January - March 2006 Quarterly Report

Fort Lewis Conservation Project

The Nature Conservancy
SAVING THE LAST GREAT PLACES ON EARTH

Fort Lewis is a key military installation and the most important conservation area in the Puget Trough region. The Nature Conservancy strives to assist Fort Lewis in the conservation of its natural resources within the framework of the Fort's military training mandate. Fort Lewis and The Nature Conservancy have shared interests because:

- ***Healthy natural ecosystems are essential for realistic and sustainable training lands.***
- ***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 training.***

Conservation at Fort Lewis

Fort Lewis continues to play a vital role in the regional effort to restore western Washington prairie and oak habitats. The Fort has the largest and best quality remnants of these threatened habitat types, and The Nature Conservancy is assisting the Fort to reach its conservation goals. Fort Lewis and The Nature Conservancy have a shared vision of conservation at the Fort which simultaneously promotes sustainable military training lands and robust natural ecosystems. The following three points provide a framework for this vision.

1. *Healthy natural ecosystems are essential for realistic and sustainable training lands.*
2. *Rare species recovery throughout the region reduces the burden of recovery on any single landowner or site.*
3. *Pest plants harm natural areas and reduce their sustainability for military training.*

The open structure of prairie and oak woodland habitats is highly desirable for military training and essential to many rare species. These habitats are currently threatened by invasive trees, shrubs and weeds that can quickly degrade large areas into dense woodlands and brush patches with reduced visibility and native diversity. It is realistic to pursue a vision of prairie and oak ecosystem management that supports sustainable military training and conservation values simultaneously.

Fort Lewis has developed a number of valuable plans to guide conservation actions. The Sustainability Initiative and the prairie and oak management plans demonstrate the Fort's commitment to conservation on its training lands and throughout the region. These plans share common goals with The Nature Conservancy's Ecoregional Planning and Conservation Area Plan, which identify prairie and oak habitats as critical conservation targets.

Quarterly Overview January to March 2006

Winter quarter is a period of reduced biological sensitivities. Prairie plants are senesced and birds and animals are not rearing young. Most prairie soils are well-drained and not prone to compaction and rutting. These factors make winter an ideal period for mowing scotch broom and other woody plants. It is also a preferred time for planting woody species.

The following report summarizes the past quarter's activities and upcoming tasks. Each task description indicates its associated task order name. This report is not intended to provide detailed descriptions and rational for tasks. Those details are available in task order plans and final reports and will be compiled each January in an annual report.

The report is divided into the following program elements: Prairie enhancement; Oak and western gray squirrel enhancement; Noxious weeds; Rare species recovery; Road decommissioning; and Riparian enhancement. *Appendix I* summarizes the work completed under each task order rather than by program elements.

Active task orders (and their TNC center numbers) for this quarter include: Prairie Enhancement 2005 (4807), Road Closure 2005 (4808), WGS FY05-(4809), Enhance Prairies(3861), White Oaks (3866), WDFW Coop Position (3845), and STHL FY05 (3849).

PRAIRIE ENHANCEMENT (INCLUDING SCOTCH BROOM CONTROL)

Streaked Horned Lark Habitat Enhancement. Mowed Scotch broom on 177 acres of streaked horned lark habitat around the Pacemaker landing strip at 13th Division Prairie (see *Appendix II Figure 1* for map). The largest mowing polygon (115 acres) was in the core lark habitat area. The entire core area has now been treated by this mowing or a 2005 prescribed burn. The polygons to the east of the landing strip and in the far south are part of a lark habitat enhancement trial that will continue in 2006. The 20 acre central mowing area is part of a larger area that will be completed with future lark funding. (STHL FY05 - 3849)

Muck Creek "Triangle Area" Scotch Broom Control. Three polygons of medium quality prairie were enhanced on 13th Division Prairie near the Muck Creek Triangle Area (see Appendix II Figure 1 for map). The triangle area and surroundings has been identified as a focus prairie conservation area due to its higher quality prairie habitat and proximity to Muck Creek. In total 116 acres of Scotch broom were mowed. Several enhancement planting areas were mowed as a part of this task. Surrounding low quality prairie polygons will be mowed during spring quarter. (Enhance Prairies - 3861)

Prairie Enhancement Plantings. Enhancement plantings totally 21,400 plugs occurred in three locations at the end of winter quarter. Two of the plantings were for general prairie enhancement and the third was for the Upper Weir Prairie road closure. See prairie maps in Appendix II Figures 1 and 2 for map with planting locations. *Table 3* in *Appendix III* provides a summary for each planting. (All plantings were under task order Enhance Prairies – 3861).

- *13th Division Prairie*. Two enhancement plots were planted with 8200 plugs south of South Creek. This is a continuation of previous enhancement planting efforts designed to improve habitat in the last known location used by Taylor's checkerspot butterflies and an area currently used by Puget blues. Plants have been selected that are known to be important host and nectar resources for these butterflies. We believe that these plantings are improving the habitat such that it will be possible, with Fort Lewis support, to reintroduce Taylor's checkerspots in the near future.
- *South Weir Prairie*. This is an ongoing planting enhancement plot which was planted with 6500 plugs. It is located adjacent to TNC's Morgan property which is undergoing significant butterfly focused habtat enhancement. This area is part of the Johnson/Weir Prairie complex which currently supports Puget blue and valley silverspot butterflies. With sufficient enhancement, it may be able to support other rare butterflies.
- *Upper Weir Road Closure*. 6700 plugs were planted into the Upper Weir road closure. The site was prepped under a prior task order. Much of the prairie vegetation on Upper Weir Prairie is in excellent condition but this habitat is somewhat fragmented by roads. Two roads that pass through high quality prairie were decommissioned and these plantings were designed to restore the native prairie plant community on the old roadbed.

