



PUGET SOUND ENERGY
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NOXIOUS WEED PLAN

SETTLEMENT AGREEMENT ARTICLE 508

Appendix F to the SA 501 Terrestrial Resource Management Plan

BAKER RIVER PROJECT FERC No. 2150-033



Puget Sound Energy
Bellevue, Washington

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CONTENTS

List of Tables	iii
List of Figures	iii
Executive Summary.....	1
1.0 Introduction.....	1
2.0 Basis for the Plan	2
3.0 Goals	5
4.0 Regulatory Reference and Definitions	5
4.1 Federal	6
4.2 Washington State	6
4.3 Project Specific Agreements	7
4.4 Definitions.....	9
5.0 Plan Development Process	9
5.1 Provisions for Development and Modification of the Noxious Weed Management Plan.....	9
5.2 Ownership of Land and Facilities	10
5.3 Inclusion Within Project Boundary.....	10
5.4 Funding Process and Mechanism.....	10
6.0 Plan Implementation.....	10
6.1 Plan Area.....	10
6.2 Background Information	11
6.3 Procedures	12
6.4 Schedule	16
6.5 Consistency with Other Plans	16
7.0 Monitoring and Reporting	16
7.1 Monitoring.....	16
7.2 Reporting.....	16
8.0 References	17
9.0 Review Comments and Responses.....	19
9.1 Distribution List.....	19
9.2 Transmittal Letter	21
9.3 Reviewer Comments and PSE Responses.....	22

List of Tables

Table 1. Initial list of noxious weed species and locations requiring site-specific management plans. 11

Table 2. Noxious Weed Plan reviewers. 19

Table 3. Comments following formal review of the Noxious Weed Plan, August 14 – September 14, 2009. 22

List of Figures

Figure 1. Sample transmittal letter from PSE. 21



Executive Summary

The Noxious Weed Plan was developed pursuant to the Federal Energy Regulatory Commission (FERC) Settlement Agreement Article 508 (SA 508), “Noxious Weeds,” of the *Order on Offer of Settlement, Issuing New License and Dismissing Amendment Application as Moot* for the Baker River Hydroelectric Project (FERC Project No. 2150). The plan specifies procedures to identify and monitor weed infestations, prioritize sites for treatment, implement treatment, incorporate weed prevention methods, and provide periodic review and update of the plan to incorporate new information, techniques, and the results of monitoring. The plan was prepared in consultation with the Baker River Terrestrial Resource Implementation Group (TRIG).

1.0 Introduction

This Noxious Weed Plan has been prepared for the Baker River Hydroelectric Project, FERC Project No. 2150, pursuant to the *Order on Offer of Settlement, Issuing New License and Dismissing Amendment Application as Moot* dated October 17, 2008 (the “license”). Specifically, Settlement Agreement Article 508, “Noxious Weeds” (SA 508) and associated Appendix A-1 to Articles of the license, set forth the applicable requirements for this plan. This plan was prepared collaboratively by the Baker River Project Terrestrial Resource Implementation Group (TRIG), which includes representatives of Puget Sound Energy and the other signatories to the Settlement Agreement.

Noxious weeds and other invasive plant species can negatively affect, and even displace, native plant communities and wildlife. Currently, several species of noxious weeds and invasive non-natives are present in the Baker River Project area. Project-related activities may have contributed to the presence and spread of weed species and could contribute to future weed invasions.

This integrated Noxious Weed Plan addresses lands within the project boundary and those lands outside the project boundary that were surveyed during relicensing studies. In addition, the plan specifies how noxious weed management will be addressed for project-related land acquisitions or other activities pursuant to Settlement Agreement Articles 502, 503, 504, and 505. The plan establishes the goals for noxious weed management and the guidelines for development of the Noxious Weed Habitat Management Procedures (HMP), including species- and site-specific management plans. Under the plan, Puget Sound Energy and the TRIG have developed a detailed set of implementation procedures (the HMP, described in Section 6.3.4). The implementation procedures will be reviewed and modified by Puget Sound Energy and the TRIG as needed during the term of the license.

2.0 Basis for the Plan

Settlement Agreement Article 508 specifies the requirements and expectations of the plan. SA 508 is presented here in its entirety for reference.

During the term of the license, the licensee shall manage noxious weeds on Project lands pursuant to the most restrictive applicable federal and state regulations, including, but not limited to: 1) Washington's State Noxious Weed Control regulations found at WAC 16-750, 2) Best Management Practices published by the USDA-FS (for weed control on USDA-FS lands) for the Mt. Baker-Snoqualmie National Forest, and 3) noxious weed control regulations adopted by Skagit or Whatcom Counties, in accordance with a plan developed in consultation with the TRIG as required by Article 501. The licensee shall file the plan with the Commission for approval, following consultation in accordance with Article 501. The plan shall address site-specific and species-specific management and monitoring programs, based on the guidelines and treatment options identified in the tables attached as Appendix A-1, which are based upon the results of pre-licensing Terrestrial Study T-6 and the Forest-Wide Environmental Assessment for Noxious Weed Management on the Mt. Baker-Snoqualmie National Forest, published by the USDA-FS in May 1999. The initial plan shall adjust treatment of all lands within the Project boundary, and those lands outside the Project boundary that were surveyed for noxious weeds during pre-licensing studies, as documented in the T-6 Final Study Report, December 23, 2003. The plan shall address how noxious weed management considerations will be addressed when evaluating land acquisition proposals or other activities pursuant to Articles 502, 503, 504, and 505.

The portion of the plan addressing the seven high quality wetland areas located on National Forest System (USDA-FS) lands, as identified in pre-licensing Terrestrial Study T-2/T-5 as WB 17, 20, 21, 25, 28, 29, and 30, shall place priority on the control of reed canarygrass (*Phalaris arundinacea*) for the protection and enhancement of these wetlands. Licensee shall provide funding for the portion of the plan addressing these seven identified wetlands in an amount not to exceed \$25,000 in each of years 1-5 following license issuance, and shall provide \$15,000 annually thereafter during the term of the license.

Funding for noxious weed surveys and management for lands acquired following license issuance pursuant to Articles 502, 503, 504, and 505 shall be drawn from the funds of these articles. Licensee shall file related amendments to the plan with the Commission for approval by December 31 of any year in which land is acquired.

