McChord Air Force Base Noxious Weed Control and Restoration
July-September 2006 Quarterly Activity Report

October 2006

The Nature Conservancy
SAVING THE LAST GREAT PLACES ON EARTH

McChord Air Force Base is a key military installation and an important conservation area in the Puget Trough region. The Nature Conservancy strives to assist McChord AFB in the conservation of its natural resources within the framework of the Base's military mandate. McChord AFB and The Nature Conservancy have shared interests because:

- ***Rare species recovery throughout the region reduces the burden of recovery on any single landowner or site.***
- ***Pest plants harm natural areas and reduce their suitability for military objectives.***

Background

McChord Air Force Base contains a range of natural resources with conservation concerns; especially those associated with oak woodlands, grasslands, and wetlands. This includes the federal threatened species, *Howellia aquatilis,* an aquatic plant. Oak woodlands are priority habitat for neotropical birds, a variety of butterflies, and the state threatened western gray squirrel. An Endangered Species Act candidate bird species, the streaked horned lark, nests and reproduces on the airfield. Three Candidate Research Natural Areas have been identified which capture the most significant natural features present on McChord Air Force Base.

These areas have been the focus of land management and habitat restoration efforts for several years, and habitat quality has slowly started to improve. However, without continued attention they will degrade because of significant populations of habitat destroying non-native pest plants.

Funding for the actions detailed below was provided by McChord Air Force Base through a series of contracts. There were four active contracts during summer quarter: Aquatic Invasives (#3848), Noxious Weed Control (#3886), Water Howellia (#4810) and Mammal Survey (#4811).

McChord Noxious Weed Control (TNC Budget #3886)

There were several tasks completed under this contract in the past quarter. Summer provides an opportunity to spot treat surviving noxious weeds in areas that were initially treated in the spring. This is where much of our effort was concentrated under this task order this past quarter. Figure 1 presents a map of areas where noxious weeds were treated during summer. This contract was extended until July 31, 2007.

Most of the effort under this contract focused on controlling spotted knapweed. Access was excellent this year and the new spray rig mounted in the back of the Kubota has worked impressively. Figure 1 provides a map of locations where the various species were controlled.

Most weeds are dormant during fall and winter quarter, and weed control activities under this task order are expected to be minimal until spring. We do plan to use the new wetblade mower to do trials throughout the fall and winter quarters. Enhancement plantings will be conducted in the Bensten wetland area during fall.

