

Wetlands and Drainage Corridor Evaluation & Delineation Report
and Stream Assessment
As
Preliminary Assessment
For
Biological Evaluation

Parcel numbers 0216121000 and 0316071010

40400 Harts Lake Valley Rd. S, Pierce County, WA
Sect. 7, T 16N R 2E, WM

prepared for:

Wilcox Farms Inc.
40400 Harts Lake Valley Rd.
Roy, WA 98580
360.458.7774

prepared by

H & S CONSULTING
P. O. Box 731695
Puyallup, WA 98373
253 732-6515

mheckert@q.com

January 15, 2011

EXECUTIVE SUMMARY

The Wilcox - Hart Cr. Project Site, 40400 Harts Lake Valley Rd. Pierce County, WA, Parcel numbers 0216121000 and 0316071010 is approximately 501 acres, located generally southeast of Yelm, Pierce County, Washington. An assessment of this project area following the procedures outlined in the *Washington State Wetlands Identification and Delineation Manual* (Wash. Manual), the *Corps of Engineers Wetland Delineation Manual* (1987 Manual), *Revised Washington State Wetland Rating System* (WSWRS), and Pierce County Title 18E resulted in the identification of one wetland area and one stream.

The project site is a large-scale agricultural production complex. The site is primarily agricultural fields interspersed with barns and processing facilities. A ditched stream (Harts Cr.) transects the site northeast to southwest, with a wetland associated with the stream. The northern boundary is the shore of Harts Lake.

Onsite assessment included an evaluation of the function and value rating for the wetland, a classification of each wetland and stream following the U.S. Fish and Wildlife Service methods, a categorization of each wetland and drainage following Pierce County Title 18E - *Development Regulations Critical Areas*, and an identification of the Pierce County buffer width.

WETLAND	SIZE-acres	PIERCE COUNTY CATEGORY	WA WETLAND RATING SCORE	GENERAL BUFFER WIDTH	Adjustment by Function And Land Use	Buffer Total
A	* 28.69	III	42	50 ft.	0 ft.	50 ft.

The wetland was delineated, the stream was located, and the Ordinary High Water Mark (OHWM) was defined.

The Seattle District U.S. Army Corps of Engineers, the Washington Department of Ecology, and Pierce County (as well as a number of other resource agencies) regulate activities in and around identified wetland and stream areas. Such regulations focus on the avoidance of adverse impacts to wetlands and the mitigation of such impacts that cannot be avoided. In addition, Pierce County has established criteria to categorize wetlands for purposes of regulation and requires a buffer along wetland and drainage corridor areas.

The Owner proposes to continue on-going maintenance of the ditched stream to facilitate drainage of the site.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	2
INTRODUCTION.....	1
BACKGROUND INFORMATION	2
ONSITE ANALYSIS	3
WETLAND AND STREAM DETERMINATION	6
WETLAND FUNCTION AND VALUE ASSESSMENT	6
SITE ANALYSIS	8
REGULATORY CONSIDERATION.....	11
PROPOSED MAINTENANCE ACTIONS.....	12
FIGURES.....	13
REFERENCE LIST.....	14
APPENDIX A - FIELD DATA FORMS.....	15
APPENDIX B – WSWRS FORM.....	16
ATTACHMENT 1-3 – WETLAND DELINEATION MAP.....	17

STANDARD OF CARE

Prior to extensive site planning, this document should be reviewed and the wetland boundaries verified by the appropriate resource and permitting agencies. Wetland boundaries, wetland classifications, wetland ratings, and proposed buffers must be reviewed and approved by the US Army Corps of Engineers (CoE), Pierce County Planning and Land Services and potentially other regulatory agencies. H & S has provided professional services that are in accordance with the degree of care and skill generally accepted in the nature of the work accomplished. No other warranties are expressed or implied. H & S is not responsible for design costs incurred before this document is approved by the appropriate resource and permitting agencies.

Mark Heckert
Principal
H & S Consulting

INTRODUCTION

This report details the culmination of activities and onsite evaluations undertaken to complete a wetland and drainage corridor evaluation as an element of the planning and site development of the **Wilcox - Hart Cr. Project Site**. The Wilcox - Hart Cr. Project Site is located generally southeast of Yelm, Pierce County, Washington in WRIA 11-Nisqually – Horn Creek sub watershed (Figure 1). The project site is an agricultural industry production facility.

