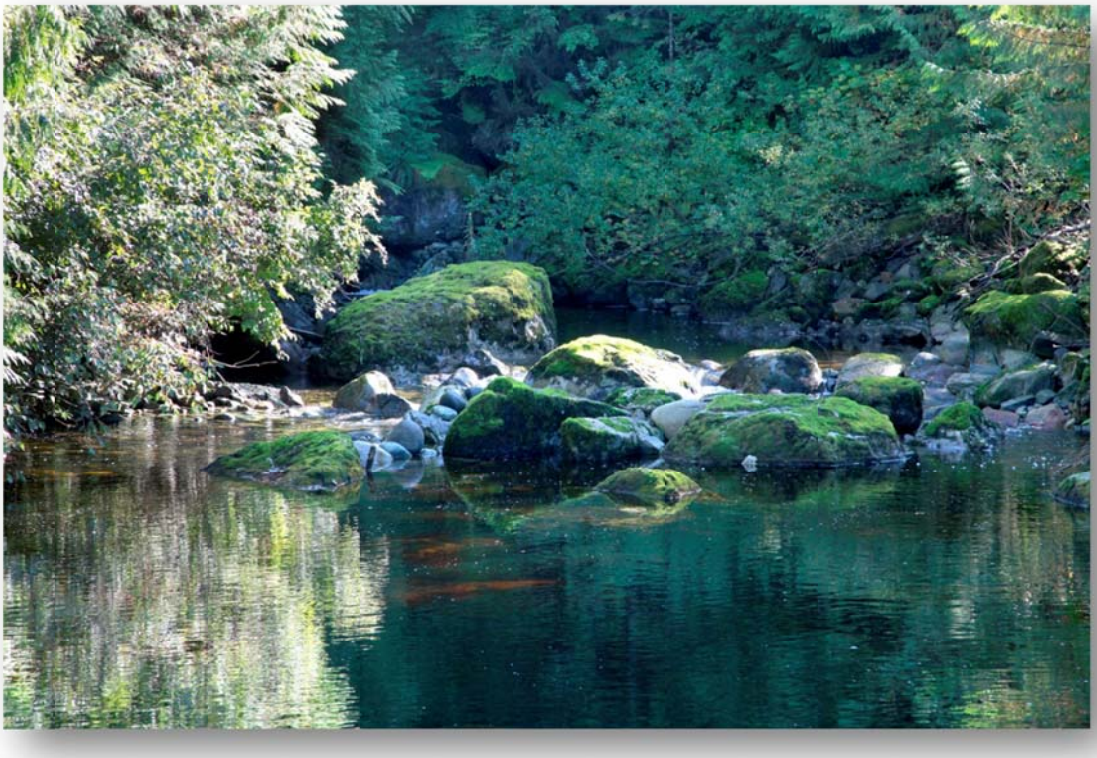
Youngs Creek Hydroelectric Project
FERC No. 10359



WILDLIFE HABITAT MITIGATION PLAN
License Article 403

2013 ANNUAL REPORT

Prepared By:

SNOHOMISH COUNTY PUD
PUBLIC UTILITY DISTRICT NO. 1

Everett, WA

January 2014

Final – This document has been prepared for the District. It has been peer-reviewed by the District for accuracy and formatting based on information known at the time of its preparation and with that understanding is considered complete by the District. The document may be cited as:

Public Utility District No. 1 of Snohomish County (District). 2014. Wildlife Habitat Mitigation Plan (License Article 403) 2013 Annual Report for the Youngs Creek Hydroelectric Project (FERC No. 10359). January 2014.

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LIST OF ACRONYMS AND ABBREVIATIONS

CAPA	Critical Area Protection Area
FERC	Federal Energy Regulatory Commission
Project	Youngs Creek Hydroelectric Project, FERC No. 10359
ROW	right-of-way
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WHMP	Wildlife Habitat Mitigation Plan

1. INTRODUCTION

A license was issued by the Federal Energy Regulatory Commission (FERC) on 5 May 1992 for the Youngs Creek Hydroelectric Project (Project) located south of Sultan, Washington. As part of the Order Issuing License, Article 403 directed that a final wildlife habitat mitigation plan be prepared. In 2011, Public Utility District No. 1 of Snohomish County (the District), current owner of the Project, filed for an amendment to the 1992 Wildlife Habitat Mitigation Plan (WHMP). The amendment was approved by the FERC on 8 September 2011.[1]