“Appendix A-1 to Articles,” which follows the Settlement Agreement Articles in the FERC *Order Issuing License* of October 17, 2008, adds the following details:

Noxious Weed Management Guidelines and Treatment Options

Specific guidelines for actions in the Noxious Weed Management Plan

Species Or Class	Management Action Within The Plan Area	
	Federal Lands	Non-federal Lands
Class A	Eradicate	Eradicate
Class B Designate	Eradicate	Control
Class B	Contain (unless county raises priority, or as noted below for English ivy and reed canarygrass)	Contain (unless county lists species for control, or as noted below for English ivy and reed canarygrass)
Class C	Contain (unless county raises priority, or as noted below for English ivy and reed canarygrass)	Contain (unless county lists species for control, or as noted below for English ivy and reed canarygrass)
English ivy	Eradicate	Eradicate
Reed canarygrass	<ul style="list-style-type: none"> Contain, except as specified below for the seven wetlands. <i>Carex flava</i> site: manage and fund as per Article 510 	Contain

Treatment methods available under the Noxious Weed Management Plan.

Species	Common Name	Potential Treatment Methods ^a
<i>Cirsium arvense</i> ^b	Canada thistle	Manual control: hand pulling, mowing Biological control Herbicide application: Aquatic formulation of Glyphosate Shade planting
<i>Cirsium vulgare</i> ^b	Bull thistle	Manual control: hand pulling, mowing Biological control Herbicide application: Aquatic formulation of Glyphosate Shade planting
<i>Cytisus scoparius</i> ^b	Scotch broom	Manual control: hand pulling, cutting, mowing Biological control Herbicide application: Aquatic formulation of Glyphosate Shade plantings in conjunction with other treatments
<i>Geranium robertianum</i> ^b	Herb Robert	Manual control: hand pulling, mowing Herbicide application: Aquatic formulation of Glyphosate

Species	Common Name	Potential Treatment Methods^a
<i>Hedera helix</i> ^b	English Ivy	Manual control: cutting, hand pulling and grubbing Herbicide application with surfactants
<i>Phalaris arundinacea</i> ^b	Reed canarygrass	Manual control: hand pulling, mowing, mulch Herbicide application: Aquatic formulation of Glyphosate Steam treatment Shade Plantings
<i>Senecio jacobaea</i> ^b	Tansy ragwort	Manual control: hand pulling Biological control Herbicide application: Aquatic formulation of Glyphosate Shade plantings and healthy plant communities
<i>Polygonum cuspidatum</i> ^c	Japanese knotweed	Manual control: cutting/bending stems, mowing Herbicide application: Aquatic formulation of Glyphosate Shading

^a If new, high priority (e.g., Class A or B designate) noxious weeds are discovered within the Project area, they will be treated in the most effective manner possible, within the guidelines and recommendations of the Region 6 EIS for Preventing and Managing Invasive Plants.

^b Species identified in the T-6 Noxious Weed Study.

^c Species not identified in the T-6 Noxious Weed Study.

In addition, the TRIG shall evaluate other invasive species management in the plan area periodically to determine if changes are warranted due to factors such as additions to the noxious weed lists; changes in federal, state or county regulations; or the discovery of new treatment methods. Licensee shall monitor changes to the Skagit County and Whatcom County noxious weed lists through annual acquisition of the updated noxious weed lists, typically available during the first quarter of the year from each county's Noxious Weed Control Board.

The Noxious Weed Management Plan shall be designed to manage specified invasive non-native plants and noxious weeds within the plan area on a 5-year cycle of treatment and monitoring, and reduce the potential for new introductions or reintroductions for the remainder of the license term. During these periods, designated portions of the plan area shall be resurveyed, and treatment methods re-evaluated. Options for management of existing weeds shall be evaluated and implemented during each 5-year cycle. Current county, state and federal weed control regulations and policies, as well as noxious weed lists, shall be used as guidelines for weed management, and shall be updated for each 5-year cycle.

Prevention on National Forest System lands in the plan area shall be accomplished by implementing the specific measures listed in the USDA-FS Forest Plan Amendment #14: Best Management Practices for Prevention of Noxious Weeds

(Appendix C in: Potash, L. 1999. Forest-Wide Environmental Assessment for Noxious Weed Management on the Mt. Baker-Snoqualmie National Forest. USDA-FS, Mountlake Terrace, WA). Any updates to BMPs on National Forest System lands shall be implemented by licensee within six months of receipt from the USDA-FS.

Active restoration measures shall be implemented to decrease “weed-friendly” habitat associated with licensee ground-disturbing activities. All revegetation on USDA-FS lands shall follow USDA-FS Pacific Northwest regional policy regarding native plant movement guidelines. Use of desirable non-native species shall follow the recommendations in the Mt. Baker-Snoqualmie National Forest Native Plant Notebook, Second Edition (Potash and Aubry, 1997), or as superseded by Region 6 guidance.

3.0 Goals

The goals of the Baker River Project Noxious Weed Plan are to:

1. Identify those non-native, invasive plant species (target weed species) that have the potential to threaten natural resource and/or human use management objectives within the Noxious Weed Plan Area (Plan Area).
2. Identify the location and size of target weed species infestations in the Plan Area.
3. Describe methods to manage the target weed species, appropriate for the Plan Area.
4. Prioritize the weed species and sites for management activity.
5. Develop an integrated weed management strategy for target weed species, including prevention measures and management measures for use under routine conditions and during ground-disturbing activities.
6. Incorporate native plant species in revegetation and restoration activities on NFS lands and where practicable to achieve management objectives on other lands managed for terrestrial resources.
7. Consider methods to minimize impacts to non-target resources such as cultural resources, native plants, water, and amphibians (per the Habitat Management Guidelines for amphibians and reptiles of the Northwest, available online at: www.parcplace.org/habitat_management_guide.html)
8. Monitor the implementation and effectiveness of the weed management actions over time and modify the management actions as appropriate.
9. Review and update the plan procedures periodically to incorporate new information on weed status, weed occurrence, management measures, and effectiveness of weed treatments.