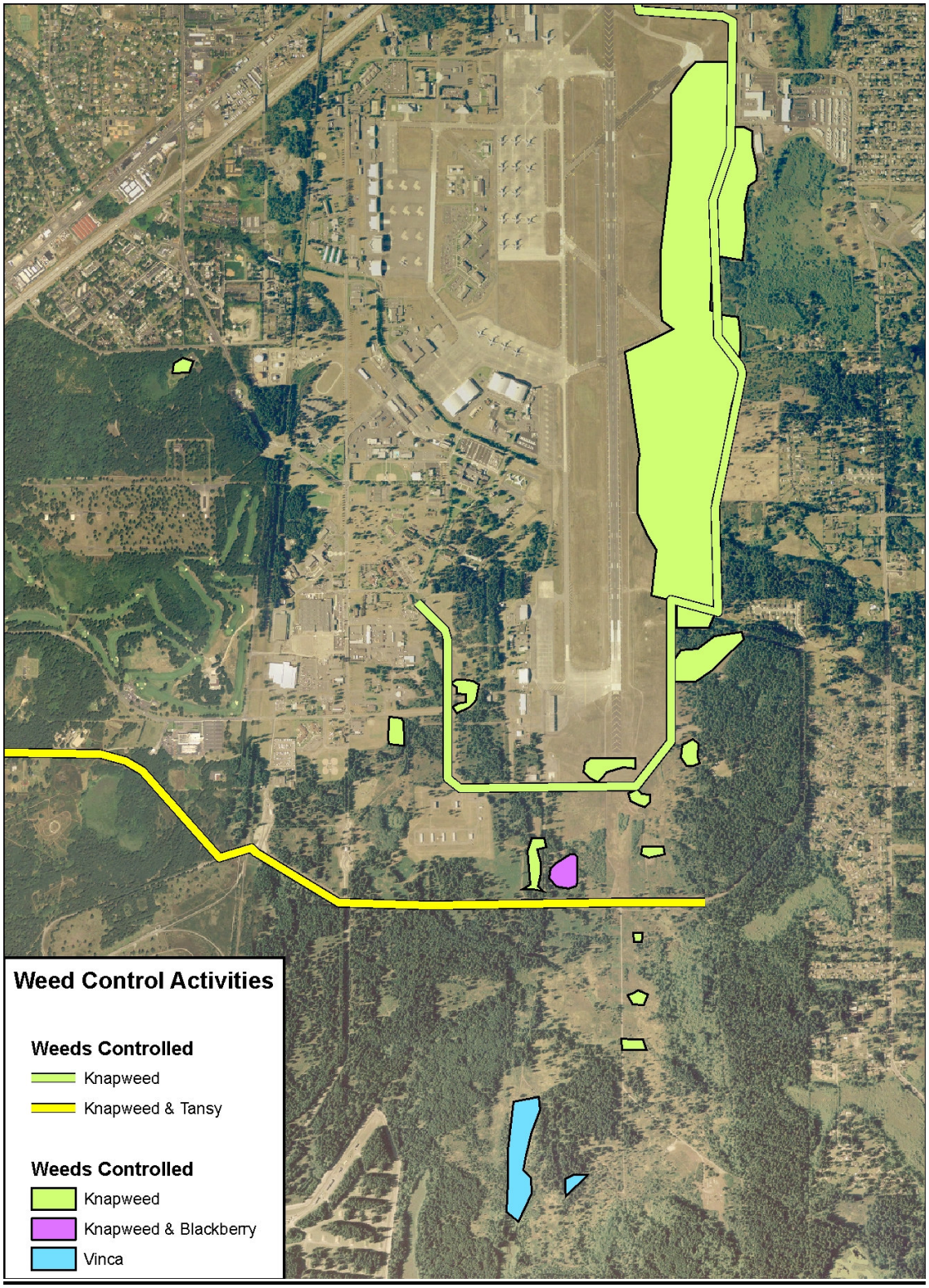

Figure 1: Map of summer 2006 weed control activities at McChord AFB funded under Noxious Weed Control contract

McChord Aquatic Species Control (TNC Budget #3848)

The initial goal of this project was to eliminate weeds within the main channel of Clover Creek in order to enhance flow and conditions for aquatic organisms. Entrix was contracted to provide an initial plan and facilitate the permitting of the action. Entrix supplied an initial plan, JARPA, no-effects letter and a letter outlining permit strategy. The Conservancy contacted three contractors with specialties in wetland construction and restoration and toured the site with personnel from McChord. Each of the contractors voiced concerns with the potential cost of the project and likelihood of obtaining permits in time for construction. The single formal bid received exceeded the budget of the project. At that point McChord requested that TNC stop work on creek enhancement so that alternatives to the initial project could be evaluated.

This project's end date has been extended until February 15, 2007.

It has been agreed that funds will be used to conduct riparian enhancement along Clover Creek on the west side of the runway. This includes a massive and intensive control effort of all blackberry in preparation for fall planting of woody shrubs.

During the 2006 winter quarter a side-mounted boom mower tractor with a five foot deck was used to cut back the majority of the blackberry infestations. Hand held brushcutters were then used to cut smaller areas that were missed by the boom mower.

During spring quarter, all previously mowed areas were spot treated with Garlon 3A (triclopyr). Although Garlon 3A is approved for aquatic applications, it was not directly sprayed into the creek.

During summer quarter, surviving plants were retreated with 2.5% Garlon 3A with 0.25% Nufilm (non-toxic surfactant). Garlon 3A is approved for aquatic applications, and precautions were taken to keep spray from entering water.

In total, 10,100 linear feet are being restored in about a 30 foot swath. This equals approximately seven acres. More than 6600 feet of Clover Creek stream bank was treated on both the east and west sides of the airfield. To the west of the airfield, only the east side of Clover Creek was treated. In addition, blackberry patches on the perimeter of Morey Pond were treated, as were a few nearby infestations. See Figure 2 below for a map of all treated areas.

Over 3000 potted plants and live stakes will be planted in the restoration area during fall and winter quarters. Irrigation systems will be purchased and installed for future dry season watering of plants.