The WHMP identifies the elements of habitat protection, revegetation, and enhancements of Project lands (see Figure 1). Also included in the WHMP are ongoing monitoring and reporting. The District is to provide a written report to the FERC every five years, and a written summary report to the Washington Department of Fish and Wildlife (WDFW) and the U.S. Fish and Wildlife Service (USFWS) annually. This WHMP Annual Report details activities that were conducted from December 2012 through November 2013. The Noxious Weed Management Plan was developed as required under the amended WHMP (2011) Section 3.0(a), and is included as Appendix 1. Consultation with the agencies regarding the draft report is included in Appendix 2; response to comments is included in Appendix 3.

[1] (136 FERC ¶ 62,206).

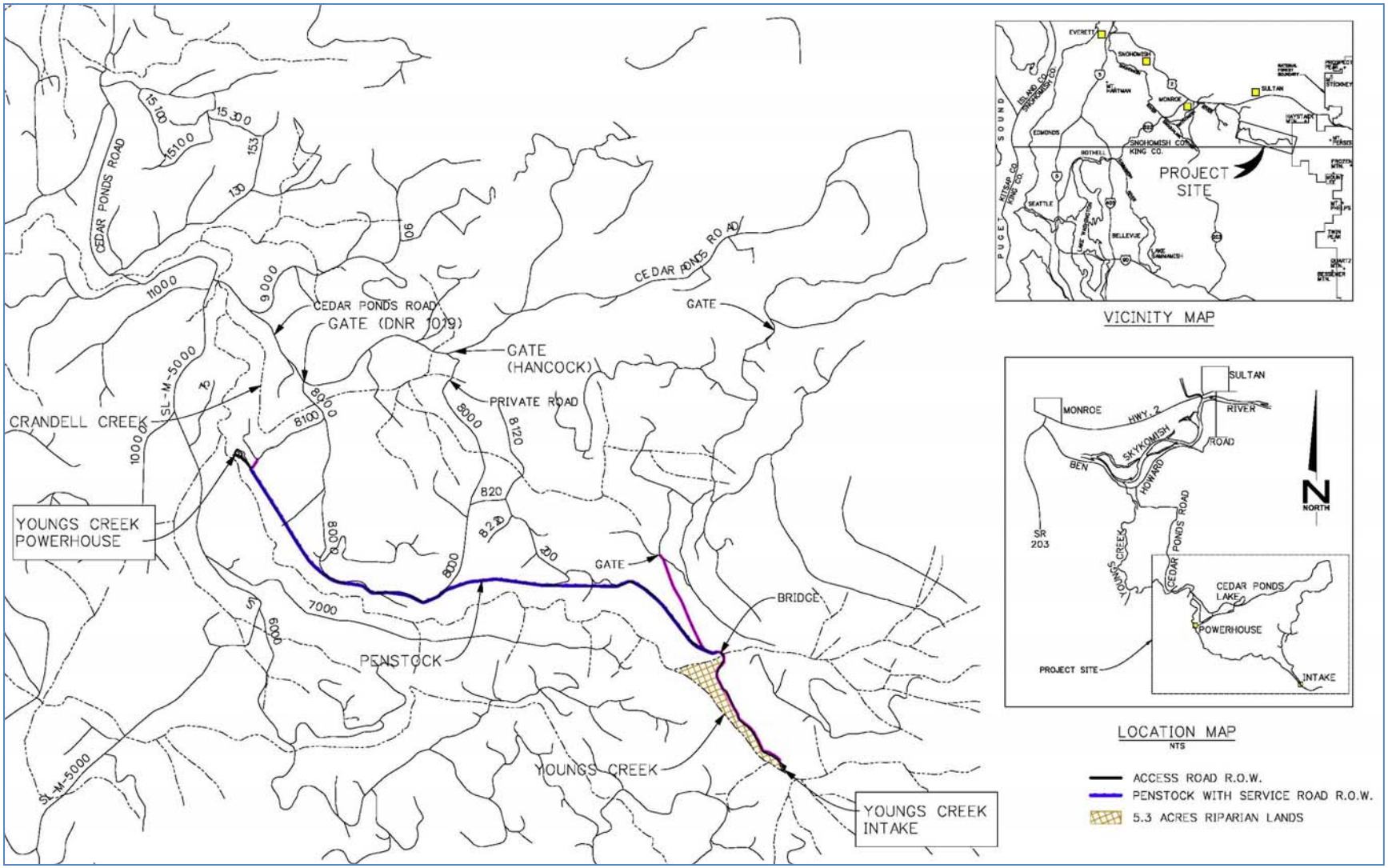

Figure 1. Map identifying penstock and access road right-of-ways.

