season. However, work would be discontinued should any coho salmon or steelhead be observed in Clover Creek or Morey Creek in the project area. Trees will be cut at their base and root systems will not be disturbed, to ensure minimal erosion impacts.
- No in-water work or walking, etc. in the creek will occur.
- All trees will be felled up the streambanks (upslope). No part of trees to be cut, including limbs, to the extent practicable, will be permitted in the creek or allowed to slide down the streambank into the creek.
- No trees will be felled into or across the creek.
- If trees are cut into 16.5-foot logs, these logs must be deposited on the adjacent upland area and not permitted to fall onto the creek's streambank/wetland.
- Regardless of how the trees are cut, in 16.5 foot logs or a total tree cut, logs or trees will not be skidded up the streambanks, but must be lifted off the streambank to the adjacent upland area to avoid vegetation damage and erosion impacts.

- No willows (shrubs), native shrubs or shrubs planted as part of the Morey Pond Dam bypass project along the streambanks of the Morey Pond Dam Bypass will be cut or removed as part of the project.
- The locust tree within the Morey Dam Bypass peninsula area will be felled in place in a southerly direction and left where it falls. This tree will not be cut into logs. The limbs on the top side of the felled tree will be removed so that no limbs are higher than the trunk of the felled tree.
- No pesticide, herbicide, etc. spraying will be part of this action.

No Action Alternative

The No Action Alternative serves as the baseline from which to compare all other reasonable alternatives. Under the No Action Alternative, existing vegetation management activities, which are authorized within the McChord Field Grounds Maintenance contract, would be allowed to continue. The McChord Field Grounds Maintenance contract includes vegetation management within the Primary Surface and the Transitional Surface, with the exception of the trees and vegetation within the vicinity of Murray Creek and Holiday Park.

All mowing and vegetation/tree removal would continue to be managed by the DPW’s Service Contract, subject to the McChord Field mowing schedule which has been established to protect streaked horned lark, which breed at the air field.

Under the No Action Alternative, McChord Field would continue to obtain a temporary waiver and/or would remain out of compliance for known tree obstacles within the Primary Surface zone

Summary of Anticipated Environmental Effects Associated with the Proposed Project

During the scoping process, several resource areas were identified for analysis due to their potential for environmental impacts. This scoping period also identified resource areas that would not be impacted by the proposed action and were eliminated from further analysis. These resources include: air quality, water quality & quantity, cultural resources, and biological resources.

Environmental Effects to Resources in the Proposed Project Area

RESOURCE AREA	Proposed Clear Cutting of McChord Field Primary Surface	No Action Alternative
Air Quality	<p>Short-term, minor air quality impacts from motorized logging equipment (i.e. trucks, saws, chipper, etc) may result in temporary increases of emissions at the air field. These impacts are considered to be negligible, because they are temporary in nature and will be below the thresholds established in 40 CFR 51.853(b), and considered regionally insignificant under 40 CFR 93.153(i).</p> <p>Long-term impacts to air quality due to the loss of trees was considered to be de minimis, because of the</p>	No impacts to air quality are expected with this alternative.