Propagation. A total of 59,625 prairie plant species have been planned for propagation and eventual planting in fall of 2006. Propagation work has progressed well. Most species are above target for number of plugs sown and other than fescue, only three are significantly below target (see *Appendix III Table 4* for summary). Fescue plugs are on schedule to be germinated during spring quarter. (Enhance Prairie - 3861 and Roads 2005 – 4808)

Seed Production. Fort Lewis funds were used to augment a larger seed production effort that is designed to provide seed for Collins research plots and general prairie enhancement. A total of 24 beds were built and planted with 30 species during fall 2005 and winter 2006 and will seasonally supply seed for prairie restoration starting in fall 2006. Fort Lewis funded

construction and planting of four beds. Seed beds are constructed of treated lumber with dimensions of 4X30 feet. A species list is provided in *Appendix III Table 5*. (Roads Closure 2005 – 4808).

In addition, approximately 27 of the rarest prairie plant species on the Fort are targeted to be cultivated in the seed beds for seed production. These are the rarest plant species on Fort Lewis that are confined to prairies and have fewer than 5 populations or fewer than 100 individual plants will be propagated by seed and plugs. Most of these species are not globally rare and none of them are listed under the U.S. Endangered Species Act.

Six of the 27 identified species may have already vanished in the past decade and any of fifteen others could easily vanish. For all of these species that we are able to obtain local seed, we will establish 12 ft^2 of seed bed. For all of the perennial species we will attempt to produce 200 plugs from seed collected at the Fort. The resulting plants and seed will be split between the site of the original population and new sites with similar ecological characteristics and less potential damage from vehicular traffic or other disturbances. At the end of winter quarter, eight species were sown – these are the only species that currently have available seed. See *Appendix III Table 6* for species list. (Prairie Enhancement – 3861)

Upcoming Tasks.

- Control non-native grasses and forbs in ongoing streaked horned lark habitat enhancement trial areas. See west and east most Pacemaker polygons in *Appendix II Figure 1*.
- Continue streaked horned lark monitoring work initiated by WDFW and establish base-line data for lark habitat enhancement trial.
- Additional medium quality broom mowing will occur at Upper Weir and Johnson. Mowing will occur prior to April 15 to minimize impact to sensitive native plants. See *Appendix II Figure 2*.
- Mowing on lower quality sites will occur at Lower Weir Prairie and the Muck Creek Triangle and Pacemaker areas of 13th Division Prairie. See *Appendix II Figures 1 and 2*.
- Second-year measurements of Enhancement Planting Experiment plots.
- Poast will be applied to all enhancement plantings and at TA 7S.

OAK, PINE AND WESTERN GRAY SQUIRREL HABITAT ENHANCEMENT (INCLUDING SCOTCH BROOM CONTROL)

Western Gray Squirrel and Oak Enhancement Mowing. Approximately 173 acres of oak woodland were mowed to enhance understory habitat in TA's 8, 10 and 12 (see map in *Appendix II Figure 3*). Mowing polygons are all within core western gray squirrel (WGS) habitat as indicated by prior tube monitoring. Scotch broom and small Douglas-fir were primary targets for mowing. Mowing activity ceased prior to March 15 to avoid disturbing western gray squirrel during sensitive breeding and rearing season. (White Oaks – 3866)

Western Gray Squirrel Enhancement Plantings. Several squirrel habitat enhancement plantings occurred during winter quarter. In total 2,110 trees and shrubs were planted. See map of squirrel plantings in *Appendix II Figure 4*. (All plantings funded by White Oaks - 3866)

- *Lake DeBalon.* This area is central to the efforts to enhance western gray squirrels on Fort Lewis. Tube monitoring has revealed presence and sightings have confirmed several individuals. This planting is adjacent to previous enhancement planting efforts. In all, 650

plants were added to the site. Plantings are aimed at enhancing food opportunities at the site and increasing the size of suitable habitat in the area. The planting consisted of the following species: Oregon White Oak-150; Indian Plum-100; Serviceberry-200; and California Hazelnut-200.

- *Shaver Lake*. As a result of tube monitoring and sightings, Shaver Lake has been identified as a priority WGS restoration site. The site contains all WGS habitat requirements, including proximity to water, large, various foraging sources, and limited understory. In all, 350 plants were planted of the following composition: 50-Oregon white oak; 50-Indian plum; 150-California hazelnut; 100-Serviceberry;
- An additional 550 plants which were surplus from a Fort Lewis Fish and Wildlife project were dispersed throughout the Shaver Lake and DeBalon sites. All of these additional plants are native and many are also food bearing which will add to the connectivity and foraging opportunities for the western gray squirrel available at each site. In total 550 shrubs and trees were planted: beaked hazelnut-50; bitter cherry-150; choke cherry-50; Oregon white oak-250; Indian plum-25; and service berry-25.
- *Food Islands.* Twenty additional food island plantings were established this winter that are designed to help provide linking habitat for WGS populations at Shaver Lake and Lake DeBalon. Plantings consist of both overstory and understory food producing plants. Each food island contains 28 plants for a total of 560 trees and shrubs. Each food island contains 4 Oregon White Oak, 8 Indian plum, 8 serviceberry, and 8 beaked hazelnut.

Eastern Gray Squirrel Control Trial. The first three sessions of EGS control were conducted during winter quarter. This effort resulted in 20 captured eastern gray squirrel and six western gray squirrels. All WGS were tagged and released on site. Initial monitoring results have shown dramatic reduction in numbers of tubes recording EGS presence, especially in session 2 and 3. Session 1 trap timing may have missed a window of daily peak activity, which would explain the significant numbers of tubes that have recorded post-trapping EGS presence. Session 4 is currently underway, should further reduce EGS numbers throughout the 'Squirrel Triangle' (high priority conservation zone). It is intended to serve as a clean-up session and is directed at sites where tubes are still gathering EGS hair samples. At the end of winter quarter, 2400 traps were set which, produced the 20 EGS captures. In addition to EGS captures, tube monitoring has already revealed WGS in previously unidentified areas. See *Appendix II Figure 5* for a map of EGS control areas. (Work funded under WGS 05-4809 up until February 28 and followed by White Oak-3866)

Table 1. EGS control results through session 3.