4.0 Regulatory Reference and Definitions

The plan has been developed, and will be implemented, in a manner consistent with applicable local, state, and federal laws, regulations, and policies. This section provides reference to pertinent laws, regulations, and policies regarding weed management.

4.1 Federal

The major federal authorities for management of non-native plants are the Plant Protection Act (Title IV of the Agricultural Risk Protection Act of 2000), the Amendment to the Federal Noxious Weed Act of 1974, and Executive Order 13112 on Invasive Species (1999). The Plant Protection Act addresses the need to manage plant pests and noxious weeds in order to protect agriculture, the environment, and the economy of the United States. The Act replaces the Federal Noxious Weed Act (FNWA), but incorporates the 1990 Amendment to the FNWA, which defines undesirable plants to include, but not be limited to, noxious weeds. Executive Order 13112 directs federal agencies whose actions may affect the status of invasive species to manage these species. An Invasive Species Council was established per the Order, and a national Invasive Species Management Plan was established by the Council in 2001.

The USDA-FS implements measures to prevent the introduction and control the spread of noxious weeds on National Forest System lands. USDA-FS management methods must comply with the objectives, standards, and guidelines of the Mount Baker-Snoqualmie National Forest (MBSNF) Land and Resource Management Plan (Forest Plan) (USDA-FS, 1990, as amended), as well as federal law and direction. A forest-wide environmental assessment (EA) on noxious weed management was completed for the MBSNF in 1999 (USDA-FS, 1999a). The EA addresses site-specific treatment for known weed infestations and includes a comprehensive appendix outlining best management practices for prevention of noxious weeds. These best management practices were incorporated as Amendment #14 to the MBSNF Forest Plan (USDA-FS, 1999b). In 2005, an EA and a decision notice on the proposed treatment of invasive plants and new invaders strategy were issued for the MBSNF (USDA-FS, 2005a and 2005b). The 2005 EA updates the site-specific treatments for known weed infestations, and, in combination with the new invaders strategy (Forest Plan Amendment #26), provides the current guidance and NEPA authorization for weed management on the Forest. Specific authorization for the use of the herbicides clopyralid and imazapyr on the MBSNF was documented in a supplemental NEPA analysis conducted by the USDA-FS in 2008 (personal communication, Curtis Spalding, NEPA Specialist, MBSNF, November 4, 2008). Additional direction for the management of invasives within Region 6 of the Forest Service is provided in the Pacific Northwest Region's Invasive Plant Program Record of Decision (USDA-FS, 2005c). Region 6 policy on the use of native and non-native plants is provided in USDA-FS 1994; MBSNF guidelines on plant movement are provided in Potash and Aubry (1997). National policy on the use of native and non-native plants was formalized in a directive approved in January 2008 (73 FR 8265-8266); the full text of the directive is provided in: http://www.fs.fed.us/rangelands/howeare/documents/FSM2070_Final_2_062905.pdf

4.2 Washington State

Washington Weed Law (Chapter 17.10 RCW) requires noxious weed control to limit adverse economic effects on agricultural, natural, and human resources of the state. Noxious weeds are defined as plants that, when established, are highly destructive, competitive, or difficult to control by cultural or chemical practices. The State Noxious Weed Control Board coordinates noxious weed control activities throughout the state

via local weed districts and county noxious weed control boards. Management goals for noxious weed species may range from complete eradication to containment of the species within a currently infested area.

The State Noxious Weed Control Board updates its list of noxious weeds annually and categorizes the species into three classes (Chapter 16-750 WAC). Class A species are those noxious weeds not native to the state that are of limited distribution or are unrecorded in the state. Eradication of all Class A species is required by state law. State Class A species are listed on all County Class A weed lists.

Class B species are those noxious weeds not native to the state that are of limited distribution or are unrecorded in a region of the state, and that pose a serious threat to the region. These species are treated differently in different regions of the state, based on their distribution. In regions where a Class B species is of limited distribution or unrecorded, the species is designated by the state for 'Control', which is defined under state law (WAC 16-750) as prevention of seed production. In regions where a Class B species is already widespread (Class B non-designate species), control (i.e., management) is decided at the local weed board level, with containment as the primary goal.

Class C weeds may be widely established in Washington, or may be of particular interest to the agricultural industry. Control of these species (per WAC 16-750 definition) is a local weed board option.

The State of Washington also maintains a monitor list of non-native species. Species may be included on the list for a variety of reasons including the need for information on distribution and biology, the need to verify occurrence, and the need to monitor reoccurrence. There is no regulatory or legal authority associated with the monitor weed list.

The noxious weed control boards of Skagit and Whatcom counties administer state weed laws at the local level on private, county, and state lands. Local weed boards are provided flexibility to determine local weed priorities for Class B non-designate and Class C species, and are responsible for enforcement of weed management activities to ensure resource protection and uniform standards. Although primary responsibility for weed management is assigned to the landowner, the county weed boards facilitate implementation of management activities through technical assistance and education on noxious weed species, prevention strategies, and management methods.

4.3 Project Specific Agreements

Noxious weed management in the Plan Area will be consistent with Washington State law, county weed control regulations and policy, and USDA-FS weed management policy for Region 6 and the MBSNF. Weed management activities in excess of those required by law or policy may be proposed under the Noxious Weed Plan; these measures will be developed and implemented by consensus of the TRIG.

Habitat revegetation and restoration activities will include the use of native plant species to meet management objectives, when practicable. Plant species should be native to the area; preference should be given to native plant materials from locations closest in elevation and geographic proximity to the disturbed sites. Each habitat site will be evaluated to determine the appropriate planting plan in keeping with the site's vegetative

condition and future land use, adjacent land uses, habitat management objectives, and site maintenance requirements. Non-invasive, non-native plant species may be used where their use is consistent with current and expected future land uses (e.g., landscaped sites, frequently disturbed sites, managed forest stands) and where necessary to achieve objectives associated with site management/maintenance activities (e.g., forage production, erosion control, temporary cover, soil conditioning, weed suppression, etc.).