The evaluation and delineation of onsite and adjacent wetlands and drainage corridors is a vital element in the planning and selection of a site development action. The goal of this approach is to assure that planned site development does not result in adverse environmental impacts to regulated wetlands, streams, and their associated protective buffer areas.

Wetlands are generally defined as **"those areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."**

(Pierce County Title 18E).

STUDY PURPOSE

The purpose of this document is to present the results of an onsite assessment and evaluation of wetland areas and streams within the Wilcox - Hart Cr. Project Site following the methods and procedures outlined in the *Washington State Wetlands Identification and Delineation Manual* (Wash. Manual), *Revised Washington State Wetland Rating System (WSWRS)*, the *Corps of Engineers Wetland Delineation Manual* (1987 Manual) and CoE Interim Regional Supplement and the Washington Department of Natural Resources (WDNR) Forest Practice Rules. Onsite assessment noted that there were no differences in the identified wetland boundaries as a result to using either the Wash. Manual or the 1987 Manual. Drainage corridors were also assessed in accordance with the criteria established by Pierce County and the State of Washington Department of Natural Resources (WDNR) Forest Practice Rules (WAC 222-16-030). This study was designed to accommodate site planning and potential regulatory actions and is suitable for submittal to federal, state, and local authorities for wetland and stream boundary verification and permitting actions.

SITE DESCRIPTION

The project area was generally rectangular, approximately 501 acres in size, located southeast of Yelm, Washington. Harts Creek is the subject of this assessment (Figure 2-3). The project area was bounded on the west by agricultural fields and the Nisqually River. The project area was bounded on the north by Harts Lake, and on the east and south by agricultural fields. The subject drainage corridor (stream- Harts Creek) flows

northeast to southwest from the outlet of Harts Lake, then northwest to confluence with Horn Creek, then confluencing with the Nisqually River. The project area is 6,935 feet, from the outlet of Harts Lake to the irrigation intake. From there, the Harts Creek continues 4,693 feet to the confluence with Horn Creek. From Horn Cr. it is 2,109 feet to the confluence with the Nisqually River (Fig. 2).

The drainage has been modified to be narrow and deep through the site. The vertical fall is six (6) ft. from the outlet of Harts Lake to the irrigation intake.

SITE HISTORY

Wilcox Farms has conducted agricultural operations within and adjacent to Harts Creek since 1909. The area has been farmed since 1889. A drainage existed in the general vicinity of the present ditch. This drainage was ditched to drain the surrounding area to facilitate agricultural operations in 1961. The ditch has been actively managed and maintained since that time. The ditch has been deepened and narrowed to promote outflow. Stream bank vegetation has been managed to facilitate drainage and access to the ditch. A culvert was installed at the Harts Lake Valley Road crossing and at two interior access roads (Fig. 3). At the downstream end of the project area, a dam was constructed to collect water for agricultural use in 1948 (Fig. 3). This water diversion has been active and utilized continually since construction. For an undefined period, the ditch channel location was altered substantially at the south end, to flow straight west.

The ag fields adjacent to the drainage have been ditched extensively toward the ditch, and to the east have been extensively tiled to promote drainage, with the tiles connecting to the ditch (Fig. 4).

As part of regular maintenance of the drainage, the ditch has been regularly and continually excavated to remove sediment and vegetation and maintain the ditch configuration. This maintenance has occurred annually as an ordinary part of agricultural maintenance of the farm.

Wilcox Farms has periodically conducted and contributed to enhancement projects (most recently March 2011) within the farm and along Harts Creek, including plantings in the assessment area, and to the east, and downstream near Horn Creek in conjunction with the Nisqually Tribe, Pierce Conservation District, the Nisqually Land Trust, and others (Fig. 5). These projects have entailed planting of streamside and wetland trees and shrubs.

BACKGROUND INFORMATION

NATIONAL WETLAND INVENTORY

The National Wetland Inventory (NWI) mapping completed by the U.S. Fish and Wildlife Service was reviewed as a part of this assessment (Figure 6). This mapping resource

identified a fresh water emergent wetland in the north portion of the site, and wetlands bounding Harts Lake.

WA DEPT OF FISH & WILDLIFE FISH DISTRIBUTION

The State of Washington fish distribution mapping was reviewed as a part of this assessment (Figure 7) This mapping resource identified a probable priority habitat as the creek which transects the site.