Session 1 February 6-13	6 EGS captured – all males 1 WGS captured- female at northern Spanaway
Session 2 March 6-13	8 EGS captured- 4 females and 4 males 2 WGS captured-both females at Debalon
Session 3 March 27-April 3	6 EGS captured- 3 females and 3 males 3 WGS captured-2 females and a male just south of east gate road along Johnson marsh.

Western Gray Squirrel Monitoring. Two squirrel monitoring tasks were worked on during winter quarter. Monitoring associated with EGS control is discussed below and as part of the EGS control section of this report. Monitoring of the DeBalon oak release timber harvest is discussed below. (Work completed under WGS 05-4809 up until February 28 and followed by White Oak-3866)

- A total of 87 hair snag tubes were installed as a complement to trapping efforts for eastern gray squirrels in the 'Squirrel Triangle'. These hair tubes proved useful in identifying species

of squirrels visiting wire mesh traps where squirrels were eluding capture in the traps. These monitoring tubes will be used for directing the final trapping session to maximize capture of the target species within the experimental area. When all trapping efforts are suspended, this set of tubes will serve as the basis for longer term monitoring of the effects of the management (trapping) intervention.

- Intensive monitoring of gray squirrel hairs in the DeBalon oak stand has continued to document the short-term effects of management actions on resident squirrels. The first management action consisted of an oak release timber operation in early – mid December, 2005, followed by eastern gray squirrel trapping and removal in early March, 2006. For two years prior to the timber cutting, surveys consistently revealed WGS in the interior of the stand, while no eastern gray squirrels were detected. Hair tubes were checked approximately weekly during and immediately after the cutting operation, and thereafter, approximately every 3 weeks. Results are as follow:

Table 2: Lake DeBalon tube monitoring summary prior to and following management activities.

Sample Period	Timber Cutting Phase	Species Detected
23 Nov. – 9 Dec. 2005	Just prior to and during cutting	Western gray squirrel
9 Dec. – 17 Dec. 2005	During timber felling and piling	Western & eastern gray squirrel
17 Dec. 2005 – 22 Feb. 2006	Post timber felling	Eastern gray squirrel
22 Feb. – 12 Mar. 2006	Prior to and during trapping	Western & eastern gray squirrel
12 Mar. – 10 April. 2006	Post trapping	Western & eastern gray squirrel

Based on these hair snag data, it appears that eastern gray squirrels became more prevalent in the stand during and after the timber cutting than they were prior to the timber activity, and the reverse was true for the western gray squirrels. The trapping and removal of several eastern gray squirrels from the stand during the trapping period in March appears to have 'tipped the balance' once again, resulting in increased evidence of western gray squirrel activity in the stand. This stand will continue to receive special monitoring effort to document longer term effects of these management actions.

Central Impact Area Oak and Prairie Enhancement. During winter quarter, TNC and FL Fish and Wildlife mowed Scotch broom and girdled Douglas-fir in the CIA's central prairie area. This work primarily focused on reducing fuel loads for a possible prescribe burn in 2006. This area is also a known location for WGS. During the three days of access, there was a total of five tractor-days and seven person-days of Douglas-fir girdling/removal with chainsaws. It is likely that the entire southern prairie portion can be finished with four additional tractor days. The northern portion has been treated in recent years. (White Oaks – 3866)

Upcoming Tasks.

- Continue post-EGS control squirrel tube monitoring.
- Complete final trapping session of EGS control effort.
- Develop broom management plan for 2006 funding.
- Conduct additional enhancement activities in the CIA central prairie/oak/pine area as access allows.
- Continue with ponderosa pine and oak habitat enhancement.

NOXIOUS WEEDS (OTHER THAN SCOTCH BROOM)

No direct conservation actions were taken during winter quarter due to lack of biological plant activity necessary for control actions. Planning for the 2006 weed season is underway and weed control will begin in early spring quarter. In addition to the upland weed work of the past, TNC will also be taking on aquatic weed management related to habitat enhancement for the federally listed aquatic plant water howellia. A dedicated TNC staff member has been brought on to coordinate noxious weed projects.

Upcoming Tasks.

- Develop plan for upland weed management.
- Develop plan for aquatic weed managment.
- Treatment of most noxious/invasive weed occurrences at Fort Lewis.

RARE SPECIES RECOVERY

WDFW Cooperative Position. Mary Linders (an employee of Washington Dept. of Fish and Wildlife) conducted work in several areas related to rare species recovery. A summary of her efforts under this task order are included in *Appendix IV*. (WDFW Coop 3845)

Upcoming Tasks.

The current task order expires in early spring. Future funding will be handled directly between Fort Lewis and WDFW.

RIPARIAN ENHANCEMENT

No work was conducted during winter quarter. New funding for instream and riparian work was secured for 2006.

Upcoming Tasks.

- Assist Fort Lewis with riparian plantings along Muck Creek.
- Develop work plan for new in-stream task order.

OTHER UPCOMING TASKS

Cavity Creation. An additional task order has been established for 2006 that involves creation of snags and cavities for the benefit of cavity nesting birds adjacent to prairies. Much of this work will be on a trial basis. A work plan for this task order will be developed in spring.

Appendix I: Summary of 2006 Winter Quarter Activity by Task Order with TNC Center Numbers.

Road Closure 2005 (TNC# 4808)

- Propagated 23,000 plugs for fall using Road Closure 05 and Enhance Prairie funding.
- Established 480 square feet of seed production beds for prairie plant species. This augments the 2400 square feet established for the Collins project.
- Germinated 8 out of 27 targeted locally rare Fort Lewis prairie plant species for seed production and enhancement planting.

WGS FY05-(TNC# 4809)

- Conducted first two sessions of EGS control project trial.
- Monitored squirrel hair snag tubes associated with EGS control until February 28, 2006. Additional work funded by White Oaks.
- Conducted one squirrel monitoring sessions at Lake DeBalon as part of longer-term effort to track squirrel responses to management activities.