On NFS lands, weed management will be conducted consistent with best management practices (BMPs) published by the USDA-FS for the MBSNF (USDA-FS, 1999b), current guidance and NEPA authorization for weed management on the MBSNF (USDA-FS, 2005a and 2005b), and current Region 6 guidance (USDA-FS 2005c), or subsequent applicable USDA-FS guidance. In the event of a conflict between state/county BMPs and USDA-FS BMPs/guidance as applied to National Forest System lands, the plan will follow the more restrictive guidelines. Revegetation on NFS lands will follow USDA-FS Pacific Northwest Regional policy regarding native plants (USDA-FS 1994); plant movement and use of non-native species will follow recommendations of Potash and Aubry (1997), or subsequent applicable USDA-FS guidance.

4.3.1 Weed Management on Acquired Lands

The following text describes how noxious weed management will be approached with respect to acquired lands, per Article 508 of the Settlement Agreement, which specifies that “The plan [TRMP] shall address how noxious weed management considerations will be addressed when evaluating land acquisition proposals or other activities pursuant to Articles 502, 503, 504, and 505.”

Puget Sound Energy shall evaluate the extent of noxious weed management required for each parcel under consideration for acquisition or land management activities. The evaluation will include the steps described below. Each step will be developed in coordination with the TRIG, and will require TRIG approval prior to implementation.

Prior to acquisition:

1. Conduct reconnaissance level field surveys to determine occurrence of weeds listed by Washington State and/or the county. This will be a cursory look without extensive data gathering or analysis.
2. If weeds occur on the site, determine if any of the following three conditions exist:
 - a. The species is a Class A or Class B designate in the county/region where the parcel occurs; or
 - b. The weeds preclude or inhibit attaining the habitat value for the species for which the parcel was acquired; or
 - c. There is a comprehensive strategy on adjacent lands that applies to the weed species on the parcel (e.g. Skagit basin knotweed control strategy).
3. If any of the three conditions (2a, b, or c) exist, then complete more accurate surveys, develop site and species-specific treatment plans for the parcel, and estimate costs for management of the weeds, so the TRIG can evaluate the cost/benefits of acquiring the parcel.

After acquisition:

4. Management funds from the acquisition articles will only be used to manage weed sites if any of the three conditions (2a, b, or c) above are applicable.

4.4 Definitions

This plan uses the following definitions based on Washington Administrative Code (WAC) 16-750.

Control means to prevent all seed production (and to prevent the dispersal of the following propagules of aquatic noxious weeds - turions, fragments, tubers, and nutlets). Note that the term control also is widely used by weed managers and in weed literature to refer to management of weed populations in the general sense, independent of the formal state definition.

Contain means to confine a noxious weed and its propagules to an identified area of infestation.

Eradicate means to eliminate a noxious weed within an area of infestation.

Prevent the spread of noxious weeds means to contain noxious weeds.

Class A noxious weeds are those noxious weeds not native to the state that are of limited distribution or are unrecorded in the state and that pose a serious threat to the state.

Class B noxious weeds are those noxious weeds not native to the state that are of limited distribution or are unrecorded in a region of the state and that pose a serious threat to that region.

Class B designate means those Class B noxious weeds whose populations in a region or area are such that all seed production can be prevented within a calendar year.

Class C noxious weeds are widely established in Washington or are of special interest to the agriculture industry.

Monitor weed species are non-native species that are monitored by the state to obtain information on their habit, occurrence and spread.

5.0 Plan Development Process

This section describes the process by which this plan has been developed, and the process by which it can be modified in the future.

5.1 Provisions for Development and Modification of the Noxious Weed Management Plan

The licensee has prepared the Noxious Weed Plan in consultation with the TRIG, as required by Article 508, and in accordance with the guidelines in Appendix A-1 to the Settlement Agreement articles.

Modifications to the Noxious Weed Plan will only be made by consensus of the TRIG and with the approval of the FERC. Any member of the TRIG may propose a modification to the plan. If modification of the plan is adopted by the TRIG, it will be

filed with the FERC for approval. Until FERC approval for modification is received, the plan will continue to be implemented as originally approved.

5.2 Ownership of Land and Facilities

This plan applies to lands within the Plan Area, as defined in Section 6.1. Lands within the Plan Area include both National Forest System lands and non-federal lands.

5.3 Inclusion Within Project Boundary

Weed management activities may be undertaken on lands acquired pursuant to Articles 502, 503, 504, and 505. These acquired parcels will be evaluated and managed per the specific guidelines in Section 4.3.1. Any modifications to the Project Boundary would be pursuant to implementation of License Articles 203 and 304.

5.4 Funding Process and Mechanism

The funding process for the Plan is described in the Terrestrial Resources Management Plan (TRMP), Section 8.0, Funding. Specific guidelines for funding of management activities on acquired parcels is provided in Section 4.3.1. The licensee shall provide an annual summary of expenditures made during the preceding year in conformance with the requirements of the license.

6.0 Plan Implementation

This section outlines specific components of the Noxious Weed Plan as defined in Article 508.

6.1 Plan Area

This Noxious Weed Plan addresses lands within the Baker River Project boundary and those lands outside the project boundary surveyed during relicensing studies. The initial Plan Area includes:

- The perimeters of Baker Lake and Lake Shannon up to the approximate high pool elevations of 727.7 and 442.35 feet, respectively;
- The mouths of all USDA-FS Type 1, 2, or 3 streams with a defined channel, from the point of outflow to the reservoir upstream 300 meters, or as far as the invasive weeds were present;
- Project facility areas including Puget Sound Energy campgrounds, dams and associated facilities, fish facilities, and dikes;
- Selected sites where herb Robert (*Geranium robertianum*) has been previously sighted, including Maple Grove campground; and
- Selected areas outside of the project boundary where invasive non-native weeds are present and are considered to be associated with the populations found within the project area.

Weed management activities may be undertaken on lands acquired pursuant to Articles 502, 503, 504, and 505. These acquired parcels will be evaluated and managed per the specific guidelines in Section 4.3.1

6.2 Background Information

The Baker River Project is located on National Forest System lands of the Mt. Baker-Snoqualmie National Forest, state lands, and multiple private ownerships. Land management in the project vicinity includes the Puget Sound Energy power generation facilities, fish production facilities, water and land-based recreation, timber production, and late successional forest reserves. Project area roads, facilities, boat launches, trails, and recreation sites are all features that can contribute to the distribution of weed seeds and plant materials, and these sites are the primary focus of weed survey and management activities.