NATIONAL MARINE FISHERIES SERVICE(NMFS) CRITICAL HABITAT

The NMFS mapping of "critical habitat" for the Puget Sound (PS) Chinook salmon Evolutionarily Significant Unit (ESU) was reviewed as a part of this assessment (Figure 8) This mapping resource identified Horn Creek as a critical habitat downstream of the project area approximately 4,4693 ft.

STATE OF WASHINGTON PRIORITY HABITATS AND SPECIES

The State of Washington Priority Habitats and Species (PHS) Mapping was reviewed as a part of this assessment (Figure 9) This mapping resource identified Harts creek as a probable priority habitat for anadromous fishes as well as the entire site as wetland priority habitat.

PIERCE COUNTY WETLAND INVENTORY and DNR WATER TYPE

The Pierce County Wetland Inventory Mapping and WA. DNR Water Type mapping was reviewed as part of this assessment (Figure 10). This mapping resource identified a "Cat. 2" as bounding Harts Lake, small "unknown" wetlands at the south corner of the site, and a large "unknown" wetland downstream along Harts Creek.

SOILS MAPPING

The soil mapping inventory completed by the NRCS was reviewed as a part of this assessment (Figure 11). This mapping identified the soils generally in the center of the project site as Dupont muck and Norma fine sandy loam. These soils are poorly drained, and listed as "hydric."

ONSITE ANALYSIS

CRITERIA FOR WETLAND AND STREAM IDENTIFICATION

Wetlands are transitional areas between aquatic and upland habitats. In general terms, wetlands are lands where the extent and duration of saturation with water is the primary

factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface (Cowardin et al., 1979). Wetlands are generally defined within land use regulations as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (1987 Manual).

Wetlands exhibit three (3) essential characteristics, all of which must be present for an area to meet the established criteria within the Wash. Manual and the 1987 Manual. These essential characteristics are:

1. **Hydrophytic Vegetation:** A predominance of plants that are typically adapted for life in saturated soils.
2. **Hydric Soil:** A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper horizons.
3. **Wetland Hydrology:** Permanent or periodic inundation, or soil saturation to the surface, at least seasonally.

A stream is generally defined as a location where surface waters produce a defined channel or bed. A defined channel or bed is typically an area which demonstrates clear evidence of the passage of water and includes, but not limited to, bedrock channels, gravel beds, sand and silt beds, and defined channel swales. A stream need not contain water year-round. A stream typically does not include irrigation ditches, canals, storm or surface water run-off devices, or other artificial watercourses unless the constructed watercourse conveys a stream which naturally occurred prior to the construction of such watercourse.

STUDY METHODS

H & S completed a specific onsite evaluation of the project site on December 2-3, 2010. The objective of this evaluation was to define and delineate potential wetland and drainage corridor areas which may be present within and adjacent to the project area as defined by the three-parameter criteria test noted within the Wash. Manual and 1987 (With supplement) Manual, and the water-typing criteria noted within the WDNR Forest Practice Rules (WAC 222-16-030).

Boundaries between wetland and non-wetland areas were established by examining the transitional gradient between wetland and non-wetland characteristics criteria along transects through the site. Delineation was performed using the *routine methodology for areas greater than five acres* as detailed in the 1987 Manual. Pierce county Wetland category was derived utilizing the *Revised Washington State Wetland Rating System (WSWRS)* rating form (Attached).

FIELD OBSERVATION

As defined by existing site conditions and aerial photos, the project site area had been managed and manipulated for many years for agricultural production.

- **Soils**

The western portion of the project was generally comprised of loam, and gravelly sandy loam soils that appeared to drain moderately well. These areas did not exhibit redoximorphic features such as gleying, oxidized root channels, or mottles. These areas did not meet the hydric soil criteria.

At the northern portion of the site, adjacent to Hats Lake, a depression area encompasses the drainage stream. This was marked by a distinct topographic depression. The surface soil layer within this depression was generally loam underlain with clay loam or gravelly clay loam. The sub-soil within this area was generally noted gravelly loam to gravelly clay loam, gray (10YR 4/1) in color, and exhibited prominent redoximorphic features (i.e. soil mottles, oxidized root channels). These soils met the hydric soil criteria.

- **Hydrology**

Hydrology within the overall project area appeared to be the result of seasonal inundation by the ditch, seasonal stormwater runoff from onsite and adjacent properties; short-term seasonal ponding within depression areas and soil characteristics. Stormwater surface runoff through the overall project area was directed by topography generally into the stream corridor, which flowed south through the project site. The depression appears to remain ponded 1/3 to 1/2 of the year. Downstream of the depression to the project end, no evidence of hydrology was noted outside of the stream channel.