Enhance Prairies(TNC# 3861)

- Mowed 116 acres of Scotch broom to enhance prairie habitat in the Muck Creek triangle area of 13th Division Prairie.
- Planted 21,400 plugs of prairie plants in three planting location at 13th Division, South Weir and Upper Weir Prairies.

White Oaks (TNC# 3866)

- Mowed 173 acres of Broom and small Douglas-fir to enhance habitat and reduce fire fuel loading in core WGS habitat (TA's 8, 10 and 12).
- Planted 2,110 trees and shrubs to benefit WGS habitat.
- Conducted second two sessions of EGS control project trial.
- Conducted two squirrel monitoring sessions at Lake DeBalon as part of longer-term effort to track squirrel responses to management activities.
- Enhanced prairie and oak and pine habitat in the CIA. During the three days of access, there was a total of five tractor-days and seven person-days of Douglas-fir girdling/removal with chainsaws.

WDFW Coop Position (TNC# 3845)

- See *Appendix IV* for summary of work completed.

STHL FY05 (TNC# 3849)

- Improved Streaked horned lark habitat on 13th Division Prairie by mowing 115 acres of Scotch broom in core and surrounding habitat.
- About 40 acres of the above mowing was an initial step in a longer-term lark habitat enhancement trial.
- Monitored squirrel hair snag tubes associated with EGS control after February 28, 2006.

Appendix II: Enhancement Activity Maps

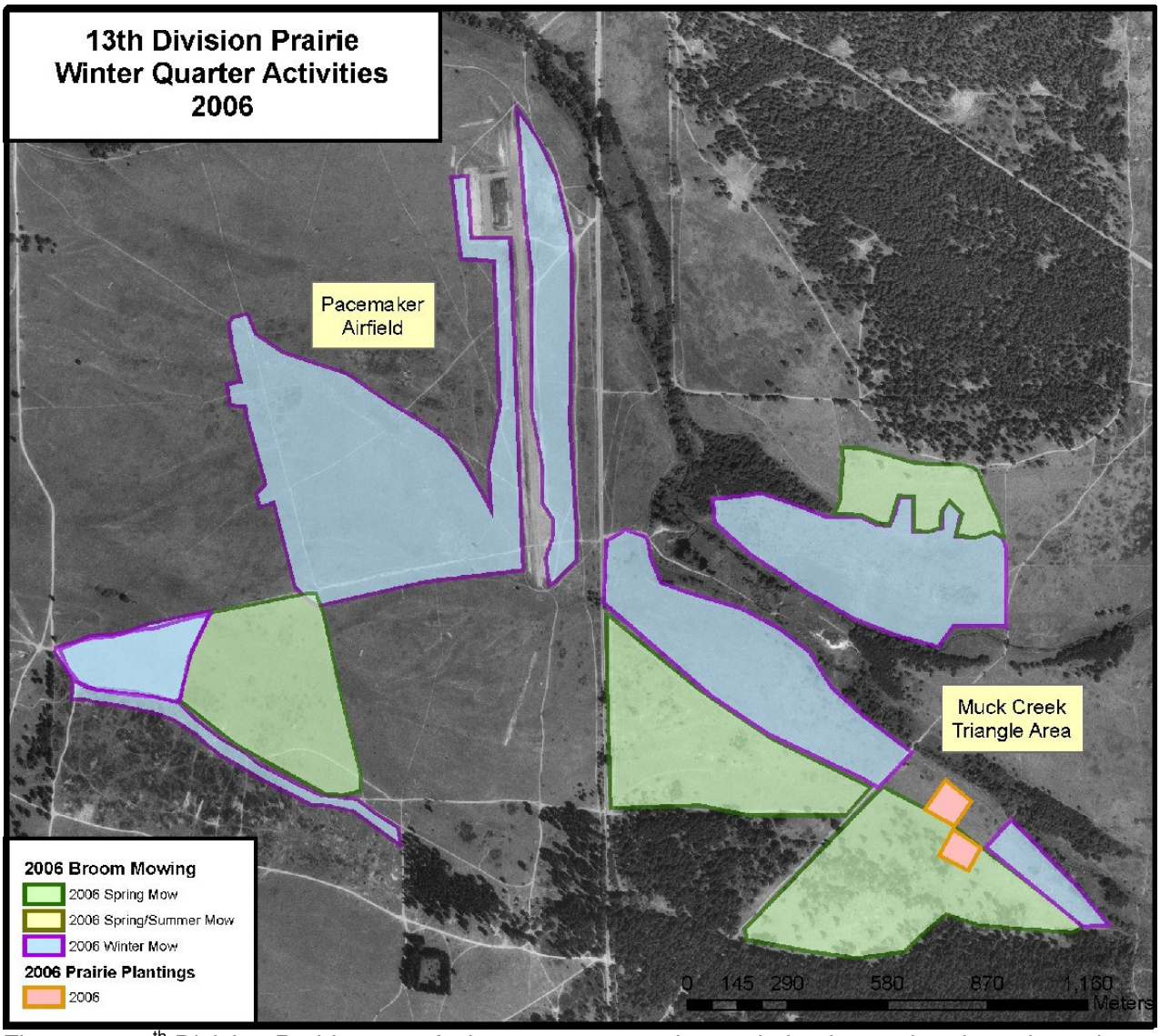

Figure 1: 13th Division Prairie map of winter quarter mowing and planting and projected mowing for spring quarter.