2. VEGETATION MANAGEMENT AND MONITORING

As specified in the WHMP Section 3.0 (g) and (h), all mitigation areas were monitored during 2013 to ensure the objectives of the WHMP are being met. Monitoring consists of periodic checks on vegetative conditions and documentation of the occurrence of noxious or invasive species. Revegetated and reseeded areas will continue to be checked annually for the duration of the License. Coverage of shrubs and grasses will be visually evaluated, annually. If surveys indicate that coverage by bare ground is estimated to be more than 20 percent, reseeding will occur with the appropriate erosion control seed mix, as noted in the WHMP. Noxious weeds will be controlled during the growing season, as necessary. Monitoring of riparian and upland forest mitigation areas will consist of periodic checks of overstory vegetation.

2.1. Penstock Right of Way Revegetation

The penstock right-of-way (ROW) was re-seeded in the fall of 2011, following completion of construction activities and reseeded on an as needed basis in the spring of 2012. No construction activities occurred during 2013 that precipitated the need to re-seed any portion of the ROW.

2.1.1 Line of Sight Reduction/Establishment of Hiding Cover

Growth of native vegetation will continue to be allowed on the pipeline ROW to the extent practical while permitting visual monitoring of pipeline integrity. Trees will be allowed to grow in the outer 10 feet of either side of the ROW. To date, native shrubs have begun to re-establish themselves in only a few locations along the ROW margins. Efforts to break up the line of sight and increase hiding cover for wildlife utilizing the ROW will be performed in conjunction with other activities; i.e. when heavy equipment is brought to the site for other work, boulders and/or woody debris may be placed as needed to break up the line of sight.

2.1.2 Noxious Weed Management

Pursuant to WHMP Section 3.0(a), a Noxious Weed Management Plan was developed for the Project (Appendix 1). Accordingly, noxious and invasive weed control was performed three times during the 2013 growing season to comply with applicable noxious weed regulations. The primary weeds controlled were Canada thistle and Scotch broom. Under the direction of the District Biologist, broadleaf herbicide was applied by a state-licensed contract herbicide applicator.

2.2. Access Road ROW Revegetation

The rights-of-way along the Project access roads have been revegetated with the grass/forb mix noted in the WHMP. The former laydown areas have been planted with Douglas-fir seedlings.

3. GATES

As required under WHMP Section 3.0(c), gates restricting access to the powerhouse and intake areas have been installed. Access has been provided to the District and its contractors for normal Project maintenance and to surrounding landowners for forest management activities. Unauthorized motorcycles were able to gain access around the main gate near the powerhouse on at least one occurrence during the summer, but no resource damage was documented. Tire tracks indicate the two motorcycles primarily rode in an abandoned gravel pit. Efforts to prevent such access in the future may be made when heavy equipment is on site.

4. AVIAN NESTING AND PERCHING HABITAT

4.1. Nest Boxes

As indicated in the 2012 Annual Report, the entrance holes on several nest boxes were enlarged by Northern Flickers. In late winter 2013, a wooden plate with a hole of the appropriate size was installed over the entrance hole on each of these boxes to restrict the size to the target species; there is no evidence of attempted use by starlings or other non-native species to date.

Nests were checked by the District biologist as required by the WHMP schedule. Tree swallows nested in two of the pole-mounted nest boxes, and began nest construction in a third. To avoid excessive disturbance, eggs and chicks to be counted when discovered in the nests were not moved; as a result, only estimates of numbers of eggs or fledglings are available. A minimum of 5 chicks were seen in one of the nest boxes, and a minimum of 3 in the second box. No dead eggs or chicks were found during subsequent checks; it is therefore presumed that a minimum of 8 tree swallows fledged from the 2 boxes. Monitoring associated with other nest box programs suggests that the installation of additional boxes should not be considered until a threshold of 50 to 80 percent usage is attained (Bellrose & Holm, 1994). As such, no additional box installations are planned at this point.