Relicensing surveys of the Plan Area were conducted during 2002 and 2003. A total of eight noxious weed species occurring in 153 populations were documented (Hamer Environmental and R2, 2003a and 2003b). Figure 1 shows the areas surveyed during the inventory. Figure 2 shows the locations of weed infestations for all species except reed canarygrass. The eight wetland sites selected for reed canarygrass management are shown in Figure 3. Sixty-six of the weed populations were located in Skagit County and 87 were located in Whatcom County. A total of 54 weed sites were recorded on NFS lands.

Table 1 shows the eight noxious weed species, occurring at a total of 153 sites, requiring site-specific management plans at the time of the Settlement Agreement (November 2004). This list provides the initial basis for development of site-specific management plans.

Table 1. Initial list of noxious weed species and locations requiring site-specific management plans.

Scientific Name	Common Name	No. Sites Skagit County	No. Sites Whatcom County	Total No. Sites by Species
<i>Cirsium arvense</i>	Canada thistle	23	20	43
<i>Cirsium vulgare</i>	Bull thistle	25	24	49
<i>Cytisus scoparius</i>	Scotch broom	2	6	8
<i>Daucus carota</i> ¹	Wild carrot	4	-	4
<i>Geranium robertianum</i>	Herb Robert	7	26	33
<i>Hedera spp.</i>	English ivy	4	1	5
<i>Phalaris arundinacea</i> ²	Reed canarygrass	-	8	8
<i>Senecio jacobaea</i>	Tansy ragwort	1	2	3
Total No. Weed Sites				153

¹ Occurrence of wild carrot was recorded only within Skagit County.

² Reed canarygrass occurs widely around both Project reservoirs; eight sites were selected for management in Whatcom County: wetlands WB-17, 20, 21, 25, 28, 29, and 30; and the *Carex flava* site.

6.3 Procedures

This section presents an overview of the procedures that will be used to identify and prioritize noxious weed species and sites, incorporate new sites and species into the plan, and to develop site-specific management plans. The Baker River Project Noxious Weed Plan is designed to be implemented on a five-year cycle of treatment and monitoring. The plan's implementation procedures, specified in the Noxious Weed Habitat Management Procedures (Noxious Weed HMP; refer to section 6.3.4), will be reviewed and updated annually and at the end of each five-year implementation cycle to reflect changes in weed species occurrence and status, management policy, and treatment methods.

6.3.1 Integrated Weed Management

Integrated weed management involves the use of multiple weed management strategies in an organized program designed to meet specific habitat goals. An integrated approach identifies the habitat management goals for an area that has affected by weed species. It also incorporates an adaptive management approach for monitoring, evaluating, and updating weed management protocols.

Each target weed species is evaluated to determine its habitat requirements, dispersal mechanisms, native and non-native competitor species, and current and potential impacts to native species and habitats. The weed species are prioritized for management based on additional factors such as the extent of occurrence, ease of management, and threat to native plant and animal communities. Methods for managing the weed species and replacing them with desirable plant species are evaluated using species-specific and site-specific information. Management measures, including available cultural, physical, mechanical, chemical, and/or biological methods, are reviewed and evaluated for suitability. Treated sites are monitored to determine effectiveness of management actions and to provide data on the occurrence of new weed infestations. The implementation plan objectives are then modified, if necessary, to reflect treatment results, changes to the list of target weeds, and advances or changes in weed management methodology.

6.3.2 Target Weed Species

Target weed species will include, at a minimum, those weeds known or suspected to occur in the Plan Area that are Washington State Class A weed species, Whatcom and Skagit County Class B designates, other county-selected species, and species for which management is required by USDA-FS on the MBSNF. The initial draft of the Noxious Weed HMP addresses the TRIG's 2005 list of target weeds which is comprised of 13 species. As part of the TRIG's annual review of the Noxious Weed HMP, the target weed species list will be revised as necessary to reflect new species occurrences, and changes to federal and state law, county regulations and policy, and USDA-FS policy for the MBSNF. Other weed species may be added to the target weed species list by consensus of the TRIG.

6.3.3 Prioritization of Weed Species and Sites for Management

Weed species and sites within the Plan Area will be prioritized for management based on federal, state, and county weed classification, size and extent of the infestation, potential impacts to other resources, site restoration potential, and other factors related to weed management. State and federal law, USDA-FS policy for the MBSNF, and county regulations and policy, will take precedence in determining management priorities. Weed management activities proposed in excess of federal, state, and local requirements will be determined by consensus of the TRIG.

6.3.4 Noxious Weed Habitat Management Procedures

A set of standard procedures and guidelines for implementing noxious weed management measures has been developed in consultation with the TRIG, as required by Settlement Agreement Article 501, and in accordance with the guidelines in Settlement Agreement Appendix A-1. The Noxious Weed Habitat Management Procedures (Noxious Weed HMP) is a 'living' document describing the methodologies and actions used by the TRIG to evaluate changes to the list of noxious weed species, evaluate new project-related activities within the Plan Area, and evaluate new occurrences of noxious weeds within the Plan Area. Specifications for monitoring, reporting, and review and update of weed management procedures are also presented. Site-specific management plans for noxious weeds have been developed by Puget Sound Energy in consultation with the TRIG and are incorporated into the Noxious Weed HMP.

After the Noxious Weed HMP is approved by the TRIG, it will be implemented. Subsequent modifications will be submitted to FERC as attachments to the next Annual Report following the process outlined in the TRMP.

Puget Sound Energy will report to the TRIG annually on the implementation of the habitat management procedures and guidelines. The content and timing of annual reports will be consistent with the license order and Article 501, as specified in the TRMP.

6.3.5 Site-Specific Weed Management Plans

Site-specific management plans are being developed for each target weed species occurring in the Plan Area. The site-specific management plans are grouped by individual weed species, and begin with an overall strategy for management of the target weed species at the Project. Each plan addresses one or more individual weed sites; in some cases, multiple sites with similar characteristics are combined into a single management group. Site-specific plans are being developed in consultation with the TRIG. For weed sites on NFS lands, long term management goals and proposed treatment methods are consistent with current guidance and NEPA authorization for weed management on the MBSNF (USDA-FS, 2005a and 2005b), and Region 6 (USDA-FS 2005c), or subsequent applicable USDA-FS guidance.