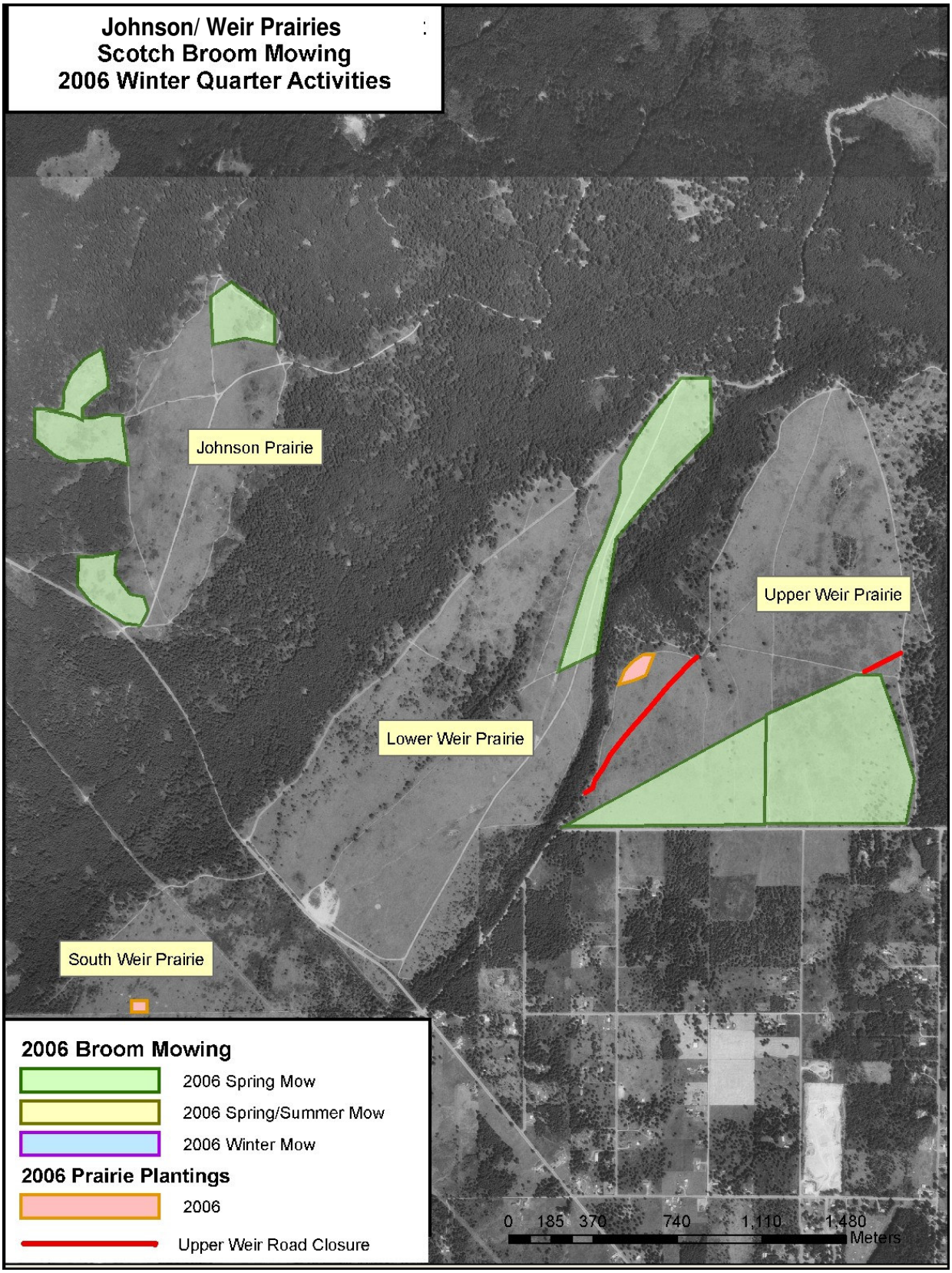

Figure 2: Johnson and Weir Prairies map of winter quarter mowing and planting and projected mowing for spring quarter.