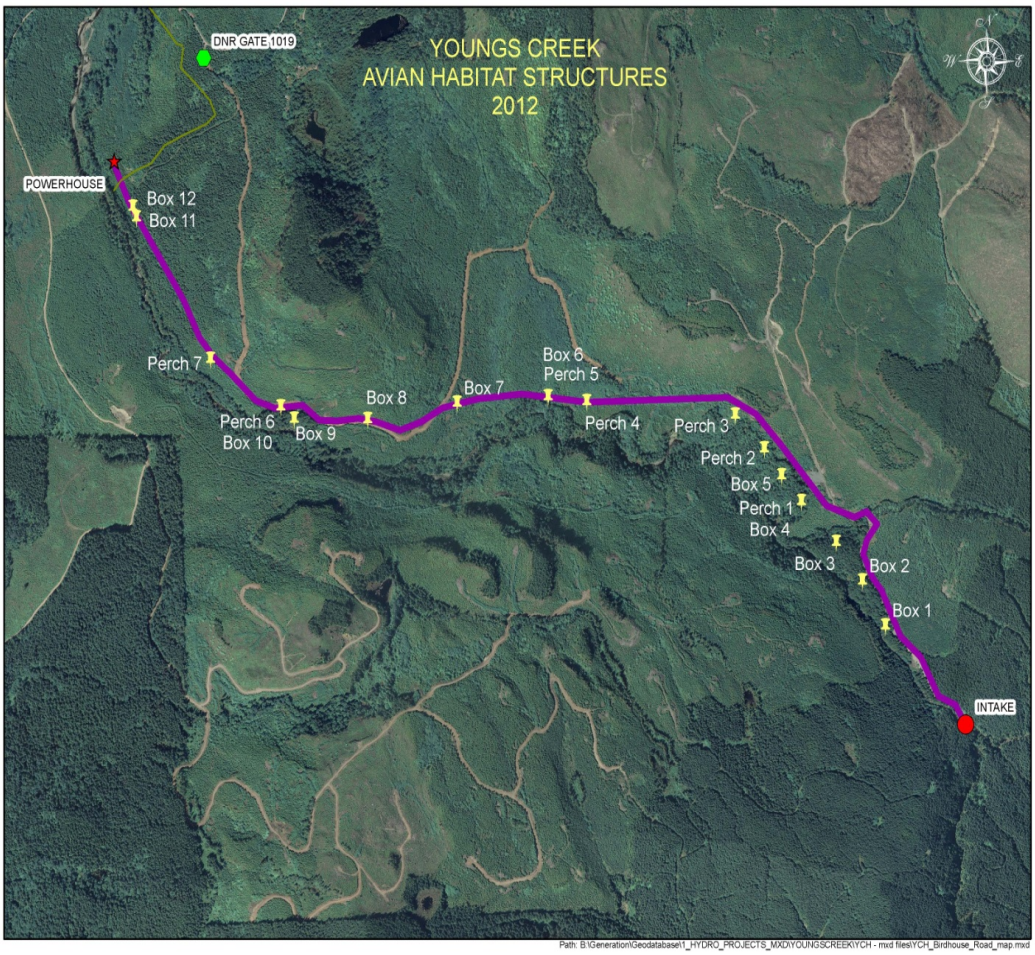

Figure 2. Map showing locations of nest boxes and perch poles.

Table 1. Nest box monitoring results.