6.3.5.1 Species Management

The following elements are included in the species management section:

- Species management priority.
- Current distribution in Plan Area, including number of sites and approximate areas, jurisdictions, and general characterization of infestations.
- Existing impacts and threats, including a description of species characteristics and the general threat posed across Plan Area.
- Long term management goal (eradication, control (prevention of seed production), reduction, containment, other).
- Available management methods, including a list of the types of treatments available to manage the species.
- Management recommendation for the species, including a brief statement of the recommended management strategy for the species in the Plan Area; this recommendation may be refined for individual sites.

6.3.5.2 Individual Site Management Plans

The following elements are included in the individual site management sections:

- Individual site management plans, including site-specific plans for individual sites or groups of sites with similar characteristics.
- Location and site information, including location, site ID, size, density.
- Site priority for treatment.
- Five-year management objectives for treatment and monitoring, including specific management objectives for site, mapping needs, treatment implementation schedule, monitoring schedule. Specific management objectives for a site may address special considerations, such as sensitivity of amphibians to certain herbicides and/or surfactants.
- Five-year management plan, including treatment plan, timing of treatment, revegetation plan, and monitoring plan including evaluation criteria.
- Preliminary cost estimates for implementation of site-specific management plan.

6.3.6 Resurvey of the Plan Area

At five year intervals, from October 2008 (the date of license issuance), PSE will conduct surveys of designated portions of the Plan Area to document new weed infestations that may have become established. Portions of the Plan Area currently supporting weed infestations will be identified for active weed treatment and monitoring on an annual basis; new weed infestations in proximity to these sites will be documented and incorporated into the management plan as they are encountered. Sites of new habitat and/or ground disturbance will be surveyed as part of site development activities. Therefore, the higher risk areas for weeds (those proximal to existing infestations and those subject to new project-related habitat/ground disturbing activities) will be reviewed and addressed during ongoing weed management activities. Other portions of the Plan Area at lower risk of weed infestation may be designated by the TRIG for re-survey on a five year cycle. The survey methodology and specific sites to be surveyed will

be determined in consultation with the USDA-FS for NFS lands, and through consensus of the TRIG for other ownerships.

6.3.7 Weed Prevention

Habitat-disturbing activities undertaken by Puget Sound Energy within the Baker River project area will incorporate specific guidelines and/or BMPs for noxious weed prevention. These activities include those associated with the implementation of the TRMP, as well as new construction, site rehabilitation, and implementation of PME for other resources.

Methods to prevent the establishment of noxious weeds include early detection and eradication of populations of new invaders, efforts to educate and inform land managers and the public about weed issues, and proper planning and management of ground and vegetation disturbing activities through implementation of best management practices (BMPs). One of the best ways to prevent invasion (or re-invasion) of noxious weeds is to actively revegetate disturbed habitats with desirable species.

Weed prevention on NFS lands in the Plan Area will be accomplished by implementing specific measures listed in the USDA-FS Forest Plan Amendment #14 (USDA-FS 1999b, as amended), Standards and Guidelines from the Region EIS (USDA-FS 2005c), and other applicable guidance from the MBSNF and Region 6. Any updates to BMPs on NFS lands will be incorporated by the licensee within six months of receipt from the USDA-FS.

Active revegetation will be implemented on sites where project-related activities lead to substantial areas of habitat disturbance, and where revegetation is practicable (e.g., sites such as rock quarries may be excluded). Habitat revegetation and restoration activities will reflect a goal to use native plant species to meet management objectives, where practicable. Plant species should be native to the area; preference should be given to native plant materials derived from locations that are most similar in elevation and closest in geographic proximity to the disturbed site. Each habitat site will be evaluated to determine the appropriate planting plan in keeping with the site's vegetative condition and future land use, adjacent land uses, habitat management objectives, and site maintenance requirements. Non-invasive, non-native plant species may be used where their use is consistent with current and expected future land uses (e.g., landscaped sites, frequently disturbed sites, managed forest stands) and where necessary to achieve objectives associated with site management/maintenance activities (e.g., forage production, erosion control, temporary cover, soil conditioning, weed suppression, etc.).

On NFS lands, active site restoration will be implemented in accordance with USDA-FS Pacific Northwest regional policy regarding native plants (USDA-FS 1994). Use of non-invasive non-native species on NFS lands will follow the recommendations in the Mt. Baker-Snoqualmie National Forest Native Plant Notebook (Potash and Aubry, 1997), as updated or superseded by subsequent Forest Service guidance, including USDA-FS, 2005a, 2005b, and 2005c (Reference BMPs in appendix to HMP).

An education component will be included in the weed prevention guidelines. Information on weed identification will be provided to Project staff to assist them in identification and reporting of incidental occurrences of target weed species.

6.4 Schedule

Site-specific management plans for the 153 noxious weed sites identified during the relicensing survey will be implemented on a staggered schedule based on weed site priority. Highest priority sites will be treated within one year of FERC approval of the Plan; lower priority sites will be treated over the following several years.

New site-specific plans will be developed for each new site identified for protection during the term of the license; these new site-specific plans will be implemented within one year of TRIG approval.

Schedules for implementation of the site-specific management plans for special status species have been developed in consultation with the TRIG and incorporated into the HMP.

6.5 Consistency with Other Plans

The Noxious Weed Plan will be implemented consistent with the standards and requirements of other plans prepared to comply with the license. If the requirements of one or more other plans conflict with the Noxious Weed Plan, the TRIG and other affected resource implementation group(s) will resolve the conflict.

7.0 Monitoring and Reporting

This section outlines the monitoring and reporting requirements as stated in the license and Settlement Agreement.

7.1 Monitoring

Treated sites will be monitored as directed in the site-specific management plans. Monitoring schedules will be based on the species and site conditions. Typically, annual monitoring is prescribed for treated sites; however, the interval may be shorter (multiple times per growing season) or longer (once every 2 or 3 years), depending upon the site and weed species characteristics, and the resources at risk. An annual monitoring report will summarize the results of that year's site monitoring and will include a list of incidental weed sightings recorded in the Plan Area during the year.