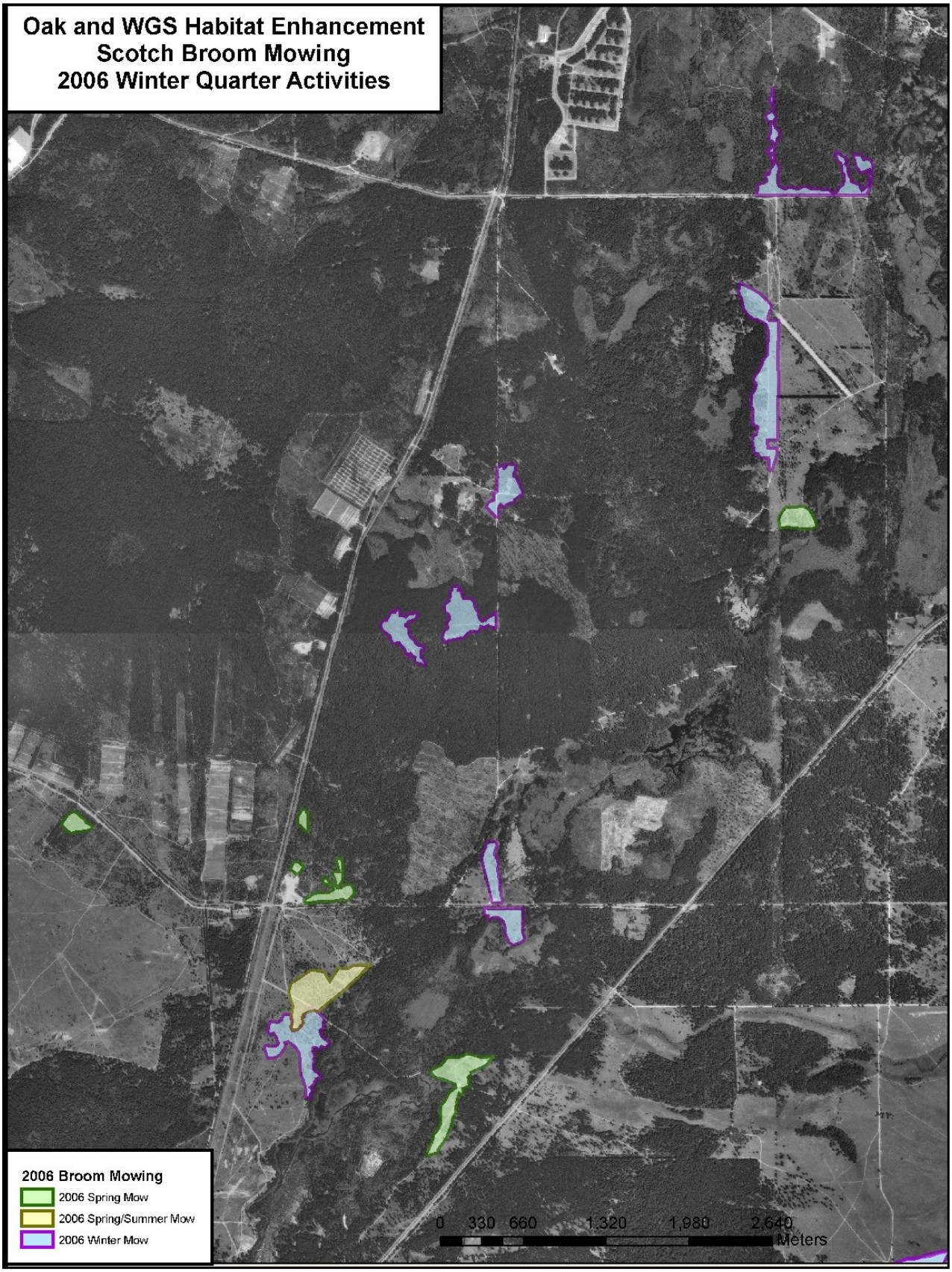

Figure 3: Western gray squirrel, oak and pine habitat enhancement map of winter quarter mowing and projected mowing for spring and early summer quarters.

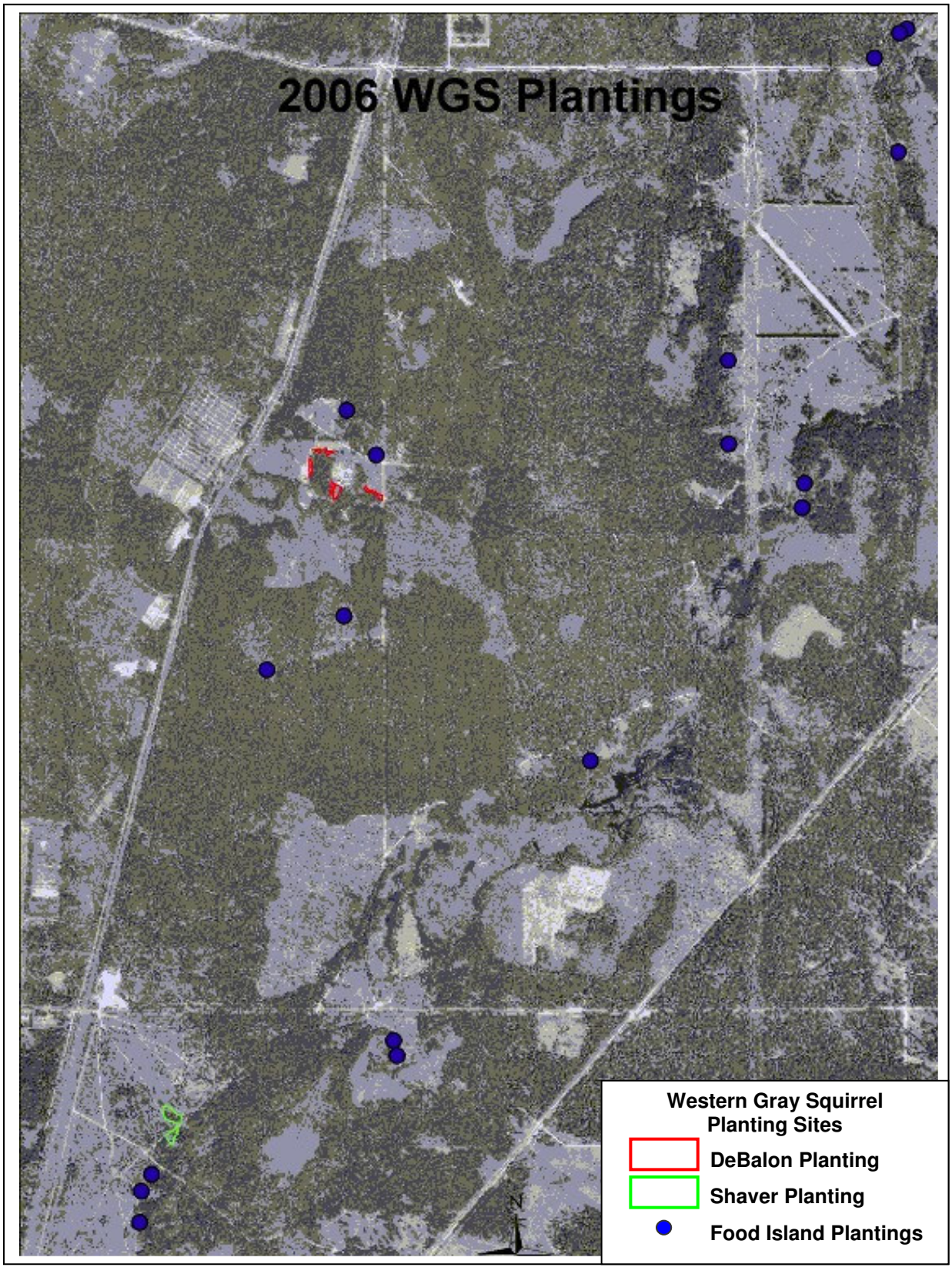

Figure 4: Western gray squirrel enhancement planting map for winter quarter 2006.