Nest Box Details			
Box #	Style	Location	2013 Monitoring Results
Box1	Audubon	Tree mount in CAPA	5/1/13 - No use. 5/16/13 - No use. 5/29/13 - No use. 6/11/13 – No use. 7/1/13 – No use. 7/22/13 – No use. 8/29/13 – No use.
Box2	Bluebird Trailbox	Tree mount in CAPA	5/1/13 - No use. 5/16/13 - No use. 5/29/13 - No use. 6/11/13 – No use. 7/1/13 – No use. 7/22/13 – No use. 8/29/13 – No use.
Box3	Audubon	Tree mount in CAPA	5/1/13 - No use. 5/16/13 - No use. 5/29/13 - No use. 6/11/13 – No use. 7/1/13 – No use. 7/22/13 – No use. 8/29/13 – No use.
Box4	Woodlink	Co -mounted on perch pole	5/1/13 – 8+ swallows flying around. Box clean & dry. 5/16/13 - No use. 5/29/13 - No use. 6/11/13 – start of nest, no eggs. 7/1/13 – nest material still present. 7/22/13 – removed partial nest; cleaned box. 8/29/13 – No successful use. Partial nest constructed; no evidence of egg laying activity. (This box was used in 2012.)
Box5	Bluebird Trailbox	Solo mounted on pole	5/1/13 – Entrance hole enlarged again. New face plate added. 5/16/13 - No use. 5/29/13 - No use. 6/11/13 – nest material, no feathers. 7/1/13 – 5 or 6 partially feathered blind chicks. Adult flying nearby. 7/22/13 – nest w/ feces on top; no eggs or fragments. 8/29/13 – Cleaned box. Successful tree swallow nest. Minimum 5 chicks observed.
Box6	Bluebird Trailbox	Co -mounted on perch pole	5/1/13 - New face plate added. No use. 5/16/13 - No use. 5/29/13 - No use. 6/11/13 – No use. 7/1/13 – No use. 7/22/13 – No use. 8/29/13 – No use.

Box7	Audubon	Solo mounted on pole	5/1/13 - No use. 5/16/13 - No use. 5/29/13 - No use. 6/11/13 – No use. 7/1/13 – No use. 7/22/13 – No use. 8/29/13 – No use.
Box8	Coveside Slant front	Solo mounted on pole	5/1/13 – Small amount nesting material; pair of tree swallows flying over and peering into box. 5/16/13 – additional nesting material added. 5/29/13 – 6 swallow eggs, no adults around. 6/6/13 – box found open with 5+ eggs/fragments broken at base of pole. 6/11/13 – Old nest remnants inside. 7/1/13 – adult tree swallow peeking out. Multiple naked fledglings 7/22/13 – nest w/ feces covering top. No eggs or fragments. 8/29/13 - Cleaned out. Successful tree swallow nest. Minimum 3 chicks observed. (This box was also used in 2012.)
Box9	Woodlink	Mounted on mature riparian tree	5/1/13 - No use. 5/16/13 - No use. 5/29/13 - No use. 6/11/13 – No use. 7/1/13 – No use. 7/22/13 – No use. 8/29/13 – No use.
Box10	Woodlink	Co -mounted on perch pole	5/1/13 - No use. 5/16/13 - No use. 5/29/13 - No use. 6/11/13 – No use. 7/1/13 – No use. 7/22/13 – No use. 8/29/13 – No use.
Box11	Coveside Slant front	Solo mounted on pole	5/1/13 - No use. 5/16/13 - No use. 5/29/13 - No use. 6/11/13 – No use. 7/1/13 – No use. 7/22/13 – No use. 8/29/13 – No use.
Box12	Coveside Slant front	Solo mounted on pole	5/1/13 - No use. 5/16/13 - No use. 5/29/13 - No use. 6/11/13 – No use. 7/1/13 – No use. 7/22/13 – No use. 8/29/13 – No use.

TOTAL: 2 of 12 nest boxes successfully used, a third had a partially constructed nest; 8 or 9 fledglings produced.

4.2. Raptor Perch Poles

A total of 7 raptor perch poles are located along the penstock ROW, based on field consultation between WDFW and District biologists. Perch poles are monitored annually, concurrent with monitoring of nest boxes. During site visits in 2013, the immediate vicinity of the perch poles was inspected for signs of raptor use, including whitewash or owl pellets, but none was noted (Table 2).

Table 2. Perch pole monitoring results.

Pole #	2013 Results
RP1	No use.
RP2	No use.
RP3	No use.
RP4	No use.
RP5	No use.
RP6	No use.
RP7	No use.

5. MITIGATION LANDS

As required under WHMP Section 3.0(e), the 5.3 acres of mitigation lands were put into Critical Area Protection Area (CAPA) status in fall 2009 (Figure 1).[2] Visual observations of the overstory are conducted concurrent with nest box and raptor perch pole checks. The site consists of mature second growth forest, approximately 70 years old, on a steep hillside above Youngs Creek. Diameters range from approximately 13 inches to 25 inches. A component of snags and coarse woody debris is present as well. Understory exists primarily as sword fern and local patches of Devil's club. Little change has occurred since the initial purchase, therefore no intervention is deemed necessary at this time.