At the end of each five-year treatment cycle, treated weed sites will be monitored to measure progress toward five-year management objectives. The five-year monitoring report will summarize the evaluation of progress and provide recommendations for modifications of treatments and/or management objectives and goals.

7.2 Reporting

Puget Sound Energy will submit a Draft Noxious Weed Report (Draft Weed Annual Report) to the TRIG no later than July 31 of each year in accordance with the schedule listed in SA 501. The Draft Weed Annual Report will summarize implementation of the Noxious Weed Plan during the previous January through December. The TRIG will be allowed 30 calendar days to review the Draft Weed Annual Report. Puget Sound Energy will revise the Draft Weed Annual Report, as appropriate, and combine it with reports for other License Articles into a Draft License Annual Report no later than January 31 of the next year. The TRIG will be allowed 30 calendar days to review the Draft License

Annual Report. Puget Sound Energy will revise the License Annual Report, as appropriate, and submit it to the FERC as a Final License Annual Report by April 30.

The Draft Weed Annual Report will include the following:

- A summary of weed management and monitoring activities conducted within the Plan Area during the year.
- Any changes to the Noxious Weed HMP agreed upon by consensus of the TRIG.
- A list of expenditures billed to the Noxious Weed Plan budget during the year.
- A summary of any issues or concerns with implementation of the Noxious Weed Plan identified by Puget Sound Energy or other members of the TRIG during the year.
- List of decisions and supporting rationale by the TRIG related to implementation of this Plan

Every fifth year, the Draft Weed Annual Report will be expanded to include the results of five-year monitoring of designated portions of the Plan Area. This report will summarize progress toward weed management objectives for individual sites as well as overall progress toward species management goals.

8.0 References

- Hamer Environmental and R2 (Hamer Environmental and R2 Resource Consultants). 2003a. Invasive weed surveys in the Baker River Hydroelectric Project area. Relicense Study T6. Final Report. Prepared for Puget Sound Energy, Bellevue, WA. Hamer Environmental, Mt. Vernon, WA and R2 Resource Consultants, Inc., Redmond, WA. December 23, 2003. 48 pp.
- Hamer Environmental and R2. 2003b. Invasive weed surveys in the Baker River Hydroelectric Project area. Relicense Study T6. Unpublished field data forms and database. Prepared for Puget Sound Energy, Bellevue, WA. Hamer Environmental, Mt. Vernon, WA and R2 Resource Consultants, Inc., Redmond, WA. December 23, 2003.
- Hamer Environmental, R2, and AESI. 2004. Vegetation Mapping in the Project Area and Wetland Inventory. Relicense Study T2/T5. Prepared for Puget Sound Energy, Bellevue, WA. Hamer Environmental, Mt. Vernon, WA; R2 Resource Consultants, Inc., Redmond, WA; and Associated Earth Sciences, Inc., Kirkland, WA. January 22, 2004.
- Potash, L.L. and C.A. Aubry. 1997. Mt. Baker-Snoqualmie National Forest native plant notebook. Second edition. U.S. Forest Service, Mt. Baker-Snoqualmie National Forest, Mountlake Terrace, WA. 413 pp.
- Skagit County Noxious Weed Control Board. 2005. Skagit County noxious weed list. Skagit County Noxious Weed Control Board, Mt. Vernon, WA.
- USDA-FS. 1990. Mt. Baker-Snoqualmie National Forest land and resource management plan, final environmental impact statement and appendices. U.S. Forest Service, Pacific Northwest Region, Mountlake Terrace, WA.

- USDA-FS. 1994. Revegetation policy for the Pacific Northwest Region. Regional Forester John E. Lowe memo to directors and forest supervisors in the Pacific Northwest Region. File Code 2600. U.S. Forest Service, Pacific Northwest Region, Portland, OR. April 14, 1994.
- USDA-FS. 1999a. Forest-wide environmental assessment for noxious weed management on the Mt. Baker-Snoqualmie National Forest. U.S. Forest Service, Pacific Northwest Region, Mountlake Terrace, WA.
- USDA-FS. 1999b. Forest Plan Amendment #14: Best Management Practices for Prevention of Noxious Weeds. Appendix C in: USDA-FS, 1999a. Forest-wide environmental assessment for noxious weed management on the Mt. Baker-Snoqualmie National Forest. U.S. Forest Service, Pacific Northwest Region, Mountlake Terrace, WA.
- USDA-FS. 2002. Baker River watershed analysis. Mt. Baker Snoqualmie National Forest, U.S. Forest Service, Pacific Northwest Region, Mountlake Terrace, WA. August 2002.
- USDA-FS. 2003. Existing information assessment, Baker Lake relicensing, botanical resources: Noxious weeds. Mt. Baker Ranger District, Mt. Baker-Snoqualmie National Forest, Sedro Woolley, WA. February 10, 2003.
- USDA-FS. 2004. Draft environmental impact statement for the Pacific Northwest Region Invasive Plant Program preventing and managing invasive plants. U.S. Forest Service, Pacific Northwest Region, Portland, OR. August 27, 2004.
- USDA-FS. 2005a. Environmental assessment on proposed treatment of invasive plants and new invaders strategy (Forest Plan Amendment # 26). Mt. Baker-Snoqualmie National Forest, Pacific Northwest Region, Mountlake Terrace, WA. April 21, 2005.
- USDA-FS. 2005b. Decision notice and finding of no significant impact on proposed treatment of invasive plants and new invaders strategy (Forest Plan Amendment # 26). Mt. Baker-Snoqualmie National Forest, Pacific Northwest Region, Mountlake Terrace, WA. June 3, 2005.
- USDA-FS. 2005c. Record of Decision, Pacific Northwest Region Invasive Plant Program preventing and managing invasive plants.. U.S. Forest Service, Pacific Northwest Region, Portland, OR. October 11, 2005
- Washington State Noxious Weed Control Board. 2005. Washington State noxious weed list 2005. Washington State Noxious Weed Control Board, Olympia, WA.
- Whatcom County Noxious Weed Control Board. 2005. Whatcom County noxious weed list. Whatcom County Noxious Weed Control Board, Bellingham, Washington.