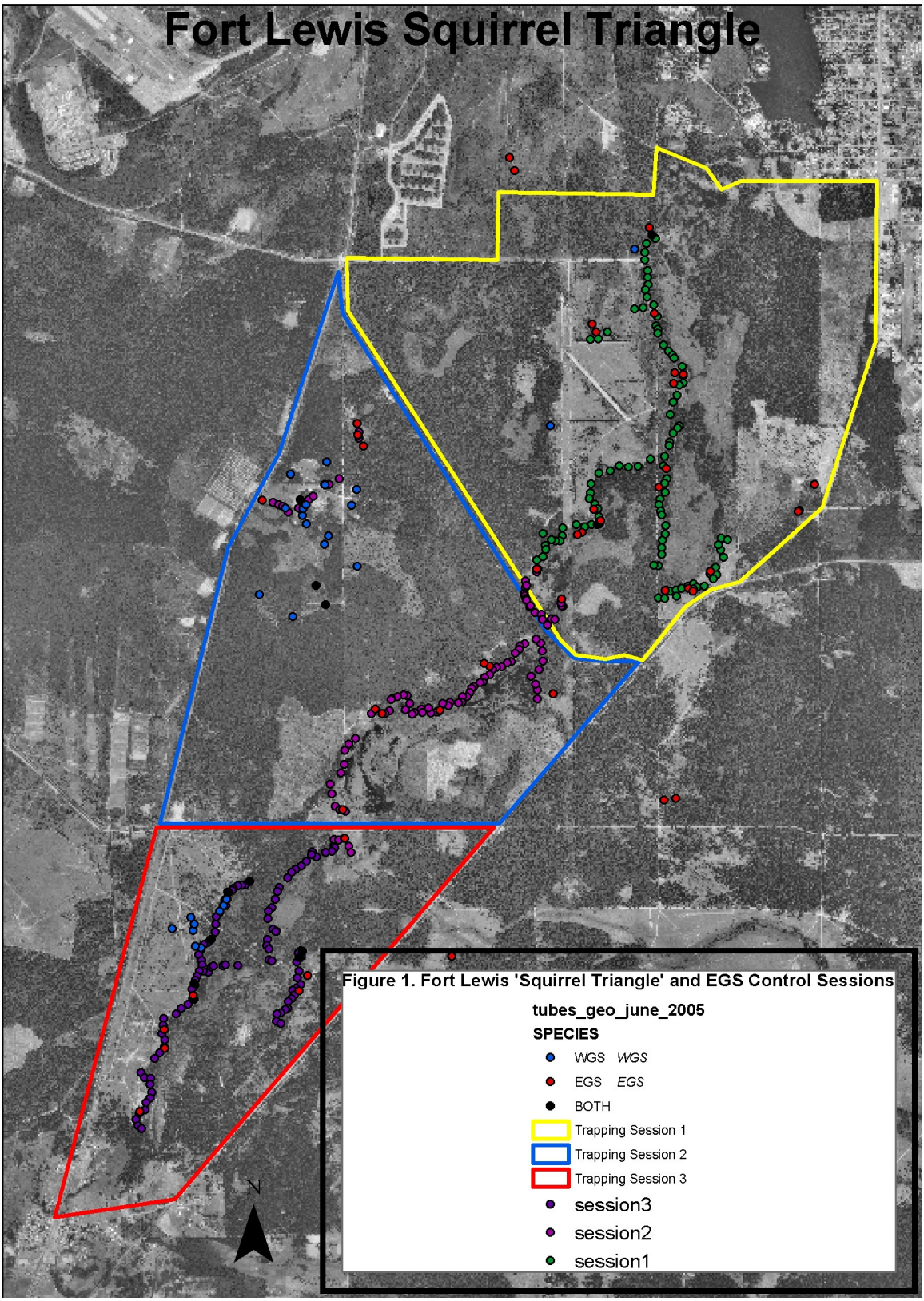

Figure 5: Map of eastern gray squirrel control trapping session areas, trap locations and monitoring tube results.

Appendix III: Propagation and Planting Information

Table 3: Summary table of species planted by location for winter quarter 2006.

Plug Species	South Weir Prairie	Upper Weir Prairie Road	13th Division Prairie	Totals
Cutleaf microseris (*Microseris laciniata*)	60	180	90	330
Early goldenrod *(Solidago spathulata*)	784	882	784	2,450
Harsh paintbrush (*Castilleja hispida*)	0	0	98	98
Nine-leaved lomatium (*Lomatium triternatum*)	294	225	196	715
Lomatium nudicaule	0	0	112	112
Oregon sunshine (*Eriophyllum lanatum*)	402	1,583	772	2,757
Roemer's fescue (*Festuca idahoensis* var. roemeri)	3,000	3,000	3,880	9,880
Showy fleabane (*Erigeron speciousus*)	728	450	993	2,171
Slender leaved cinquefoil (*Potentilla gracilis*)	286	0	0	286
Small flowered wood-rush (*Luzula campestris*)	98	72	196	366
Spring gold (*Lomatium utriculatum*)	520	0	882	1,402
Western buttercup *(Ranunculus occidentalis*)	268	320	228	816
White-top aster (*Aster curtus*)	15	0	0	15
Totals	**6,455**	**6,712**	**8,231**	**21,398**

Table 4: Summary of species planned for planting in fall 2006 and status of propagation progress at the end of winter quarter 2006.