- **Vegetation**

A managed pasture grass community dominated the southern portion of the project site. This plant community was identified as non-hydrophytic in character (i.e. typical of uplands).

Within the large depression, the vegetation community was entirely reed canarygrass and soft rush. Within the incised stream channel, the dominant vegetation was reed canarygrass. This plant community was identified as hydrophytic in character (i.e. typical of wetlands).

WETLAND AND STREAM DETERMINATION

Wetland determination was based on sample plots which contained hydrophytic vegetation, hydric soils, and wetland hydrology in accordance with the 1987 Manual and the Wash. Manual. Based on these methods one wetland was identified within the project site.

WETLAND	SIZE-acres	PIERCE COUNTY CATEGORY	WA WETLAND RATING SCORE	GENERAL BUFFER WIDTH	Adjustment by Function And Land Use	Buffer Total
A	* 28.69	III	42	50 ft.	0 ft.	50 ft.

Wetland A: This wetland was located within a moderately-defined depression adjacent to the stream in the north of the site. This wetland is encompassed by, and part of, an active agricultural livestock pasture. Emergent is the only vegetative class present. A stream transected the wetland and provides hydrological support for the wetland. This wetland appeared to remain ponded into the growing season and saturated for much of the year. Hydrology for this wetland was provided by the stream, seeps or springs and stormwater runoff from onsite and adjacent parcels.

Wetland A meets the U.S. Fish and Wildlife Service (USFWS) criteria for classification as palustrine, emergent seasonally flooded (PEMC).

Since this wetland scored 42 Points by WSWRS, this wetland appeared to meet the criteria for designation as a Pierce County Category III Wetland. General buffer for a Pierce County Category III Wetland is 50 ft. Based upon the criteria, the buffer appears to be unchanged from the generalized Buffer Width due to "moderate habitat" qualities.

Buffer Width assigned by Rating is 50 feet, as measured perpendicular to the wetland edge.

Stream: This assessment identified one drainage feature within the project site that met the established criteria for designation as a "stream." This area is best defined as a swale which has been ditched to facilitate water flow. This stream is best classified as a Type S Water by Pierce County regulation. Type S Waters mandate a 65 ft. buffer. On this site, the Water Type buffer is entirely subsumed by the Cat. I Wetland buffer.

WETLAND FUNCTION AND VALUE ASSESSMENT

Wetlands are known to perform significant roles in the ecosystem, some of which are of immediate value to society. These roles vary greatly with the size, type, hydrology, vegetation, and location of wetland areas. Although the ecological functions performed by these wetlands are complex, interrelated, and difficult to assess and quantify, methods have been developed for the U.S. Army Corps of Engineers (Adamus et al. 1987; Reppert et al. 1979). The functions provided by wetlands include hydrologic

support, shoreline protection, stormwater and floodwater storage, water quality, groundwater recharge, and provision of wildlife habitat.

CATEGORIZATION BASED ON FUNCTIONS

The functions that a wetland performs are characterized by answering a series of questions that note the presence, or absence, of certain indicators. Indicators are easily observed characteristics that are correlated with quantitative or qualitative observations of a function (Hruby et al. 2000).

Depressional or Flats Wetlands

Potential to Improve Water Quality
Potential to Reduce Flooding and Stream Erosion

Riverine and Freshwater, Tidal Fringe Wetlands

Potential to Improve Water Quality
Potential to Reduce Flooding and Stream Erosion
Opportunity to Reduce Flooding and Stream Erosion

Lake-fringe Wetlands

Potential to Improve Water Quality
Opportunity to Improve Water Quality
Potential to Reduce Shoreline Erosion
Opportunity to Protect Resources from Shoreline Erosion

Slope Wetlands

Potential to Improve Water Quality
Opportunity to Improve Water Quality
Potential to Reduce Flooding and Stream Erosion
Opportunity to Reduce Flooding and Erosion

Functions Related to Habitat for All Classes of Wetlands

Potential to Provide Habitat
Opportunity to Provide Habitat

Score and Category Based on Functions

Wetlands that are Category I based on functions need to score 70 points or more. Total scores between 51-69 are Category II; 30-50 are Category III, and less than 30 are Category IV.

ONSITE WETLAND VALUATION

The wetland areas identified within the overall project area were evaluated following the functional value assessment process noted above.