9.0 Review Comments and Responses

Puget Sound Energy prepared a final draft and distributed it via certified US Mail to the TRIG for a 30-day review period on August 14, 2009. Comments on the final draft were due September 14, 2009.

9.1 Distribution List

Table 2. Noxious Weed Plan reviewers.

Name	Organization	Address
Brock Applegate	WA Dept of Fish & Wildlife	Post Office Box 1100 La Conner, WA 98257
Cathy Baker	The Nature Conservancy	1917 First Avenue Seattle, WA 98101
Len Barson	The Nature Conservancy	1917 First Avenue Seattle, WA 98101
Mignonne Bivin	National Park Service	7280 Ranger Station Road Marblemount, WA 98267
Bob Carey	The Nature Conservancy	410 N. 4th Street Mount Vernon, WA 98273
Chris Danilson	Sauk-Suiattle Indian Tribe	5318 Chief Brown Lane Darrington, WA 98273
Don Gay	USDA Forest Service	810 State Route 20 Sedro-Woolley, WA 98284
Patrick Goldsworthy	North Cascades Conservation Council	P.O. Box 95980 Seattle, WA 98145
Joann Gustafson	WA Dept of Natural Resources	919 North Township Sedro-Woolley, WA 98284
Mark Hunter	WA Dept of Fish & Wildlife	600 Capitol Way North Mail Stop 43143 Olympia, WA 98501
Lou Ellyn Jones	US Fish & Wildlife Service	510 Desmond Dr. SE, Suite 102 Lacey, WA 98503
Robert Kuntz	National Park Service	810 State Route 20 Sedro-Woolley, WA 98284
Chris Madsen	Northwest Indian Fisheries Commission	6730 Martin Way East Olympia, WA 98512
Laura Martin	USDA Forest Service	42404 SE North Bend Way North Bend, WA 98405
Greta Movassaghi	USDA Forest Service	810 State Route 20 Sedro-Woolley, WA 98284
Bob Nelson	Rocky Mountain Elk Foundation	45 Overmeyer Road Raymond, WA 98577
James Roberts	Sauk-Suiattle Indian Tribe	5318 Chief Brown Lane Darrington, WA 98241

Name	Organization	Address
Regina Rochefort	National Park Service	810 State Route 20 Sedro-Woolley, WA 98284
William Rogers	Skagit County Noxious Weed Control Board	302 South First Street Mount Vernon, WA 98233
Scott Schuyler	Upper Skagit Indian Tribe	25944 Community Plaza Sedro-Woolley, WA 98284
Jon-Paul Shannahan	Upper Skagit Indian Tribe	25944 Community Plaza Sedro-Woolley, WA 98284
Laurel Shiner	Whatcom County Noxious Weed Control Board	901 W. Smith Road Bellingham, WA 98226
Stan Walsh	Swinomish Indian Tribe	P.O. Box 368 La Conner, WA 98233
Brenda Werden	WA Dept of Natural Resources	919 North Township Sedro-Woolley, WA 98284
Todd Wilbur	Swinomish Indian Tribe	P.O. Box 368 La Conner, WA 98233

9.2 Transmittal Letter

 **PUGET SOUND ENERGY**
The Energy To Do Great Things

Puget Sound Energy
P.O. Box 97034
Bellevue, WA 98009-9734
PSE.com

August 14, 2009

**Project No. 2150
Noxious Weed Plan**

Certified Mail Return Receipt Requested

Cathy Baker
The Nature Conservancy
1917 First Avenue
Seattle, WA 98101

**Re: Baker River Project, FERC No. 2150 – Final Draft Noxious Weed Plan,
Settlement Agreement Article 508, Submittal for 30-Day Review**

Dear Cathy:

On October 17, 2008, the Federal Energy Regulatory Commission (FERC) issued a new license for Puget Sound Energy, Inc.'s (PSE's) Baker River Project, FERC No. 2150. In the license FERC directed that PSE, after consultation with the parties to the Settlement, file a Noxious Weed Plan (NWP).

In accordance with these directives PSE has conducted consultation with the Terrestrial Resource Implementation Group composed of representatives from the Settlement parties to develop a preliminary draft of the NWP and receive initial comments and suggestions. These suggestions were incorporated into a final draft NWP. PSE is required to allow a minimum of 30 days for the parties to review and comment on the final draft NWP prior to filing the final plan with FERC.

Enclosed with this letter is the final draft NWP. Please review this plan and send your comments and/or recommendations to me. You may submit your comments using the enclosed reply form and self-addressed stamped envelop or by email. **Please respond with your reply by September 14, 2009.**

Thank you for your efforts in supporting this process. If you have any questions, please call me at 425-462-3553 or email at Tony.Fuchs@pse.com.

Sincerely,



Tony Fuchs
Consulting Natural Resource Scientist
P.O. Box 97034 PSE-09S
Bellevue WA, 98009-9734
Or email at Tony.Fuchs@pse.com

Enclosures: Final Draft Noxious Weed Plan; reply form
cc: TRIG members

Noxious Weed Plan
Doc ID: BAK.20090813.0159.PSE.TRIG

Page 1 of 1
8/14/2009

Figure 1. Sample transmittal letter from PSE.

9.3 Reviewer Comments and PSE Responses

Table 3. Comments following formal review of the Noxious Weed Plan, August 14 – September 14, 2009.

Comment	Puget Sound Energy Response
WDNR – JoAnn Gustafson, received August 26, 2009	
I have no comments (checked on comment form)	Comment noted. No revisions to plan.
NCCC – Patrick Goldsworthy, received August 27, 2009	
I have no comments (checked on comment form)	Comment noted. No revisions to plan.
NPS – Mignonne Bivin, received August 19, 2009	
I have no comments (checked on comment form)	Comment noted. No revisions to plan.
USDA-FS – Greta Movassaghi, received September 14, 2009 (via e-mail)	
I have no comments (checked on comment form)	Comment noted. No revisions to plan.
RMEF – Bob Nelson, received September 21, 2009	
I have no comments (checked on comment form).	Comment noted. No revisions to plan.