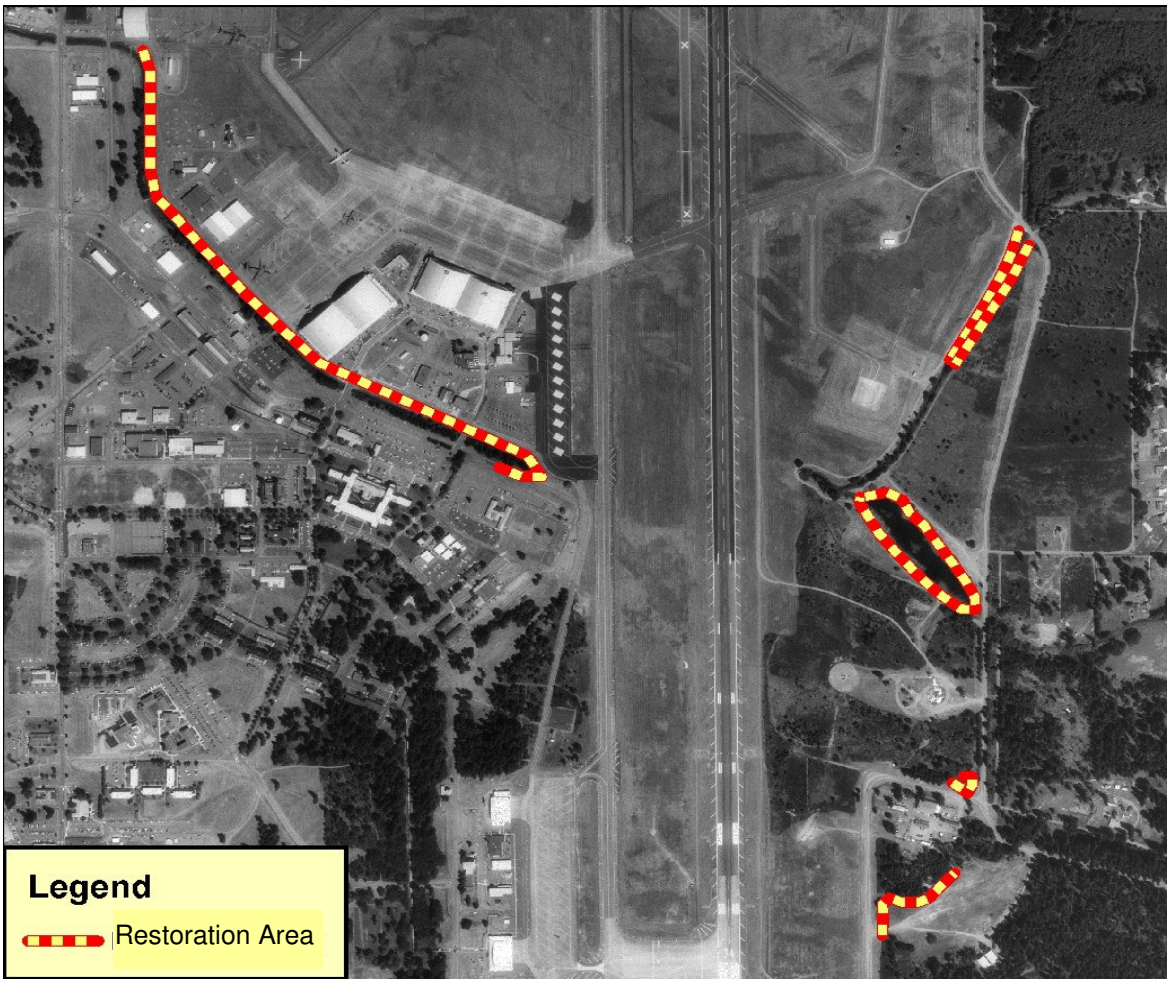

Figure 2: Map of blackberry herbicide treatment completed in spring quarter 2006.

McChord Water Howellia (TNC Budget #4810)

The purpose of this contract was to do a complete baseline survey of water howellia – a hydrophilic plant listed as threatened under the federal Endangered Species Act. There are 34 identified wetlands on McChord AFB with differing suitability for water howellia. Each of the 34 wetlands were ranked for suitability, surveyed, catalogued and monitored for howellia presence.

This project's end date has been extended until November 31, 2006.

An additional wetland was added to the survey in fall 2005. This wetland was evaluated and added to the report. A draft copy of the report was submitted and reviewed by McChord and a final report was submitted during winter quarter.

Approximately $25,000 remained in this budget for direct conservation related activities. These funds have largely been spent to purchase an experimental weed control system that promises to be effective against Scotch broom. Funding from the Mammal Survey contract was combined to purchase a wet blade mowing/herbicide application

implement, a suitable tractor and herbicide. The equipment was delivered at the end of September. Restoration work and experimental trials will be conducted during fall and winter quarter. See photos under Mammal Survey below.

McChord Mammal Survey (TNC Budget #4811)

The purpose of this contract was to inventory one of the remaining uninvestigated animal classes on McChord- Mammalia. Almost 60 species were possible occupants of McChord AFB, including multiple species of conservation concern. This contract was extended to September 30, 2006.

Following activities occurred during the spring quarter:

- Kelly McAllister of the WDFW provided assistance with technical planning and targeted trapping of fossorial mammals.
- Targeted survey work was conducted for aquatic mammals and bobcats.
- Hair snag tubes were activated in the South Approach Zone and a western gray squirrel occurrence was positively identified.
- Report was drafted and reviewed by TNC, WDFW and McChord staff. Final report was submitted at the end of September.

Surplus funds were available from this contract. It was decided by McChord that the funds would best be used for enhancement of mammal habitat. Scotch broom is one of the most significant threats to upland habitats. Surplus funds from this contract and the howellia survey contract (see above) were used to purchase a wetblade mowing system, which will cut and apply herbicide simultaneously. This is an experimental project that holds considerable promise. Additional restoration funding will be used to conduct broom control throughout the base.

Figure 3: Wetblade Mower in action and example of treated Scotch broom stem.