



US Army Corps  
of Engineers  
Seattle District

US ARMY CORPS OF ENGINEERS  
DEPARTMENT OF ECOLOGY  
JOINT AGENCY LETTER



February 22, 2007

Bill Leonard, Wetland Biologist  
Department of Transportation  
Environmental Services Office  
P.O. Box 47329  
Olympia, WA 98504-7329

**RE: Requested Revision to the Purple Loosestrife Success Standard for the Moses Lake Mitigation Bank – WRIA 41 Lower Crab Creek.**

Dear Mr. Leonard:

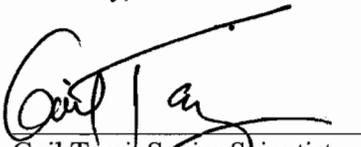
The Banking Oversight Committee (BOC) has reviewed your request dated January 25, 2007 to revise Performance Objective 6 addressing Purple Loosestrife and Performance Objective 3 addressing Russian Olive for the Moses Lake Mitigation Bank.

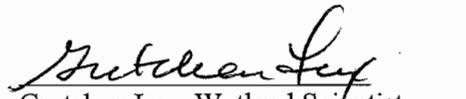
The BOC agrees to the proposed revisions to Performance Objective 6 but have included a modified contingency measure with a set threshold that triggers notification by WSDOT to the BOC to meet and discuss adaptive management methods for purple loosestrife.

The Russian Olive Performance Objective 3 revisions were approved by the BOC in 2004/2005 per a revision to NWP 27, issued on March 3, 2005 (Corps ref# 200000841). This revision approved a revised schedule for removing Russian Olive from the banking site. No further action from the BOC is needed at this time regarding this Performance Objective.

An addendum to the banking instrument containing both the previous revisions to Performance Objective 3 and the revisions to Performance Objective 6 is attached. This letter satisfies the Corps and Ecology approval for changes in the Mitigation Banking Instrument for adaptive management. If you have any questions and/or would like to meet with the BOC to discuss the addendum, please contact Penny Kelley, Ecology WSDOT Liaison, at 360-407-7298 or by e-mail at [pkel461@ecy.wa.gov](mailto:pkel461@ecy.wa.gov), or Sandra Manning, Corps of Engineers Liaison at 206-764-6911 or by e-mail at [Sandra.L.Manning@usace.army.mil](mailto:Sandra.L.Manning@usace.army.mil).

Sincerely,

  
Gail Terzi, Senior Scientist  
Seattle District  
Corps of Engineers

  
Gretchen Lux, Wetland Scientist  
Wetland Mitigation Banking Program  
Department of Ecology

Cc: Kate Thompson – Ecology HQ  
Brooke Hamilton and Jesse Barnham – WSDOT HQ  
Mike Mahr – Ecology, Eastern Region

**Moses Lake Wetland Mitigation Bank  
 Proposal for Revised Success Standards: *Lythrum salicaria*  
 (Purple loofestribe) and *Elaeagnus angustifolia* (Russian olive)**

Provided below are revised/proposed success standards for consideration of the BOC. WSDOT is asking for such revisions due to the changes in surrounding landuse, functions provided by the existing mature stands of Russian olive to buffer the site from disturbance and provide habitat, and the unachievable element of the purple loofestribe standard.

**Russian Olive**

**Problem Statement:** Removal of Russian olive prior to the establishment of mature native woody vegetation may unnecessarily reduce the habitat value of the site by reducing cover for avian and other wildlife species. In addition, maintaining the existing Russian olive will protect the site from the effects of imminent development of the surrounding properties by impeding human access and providing a visual and auditory screen from the disturbance created by the surrounding developments. The proposed changes below remedy this by protecting the existing Russian olive stands and recognizes the functions provided by maintaining the existing stands until native woody vegetation can provide the same habitat and buffering function.

**Russian Olive: Original Standards**

**Performance Objective 3:** The cover of Russian olive at the site will be reduced to enhance establishment of native species. A 1998 aerial photo of the site provides the baseline of the cover of Russian olive trees prior to construction. Updated aerial photography will be used to document changes in Russian olive cover over time. The long-term goal for management of the site is to achieve no more than 55 percent of the original (pre-construction 1,259 square feet) aerial cover of Russian olive. Russian olive seedlings will be controlled as part of long-term site management.

**Adaptive Management:** Observations of first round tree removal will help guide subsequent tree removal efforts.

**Contingency Measures:** Reevaluate Russian olive removal strategies and discuss habitat needs/options with WDFW and the BOC.

Success Standards		Monitoring Methods
3A. Year 0	Establish baseline area occupied by Russian olive.	Baseline (pre-construction) area covered by Russian olive will be outlined on an Aerial Photo, quantified, and submitted in As-Builts.
3B. Year 1	85% or < original aerial cover of Russian olive.	Each year updated aerial cover of Russian olive will be documented by visual assessment and recorded on an aerial photo to be included in monitoring reports.
3C. Year 3	70% or < original aerial cover	
3D. Year 5	55% or < original aerial cover	
3E. Year 7	55% or < original aerial cover	
3F. Year 10	55% or < original aerial cover	

### **Russian Olive: Revised Standards**

**Performance Objective 3:** The cover of Russian olive at the site will be reduced to enhance establishment of native species. A 1998 aerial photo of the site provides the baseline of the cover of Russian olive trees prior to construction. Updated aerial photography will be used to document changes in Russian olive cover over time. The long-term goal for management of the site is to achieve no more than 55 percent of the original (pre-construction 118,759 square feet) aerial cover of Russian olive. Russian olive seedlings will be controlled as part of long-term site management. With approval of the BOC, removal of Russian olive cover may be delayed beyond years listed below if it is determined that further removal of Russian olive would adversely affect wildlife habitat not being replaced by native plantings. If cover is not reduced to 55% of original by year 10 the formal monitoring period will be extended until Russian olive cover has been reduced by at least 45% of the original cover.