As identified in this assessment **Wetland A** would be considered to have the overall functional rating of Category IV.

- **Water Quality Functions** – 14 points
- **Hydrologic Functions** – 16 points
- **Habitat Functions** – 12 points
- **TOTAL score for functions** – 42 points

Fish & Wildlife Habitat Assessment

SITE ANALYSIS

Evaluation Methodologies

Onsite assessment was completed during August, 2009. This assessment covered the entire project site and followed general methodologies and procedures for the definition of fish and wildlife habitat. The entire site was transected with observations constantly being made on signs of utilization and habitat.

Criteria for Stream Habitat Identification

The capacity of freshwater streams to produce and maintain salmon and resident fishes is determined by the quality of habitat conditions for critical life-history stages. An understanding of the life-history stages, spawning or rearing strategies and temporal distributions of the various anadromous fish species is important in addressing habitat conditions. Specific stream habitat conditions are needed for: 1) transportation of migratory adults upstream, 2) spawning and incubation, 3) rearing, 4) transportation of juveniles downstream and 5) estuarine rearing/acclimation to marine waters.

Salmonid habitat encompasses the following characteristics:

Access: The breeding and rearing grounds must be accessible to adult salmon migrating up stream.

Stream Flow: The stream flow must be stable, with a low number of extreme freshets and droughts occurring.

Substrate: Salmon require clean gravel of 1 to 15 cm in diameter to provide an adequate concentration of dissolved oxygen for developing embryos and alevins. This also allows for the disposal of metabolic wastes such as carbon dioxide and ammonia.

Cover: Salmon require undercut banks, overhanging streamside vegetation, and deep pools, to provide feeding, resting places, and escape for juvenile salmon.

Temperature: The temperature of streams should be between 12 and 14 degrees Celsius to maintain the ideal amount of dissolved oxygen.

Clarity: Salmon require clear streams in order for the sunlight to reach the bottom where most primary production occurs. Highly turbid water can inhibit the salmon's natural ability to feed, and highly abrasive concentrations of suspended solids can directly damage the salmon physically.

A stream is generally defined as a location where surface waters produce a defined channel or bed. A defined channel or bed is typically an area which demonstrates clear evidence of the passage of water and includes, but not limited to, bedrock channels, gravel beds, sand and silt beds, and defined channel swales. A stream need not contain water year-round. A stream typically does not include irrigation ditches, canals, storm or surface water run-off devices, or other artificial watercourses unless the constructed watercourse conveys a stream which naturally occurred prior to the construction of such watercourse.

- **Site Suitability**

The drainage through the site appeared to be a ditched swale. The channel is V-shaped, deeply incised by regular mechanical maintenance. The channel substrate was primarily mud. The banks were dominated by emergent vegetation. Off site to the west the stream confluences with Horn Creek then the Nisqually River.

- **Hydrology**

Hydrology within the stream channel appeared to be perennial, the result of outflow from Harts lake and contribution from seeps within the basin.

- **Vegetation**

Along the stream corridor, the site was entirely comprised of an emergent wetland plant community. The species diversity was very low. The banks have been maintained to inhibit woody plant establishment. In the lower reach (around the Harts Lake Valley Rd. crossing), the immediate top of the bank has been planted in cottonwood. This appears to provide limited shade and detrital input to the stream.

FINDINGS AND CONCLUSIONS

Fish Habitat:

Various data sources indicate the presence of anadromous fishes, or adequate habitat (Fig. 7). Two DFW data sets place the upstream limit at two places; the first just upstream of the Harts Lake Valley Rd. crossing culvert, and the second almost to the outlet of Harts Lake. These locations are without any background data, and appear to be arbitrary. Nisqually Tribe stream modeling, the most site-specific data available, describes the stream within the project area as poor habitat and has noted high water temps. in the site.

Antidotal evidence from the owner (*pers. comm.*) places fish use at the confluence of Horn Creek, downstream of the study area approximately 4,693 ft. The irrigation intake constitutes a partial fish passage barrier. The culvert at Harts Lake Valley road crossing is perched 2.5 ft. and may impede upstream migration. The two culverts upstream of this are placed at the stream-bottom

Fish habitat assessment was based the presence of stream morphology and hydrology suitable to support the production and maintenance of resident or anadromous fish species.

The stream channel expressed poor substrate, poor vegetation, and perennial flow.