6. LITERATURE CITED

Bellrose, F.C. and D.J. Holm (eds.) 1994. Ecology and Management of the Wood Duck. Stackpole Books, Mechanicsburg, PA. 588p.

[2] The 5.3 acres are recorded as CAPA under Snohomish County number 200910160192. The Snohomish County Assessor's property tax parcel/account number is 27083300100200 for this land.

APPENDIX 1

Noxious Weed Management Plan

Youngs Creek Hydroelectric Project

Noxious Weed Management Plan

Prepared by:

Public Utility District No. 1 of Snohomish County

Everett, Washington

December 2013

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1. PURPOSE

This Noxious Weed Management Plan (Plan) describes Public Utility District No. 1 of Snohomish County's (the District) efforts to manage noxious and invasive weeds at the Youngs Creek Hydroelectric Project (Project). This plan details the District's strategy for controlling and containing the spread of Class A, Class B Designate, and Snohomish County Selected noxious weeds occurring within the Youngs Creek Project boundary ("Project lands") throughout the term of the license. The plan also describes the District's proposed voluntary management of other invasive weeds on Project lands.

The Plan includes the following elements:

- Summary of existing noxious and invasive weeds present on Project lands.
- Prevention strategies (*e.g.*, weed prevention practices for ground disturbing work, revegetation methods, and education information for Project employees).
- Monitoring and implementation schedules.
- Annual updates of weed management activities, including a summary of weed management actions taken since the previous report, periodic (five-year) review of Plan accomplishments and update of lists and appendices. This information will be provided to FERC as part of the WHMP five-year report.

2. RESPONSIBILITIES

District biologists[1] will oversee the implementation of the Plan and prepare summary reports of management activities. The District will be responsible for coordination with District crews implementing weed management methods and training of crews in the use of the most appropriate control and prevention measures.

Documentation of weed management activities will be compiled annually by the District. Management activities and updates will be discussed within the annual reports prepared as part of the WHMP reporting process. Review meetings will be held by the District upon request by the USFWS or WDFW at any time.

3. SUMMARY OF NOXIOUS WEEDS AT PROJECT

Ongoing weed management activities address noxious weeds at Project facilities and along Project roads. As of 2013, non-native hawkweeds, Bull thistle and Canada thistle are known to occur on Project lands and are targeted for control. In addition, Scotch broom and Butterfly bush are managed voluntarily by the District.

[1] The term "District biologist," includes wildlife biologists that are employed by or under contract to the District. The term District implies that work may be done by someone other than a wildlife biologist, but is directly supervised by a wildlife biologist.

Any species of Class A, Class B designate, or County selected noxious weeds that are documented on Project lands during a given year will be incorporated by reference into this Noxious Weed Management Plan and managed in accordance with applicable Washington State law and County regulations.

3.1. Current Status of Noxious and Invasive Weeds on Project Lands

No Class A weeds are known to exist on Project lands.

The Class B undesignated species Scotch broom was noted in a few localized areas along the pipeline right-of-way (ROW).

Two species from the County Selected Class C list were observed along the pipeline ROW. Bull thistle and Canada thistle were common and widespread along the lower 2.5 miles of ROW.

A mature individual Butterfly bush, which is an unselected Class B species, was reported from a borrow area adjacent to the ROW.

3.2. Weed Management Methods

Weeds at the Project will be managed through a variety of integrated weed management methods implemented by District staff. When necessary, herbicides are used to treat individual plants and populations, but every attempt is made to preserve the adjacent desirable vegetation. Mowing of larger weed populations or hand cutting/pulling of isolated plants will occur whenever practical. Recurring infestations along segments of the pipeline ROW or access roads will be treated one or more times during the growing season, as necessary to prevent seed production.

4. PREVENTION

Preventing the introduction and spread of weeds relies on early detection, effective treatment, ongoing education of land managers about weed issues, and proper planning and management of ground- and habitat-disturbing activities.