**Adaptive Management:** Observations of the first round of tree removal will help guide subsequent removal efforts.

**Contingency Measures:** Reevaluate Russian olive removal strategies and discuss habitat needs/options with WDFW and the BOC

	<b>Success Standards</b>	<b>Monitoring Methods</b>
3A. Year 0	Establish baseline area occupied by Russian olive.	Baseline (pre-construction) area covered by Russian olive will be outlined on an Aerial Photo, quantified, and submitted in As-Builts.
3B. Year 1-7	Removal at discretion of WSDOT Biologists	Each year updated aerial cover of Russian olive will be documented by visual assessment and recorded on an aerial photo to be included in monitoring reports.
3D. Year 7-10*	≤55% original aerial cover	

### **Purple Loosestrife**

**Problem Statement:** Purple loosestrife levels at the site have increased at the site despite extensive weed control efforts. Each year all of the individuals found onsite have been removed, sprayed, and seed heads bagged and removed. Despite these efforts additional individuals have been found at the site each year. As written the existing standard is unachievable as WSDOT can eliminate all purple loosestrife individuals each season only to have new seedlings sprout out of the existing seed bank or seeds imported by waterfowl or other wildlife. WSDOT would like to have documenting control of all individuals found onsite demonstrate achievement of the standard.

### **Purple Loosestrife: Original Standards**

**Performance Objective 6:** Purple loosestrife control will meet or exceed Grant County Noxious Weed Control Board requirements. Purple loosestrife will be controlled anytime encountered on the site. Total eradication is not likely given the historic distribution in the area and likely levels of seed in the soil at the site. If uncontrolled, purple loosestrife

could threaten the native species diversity and wildlife habitat functions at the site. Baseline levels consisted of five to six individual flowering plants scattered throughout the cattails. In 2000, the Grant County Weed Board released purple loosestrife bio-control agents into the wetland located directly west of the Bank Site to reduce a large infestation. This action successfully reduced the purple loosestrife infestation and the bio-control agents have likely been active at the Three Ponds Wetland.

Adaptive Management: The locations and numbers of purple loosestrife plants shall be closely tracked. If purple loosestrife exceeds success standard threshold levels, WSDOT will consult with the Grant County Weed Board to increase hand control efforts or to release bio-control agents into the area.

Contingency Measures: If purple loosestrife continues to be a problem WSDOT will discuss with the BOC and Grant County Weed Board. Options may include increased hand control efforts and consideration of chemical control.

Success Standards		Monitoring Method
6A. Year 0	Determine base line levels of purple loosestrife	Document base line infestation levels of purple loosestrife and indicate locations on map. Submit with As-Built Plans.
6B. Years 1-10	Purple loosestrife will not exceed pre-construction levels (5 to 6 individual plants) in any one year.	Conduct site inventories three times during the loosestrife monitoring period each year. Document the location and extent of infestation (Reports of infestations will trigger weed control action within a week of each inventory). Submit results of site inventories and a description of control actions taken in monitoring reports.

### **Purple Loosestrife: Proposed Standards**

**Performance Objective 6:** Purple loosestrife control will meet or exceed Grant County Noxious Weed Control Board requirements. Purple loosestrife will be controlled anytime encountered on the site. Total eradication is not likely given the historic distribution in the area and likely levels of seed in the soil at the site. This likelihood of seed sources provides a difficult environment to control purple loosestrife at a given threshold level. If uncontrolled, purple loosestrife could threaten the native species diversity and wildlife habitat functions at the site. All known and identified purple loosestrife plants will be actively managed and controlled throughout the site. All possible measures will be implemented to control and reduce any purple loosestrife at the site.

Adaptive Management: The locations and numbers of purple loosestrife plants shall be closely monitored and controlled. Adaptive management activities will include hand pulling individual plants and removing from the site, spraying herbicide, and cutting and bagging seeds/flowers heads of those plants that are sprayed to prevent the possibility of seed dispersal from dying plants.

**Contingency Measures:** If the purple loosestrife population at the mitigation banking site exceeds 5% aerial cover, WSDOT will meet with the BOC to discuss further options for adaptive management and shall consult the Grant County Weed Board. Documentation of aerial cover shall be included in the monitoring reports as referenced in the monitoring method below.

Success Standards		Monitoring Method
6A. Year 0	Determine base line levels of purple loosestrife	Document base line infestation levels of purple loosestrife and indicate locations on map. Submit with As-Built Plans.
6B. Years 1-10	Purple loosestrife will be managed and controlled using all possible measures to reduce the number of plants on site.	Locate, document, and report all known individuals throughout the monitoring period. (This will trigger weed control action within a week of each inventory). Submit results of site inventories and a description of control actions taken in monitoring reports.