	overall minimal number of trees that would be cut, in addition to the 6:1 mitigation that would be implemented for the removal of oaks.	
Water Quality & Quantity	<p>Minor, short-term impacts to water quality are expected. All trees would be cut at the base, in order to minimize disruptions to the soil, to minimize soil disturbance (erosion). Impacts from human activity are expected to be minimal, and result in less than significant impacts to water quality.</p> <p>Potential long-term cumulative impacts to water temperature will be mitigated with the proposed 2:1 tree and shrub planting mitigation. The mitigation will plant shrubs for shading that will comply with the Primary Surface Area (~2 meters tall) and will also restore the canopy cover to a segment of creek outside of the primary surface area to mitigate for shade. Trees and shrubs along this 1,000 foot stretch can be no taller than 60 meters tall to comply with the Airfield's Transitional Surface zone. Due to the negligible effects of the project and the proposed mitigation that has been put in place, potential cumulative impacts to water quality have been determined to be less than significant.</p>	No impacts to water quality and quantity are expected with this alternative.
Cultural Resources	No known cultural resources would be impacted with this alternative. The proposed tree cutting includes a stand of locust trees which were considered potentially culturally significant. After investigation, it has been determined that there are No Historic Properties on the site, because the surrounding site has been so disturbed that there is no cultural context in which to associate the trees. No other cultural resources were identified on the site.	No impacts to cultural resources are expected with this alternative.
Biological Resources	<p>Minor short-term and long-term adverse effects to biological resources are expected, but impacts are not expected to be significant.</p> <p>Consultation/conferencing has been completed for ESA and EFH species. Conservation recommendations have been incorporated into the project.</p> <p>Tree removal is not expected to result in adverse impacts to SHL or proposed critical habitat. Project timing will avoid nesting times.</p> <p>Project will avoid tree cutting when the salmonids (coho) are present in the stream. No in-water work will be completed as part of this project. Any streambank/riparian vegetation damage will require the planting of replacement, non-invasive shrubs as determined by the JBLM, DPW, ED Fish and Wildlife staff.</p> <p>All Oregon white oaks will be mitigated 6:1.</p>	No impacts to biological resources are expected with this alternative.

Cumulative Effects

The proposed action is not expected to have any significant cumulative impacts. Cumulative impacts assessed overall impacts from previous airfield tree removal, as well as the incremental environmental impacts of the proposed action, together with the impacts of past, present, and reasonable foreseeable future actions. Although the Army's proposal would result in individually minor (de minimis) impacts to water quality due to the reduction of stream shade, we also considered its cumulative impact to Clover Creek which is listed on the 303(d) list for temperature.

Several factors went into the Army's determination of less than significant impacts. The primary reason was the projects negligible impacts. The proposed tree clearing affects less than 500 feet of the creek where existing canopy cover provides limited shade value to the creek (current canopy cover is rated as 'fair' due to its 10-20% forest cover that is provided at the site). The Army calculated the reach of the Creek affected (distance) with the flow rate of the creek and determined that it was improbable that any temperature impacts could occur with the proposed tree obstacle clearing. Temperature concerns were also reduced when the Army recognized that immediately after the proposed project area, Clover Creek travels 0.6 miles through culverts that run under the airfield (100% cover), which would likely negate any potential temperature impacts that could occur with the implementation of the proposed project. At this time, ground water withdrawals and loss of stream flow within the watershed are believed to contribute more to temperature impacts within Clover Creek than loss of riparian cover.

In addition to the existing negligible impacts of the project, cumulative impacts were thought to be less than significant because of the proposed mitigation that was included in the project. Although tall trees impose a safety concern within the Primary Surface area, the proposed project included the replacement of tree obstacles with low growing native shrubs (dogwood, service berry, Oregon grape, willow, etc.) that would comply with UFC regulations. Because of the reasonably narrow reach of the Creek, this proposed mitigation is expected to meet the functional equivalent of the existing 10-20% riparian cover that would have otherwise been lost with the proposed project.

Although the Army believes that the foregoing adequately supports a finding of less than significant impacts regarding cumulative impacts to water quality, the Army will also implement additional mitigation outside of the airfield's Primary Surface area to increase canopy cover along Clover Creek. During the public comment period, the Chambers-Clover Creek Watershed Council (CCCWC) asked to meet with JBLM's Environmental Division staff to discuss the Army's proposed project and to review recommendations of potential mitigation areas that could be restored to increase canopy cover along the watershed. CCCWC's recommendations included a 1,000 foot section of Clover Creek that falls outside of the Primary Surface Area, within the Airfield's Transitional Surface area. After consideration, the Army has included this mitigation within its proposal for the proposed tree obstacle removal. The mitigation will provide additional riparian cover to Clover Creek, while also complying with UFC height restrictions. The mitigation also is a relatively inexpensive way the DoD can work with the community and further its goals of conservation and natural resources management, while also maintaining mission requirements. It was considered a win-win. The mitigation also further reduces any potential adverse impact that the proposed tree clearing could have, and ensures that the Army's proposed project will not contribute to any cumulative impacts to water temperature within the Chambers-Clover Watershed.