Based on these criteria, the site contains poor habitat for resident fishes, and poor habitat for anadromous species.

Wildlife Habitat - Bald Eagle (*Haliaeetus leucocephalus*):

Two active bald eagle nests occur 1,800 ft. east and 6,000 ft. northwest of the project site (Fig. 8).

REGULATORY CONSIDERATION

The proposed alteration of lands defined by various federal, state, and local authority rules and regulations as "wetlands" raises environmental concerns that are generally addressed in the development review process. These concerns center on the development's potential adverse impacts to the structure, function, value, and size of these "wetland" areas. Such adverse impacts may include a reduction in wildlife habitats, reduced surface water quality, reduced water retention, a reduced ground water recharge rate, reduced plant species diversity, and the reduction in the function and value of other associated wetland and non-wetland characteristics.

U.S. ARMY CORPS OF ENGINEERS - Section 404

Section 404 of the Clean Water Act (33 U.S.C. 1344) prohibits the discharge of dredged or fill material into "Waters of the United States" without a permit from the Corps of Engineers (Corps). The Corps has jurisdiction over freshwater systems waterward from the ordinary high water line of a water body or waterward from the upland boundary of the adjacent wetland. The definition of fill materials includes the replacement of aquatic areas with dry land, grading which changes the surface contour of a wetland, and mechanized land clearing in wetlands. For the purposes of Section 404 permitting the Corps makes the final determination as to whether an area meets the wetland definition and would be subject to regulation under the Corps program.

Currently the Corps has two specific types of permits which apply to wetland fill proposals. These two types are a series of specific **Nationwide Permits** and the **Individual Permit**. The Nationwide Permit process identifies specific categories of work that can be undertaken following a set of specific conditions applicable to each Nationwide Permit number.

The Corps requires an **Individual Permit** where a proposed activity within an identified jurisdictional wetland area cannot be authorized under one of the Nationwide Permits. Within the Individual Permit process the Corps undertakes a much more in-depth review of the proposed project and the proposed impacts. The Corps must evaluate whether the benefits derived from the project outweigh the foreseeable environmental impacts of the project's completion.

All projects that proceed forward using either one of the Nationwide Permits or the Individual Permit process must also comply with the provisions of the Endangered Species Act. As defined by a recent U.S. Supreme Court decisions the Corps of Engineers does **not** typically regulate "isolated" wetlands pursuant to Section 404 of the Clean Water Act. Under this decision "isolated" wetlands do not exhibit a continuous surface water connection to other, downstream aquatic system.

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

Proposed action undertaken through either of the Corps of Engineers processes (Nationwide or Individual) are also subject to the provisions of the Washington State Department of Ecology Section 401 *Water Quality Certification Process*. Projects that may be exempt from Corps of Engineers Section 404 jurisdiction may still require review by the Washington State Department of Ecology to ensure consistency with State water quality protection provisions.

Proposed Maintenance Actions

The proposed onsite action selected focuses on the ordinary and regular maintenance of the Hart Creek drainage within the Wilcox Farm operation to enable continued agricultural use of the established agricultural production adjoining the stream. The action will involve the removal of sediment and blockages within the stream from the outlet of Harts Lake to the irrigation dam, approximately 6,935 feet of the stream.

Time frame: All in-stream activity to occur June 15-Sept. 15, 2011.

Equipment: Samsung Excavator SE210 LC

Staging and Procedure: The fill removal will be conducted by the mechanical excavator. The machine will be positioned approximately at 50 ft. intervals along the drainage, and will dig upstream and downstream from each position. Fill removal will be one shovelful depth along the entire project site, comprised of reed canarygrass, sediment, and woody debris. Excavator will transfer the excavated material to a dump truck. No fill at any time will be deposited in wetland areas or their buffers.

Expected quantity and disposition of fill: Based on experience, it is expected that approximately 900 cubic yards of sediment will be removed from the ditch. The fill will be transported to the approved composting operation, where it will be incorporated into the farm's compost. The compost is sold to organic farms.

This maintenance of the stream drainage is essential to the continued sustainable operation of the Wilcox Farm farming operation. Wilcox Farms has undergone a transformation and has converted all its farmland to organic status. Unmaintained, the drainage will fill, resulting in flooding of the ag pastures and farmed fields, restriction of vehicle traffic across the stream, and disruption of irrigation withdrawals from the stream. There is no alternative to the proposed activity which provided for the continued operation of the farm.