Species	**Johnson/ Weir Prairie**	**Johnson/ Weir Butterfly**	**13th Division Prairie**	**13th Division Butterfly**	**13th Div. Wet Prairie**	**Road Closure**	**Ft Lewis Total**	**% Target sown**
Spring gold (*Lomatium utriculatum*)	200			800	100		1,100	**172%**
Western buttercup *(Ranunculus occidentalis*)	100				200		300	**928%**
Cutleaf microseris (*Microseris laciniata*)	200		200		100	1000	1,500	**102%**
Red columbine (*Aquilegia formosa*)					200		200	**57%**
Common camas (*Camassia quamash*)					200		200	**0%**
White-top aster (*Aster curtus*)	300	300	300				900	**165%**
Early blue violet (*Viola adunca*)	300	1800	200	200	100		2,600	**104%**
Early goldenrod *(Solidago spathulata*)	400		400				800	**123%**
Yellow violet (*Viola praemorsa*)	100		50		100		250	**120%**
Harsh paintbrush (*Castilleja hispida*)		2500	200	3000	200		5,900	**98%**
Fragaria virginiana	100	200	100	300	100	300	1,100	**14%**
Danthonia californica	300		300		500		1,100	**122%**
Missouri goldenrod (*Solidago missouriensis*)	400				100		500	**160%**
Mules ears (Wyethia angustafolium)					200		200	**152%**
Nine-leaved lomatium (*Lomatium triternatum*)	200	500	200	500			1,400	**118%**
Lomatium nudicaule			100		200		300	**119%**
Oregon sunshine (*Eriophyllum lanatum*)					200	1000	1,200	**151%**
Puget balsamroot (*Balsamorhiza deltoidea*)	200	200	100	400			900	**78%**
Armeria maritima v.californica	75	250		250			575	**367%**
Scouler's campion (*Silene scoluleri*)	100				100		200	**230%**
Showy fleabane (*Erigeron speciousus*)	100	200	200		100		600	**105%**
Sickle keel lupine (*Lupinus albicaulis*)	100	200	100	200		100	700	**98%**
Slender leaved cinquefoil (*Potentilla gracilis*)	100		100		100		300	**185%**
Small flowered wood-rush (*Luzula campestris*)	300		300		200		800	**111%**
Total non-fescue plugs	**3575**	**6150**	**2850**	**5650**	**3000**	**2400**	**23625**	**93.4%**
Roemer's fescue (*Festuca idahoensis* var. roemeri)	8000	2000	8000	2000	1,000	15000	36,000	**0%**
Total with fescue plugs	**11575**	**8150**	**10850**	**7650**	**4000**	**17400**	**59625**	**--**

Table 5: Seed bed production indicated as a fraction of a 4X30' raised bed.

Seed bed	Bed size
Festuca roemeri	2
Sea blush (*Plectritis congesta*)	1/3
Small flowered blue eyed Mary (*Collinsia parviflora*)	1/3
Great camas (*Camassia leichtlinii*)	1/10
Sickle keel lupine (*Lupinus albicaulis*)	1
Armeria maritima v.californica	1/3
Aster chilensis ssp. hallii	1/10
Castilleja hispida	1
Cerastium arvense	1/10
Clarkia amoena	1/10
Aster curtus	1
Balsamorhiza deltoidea	1
Danthonia californica	1
Danthonia spicata v. pinetorum	1/3
Erigeron philadelphicus	1/10
Erigeron speciosus v. speciosus	1
Eriophyllum lanatum v. achillaeoides	1
Gaillardia aristata	1/10
Linanthus bicolor v. bicolor	1/10
Lomatium utriculatum	1
Perideridia gairdneri	1/10
Psoralea physodes	1/10
Sisyrinchium angustifolium	1/10
Senecio macounii	1/10
Solidago missouriensis v. tolmieana	1
Solidago spathulata v. neomexicana	1
Trifolium microcephalum	1/10
Trifolium tridentatum	1/10
Viola praemorsa	1/10
Viola adunca	1

Table 6: 2006 Rare Prairie Plant Production at Shotwell's Landing Restoration Nursery

Hitchcock and Cronquist name	Biota of North America (most recent taxonomy)	Seed bed (ft^2) order	# of plugs order	# cells seeded	Fully Planted	Partially planted	trnsplt in May	Not in Process	No Seed Avail.
Arenaria stricta v. puberulenta	Minuartia michauxii var. michauxii	12 ◙	-	0				x	x
Brodiaea congesta	Dichelostemma congestum	12 ◙	200	1tray			x		
Brodiaea hyacinthina	Triteleia hyacinthina	12 ◙	200	1tray			x		
Epilobium minutum	Epilobium minutum	12 ◙	-	0				x	x
Linaria canadensis v. texana	Nuttallanthus texanus	12 ◙	-	0				x	x
Plagiobothrys figuratus	Plagiobothrys figuratus ssp. Figuratus	12 ◙	-	0				x	x
Agoseris grandiflora	Agoseris grandiflora	12	200	0				x	x
Armeria maritima v.californica	Armeria maritima ssp. Californica	24	800↑	2000			x		
Asclepias speciosa	Asclepias speciosa	12	200	0				x	x
Aster hallii	Aster hallii	12	200	0				x	x
Brodiaea howellii	Triteleia grandiflora var. howellii	12	200	0				x	x
Collinsia parviflora	Collinsia parviflora	40↑	-	1000			x		
Collomia grandiflora	Collomia grandiflora	12	-	0				x	x
Erigeron philadelphicus	Erigeron philadelphicus	12	200	0				x	x
Erigeron strigosus v. strigosus	Erigeron strigosus v. strigosus	12	200	0				x	x
Habenaria greenei	Piperia elegans ssp. Elegans	12	200	0				x	x
Linanthus bicolor v. bicolor	Linanthus bicolor ssp. Bicolor	12	-	200			x		
Rhinanthus crista-galli	Rhinanthus minor ssp. Minor	12	-	0				x	x
Sanguisorba occidentalis	Sanguisorba annua	12	-	0				x	x
Senecio macounii	Packera macounii	12	200	0				x	x
Silene douglasii v. douglasii	Silene douglasii v. douglasii	12	200	0				x	x
Aster eatonii	Symphyotrichum eatonii	12	200	0				x	x
Lomatium nudicaule	Lomatium nudicaule	12	575↑	1200			x		
Orobanche uniflora v. minuta	Orobanche uniflora	?	?	0				x	x
Plectritis congesta	Plectritis congesta	40↑	-	1200			x		
Potentilla glandulosa	Potentilla glandulosa ssp. Glandulosa	12	200	0				x	x
Balsamorhiza deltoidea	Balsamorhiza deltoidea	120 ↑	800↑	1400					