Public Comment

The Army published a Notice of Availability for the EA and draft Finding of No Significant Impact (FNSI) on 04 September 2013, in the Tacoma News Tribune. Notice of Availability post cards were mailed to all entities within the EA's distribution also on this date. To be considered for the project, all comments were to be received by 04 October 2013, but this time was extended to account for the government shutdown which affected many of the Army's regulating agencies. During the public comment period, the Army received 3 letters, including responses from Chambers-Clover Creek Watershed Council, Washington Department of Fish and Wildlife, and the U.S. Environmental Protection Agency. All comments have been considered, and many have been incorporated into the final EA. Individual responses to all comments received can also be located in Appendix D of the EA.

Mitigation

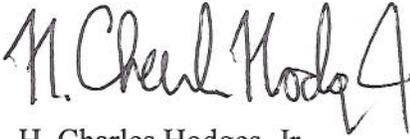
The proposed action includes native tree and shrub planting within the Primary Surface area (the area affected by the proposed tree clearing) and within a 1,000 foot section of Clover Creek outside of the Primary Surface Area (within the Airfield's Transitional Surface).

The following measures will also be implemented to minimize the potential adverse effects to the riparian area of Clover Creek:

- The proposed tree cutting will remove trees between July 16th and October 30th, which is the dry, low flow season. However, work would be discontinued should any coho salmon be observed in the Clover Creek project area. Trees will be cut at their base and root systems will not be disturbed, to ensure minimal erosion impacts.
- No in-water work or walking in the creek will occur.
- All trees will be felled up the streambanks (upslope). No part of trees to be cut, including limbs, to the extent practicable, will be permitted in the creek or allowed to slide down the streambank into the creek.
- No trees will be felled into or across the creek.
- If trees are cut into 16.5-foot logs, these logs must be deposited on the adjacent upland area and not permitted to fall onto the creek's streambank/wetland.
- Regardless of how the trees are cut, in 16.5 foot logs or a total tree cut, logs or trees will not be skidded up the streambanks, but must be lifted off the streambank to the adjacent upland area to avoid vegetation damage and erosion impacts.
- No willows (shrubs), native shrubs or shrubs planted as part of the Morey Pond Dam bypass project along the streambanks of the Morey Pond Dam Bypass will be cut or removed as part of the project.
- The locust tree within the Morey Dam Bypass peninsula area will be felled in place in a southerly direction and left where it falls. This tree will not be cut into logs. The limbs on the top side of the felled tree will be removed so that no limbs are higher than the trunk of the felled tree. Removing this tree without causing damage to the bypass vegetation and the bypass itself, along with the associated and adjacent naturally seeded upland area would be very difficult and could cause significant impacts. Access to this area is extremely limited and removing the tree would also be a safety issue.
- No pesticide, herbicide, etc. spraying will be part of this action.

Conclusion

I have considered the results of the analysis referenced above, comments received, and Army mission requirements. In review of the resource areas potentially impacted by the proposed action of clearing tree obstacles at McChord Field airfield, it was found that the preferred alternative would have no significant environmental impacts on the natural or human environment. Based on this documentation, which has incorporated or referenced the best information available, I have taken a hard look at known impacts and determined that the implementation of the proposed action, with the mitigation referenced above, will not significantly affect the environment and therefore, an Environmental Impact Statement is not needed.



H. Charles Hodges, Jr.
Colonel, US Army
Commanding

28 May 14

Date