4.1. Weed Prevention Practices for Construction and Maintenance Projects

One of the most effective tools for reducing the introduction and spread of weeds is careful planning and management of ground-disturbing activities conducted as part of construction, maintenance, or restoration projects. Weeds are readily spread from infested to non-infested areas on the tires, tracks, or blades of heavy equipment. Trucks, off-road vehicles, and even hand tools or boots can transport weed propagules. Contaminated soil and rock fill, mulch, and seed mixes are also often responsible for new weed infestations. Conversely, the availability of heavy equipment can be an opportunity for the weed manager to reduce existing populations at a reduced cost. The Plan manager should be an active participant, with Project engineers and design professionals, throughout the construction planning and implementation process. By incorporating weed prevention design considerations and practices, weed management costs can be reduced.

4.2. Disposal of Weed Material

Plant material from noxious weed species must be disposed of in a way that ensures that no seeds, roots, or other portions of the plant capable of reproduction are spread. Plant material

should be bagged on site if any flowers or seeds are present; paper or plastic bags can be used. Some species, particularly members of the aster family, can produce seed from immature heads on cut plants; these plants should be bagged even if only in bud. Plant material should be transported to a contained disposal site or sanitary landfill. Soil excavated from sites with noxious weed populations should not be transported to other sites or used as topsoil, to avoid spreading weed seeds or other propagules. If removal from the site is required, the soil can be disposed of at a contained site or sanitary landfill. Alternatively, noxious weed material or infested soil may be buried below a 24-inch or greater layer of weed free soil. This should be accomplished as close to the originating site of the weeds as possible, to avoid transport of the species to new areas. This method may not be 100 percent effective, as seed or other propagules may be inadvertently deposited in surface layers. Burial is not recommended for invasive knotweed due to its ability to resprout from extremely small pieces of plant material.

4.3. Education

Education and information programs can be used to expand knowledge of weed identification, weed transport, and basic weed prevention practices. Weeds are not transported only via construction activity, but also by passenger vehicles, off-road vehicles, and wildlife. District biologists should routinely update training in noxious weed identification and weed prevention and treatment methods, particularly proper disposal of weed material.

4.4. Revegetation

Revegetation of disturbed soils with fast-growing, desirable plant species is a primary method of preventing weed establishment. Soil disturbance can stimulate germination of weed seed that has accumulated in the soil as well as provide substrate for newly introduced seed. Short term erosion control vegetation can provide protection against weed establishment. The District will revegetate sites where Project-related activities result in substantial areas of habitat and soil disturbance, and where revegetation is practicable (*e.g.*, sites such as rock quarries are not included). Revegetation actions will reflect consideration of each site's vegetative condition and future land use, adjacent land uses, habitat management objectives, and site maintenance requirements.

The use of native plants will be considered for sites located in relatively undisturbed, native plant-dominated communities. Non-invasive, non-native plant species will be used where 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 and maintenance activities (*e.g.*, forage production, erosion control, temporary cover, soil conditioning, and weed suppression.).

Two seed mixes suitable for general revegetation of native habitats on Youngs Creek Project lands are identified in the WHMP's Section 2.1.3.

5. MONITORING AND REPORTING

5.1. Site-Specific Monitoring

Monitoring of weed populations on Project lands is conducted by District staff. Locations of weed infestations are noted by District staff and treatment measures are implemented as soon as

practicable. Road and pipeline ROWs are patrolled multiple times during the growing season to identify areas where weed control is required.

Currently, District staff note the locations of weed infestations on Project maps; documenting the dates and specific information related to implementation of control measures. Weed monitoring and treatment activities are reported as part of the WHMP reporting process.

5.2. General Monitoring

Incidental observations of weeds on Project lands are reported by staff conducting other activities on Project roads, at Project facilities, and on other Project lands. A primary source of weed information is the District biologists' regular field review of Project lands. Weed sightings will be referred to the District's weed manager so that treatment action can be implemented as soon as possible.

In addition to the target weed species listed in Section 3.1, any species of Class A, Class B designate, or County selected noxious weeds that are reported on Project lands during a given year will be incorporated into the Plan and managed in accordance with applicable Washington State law and Snohomish County regulations.

5.3. Reporting

As part of the WHMP reporting process as identified in the WHMP's Section 3.0(g), an annual update will be prepared summarizing the noxious weed treatment and monitoring activities of the previous year and any updates to the Plan or its appendices.

A periodic (five-year) review of Plan accomplishments and update of target species will be provided to FERC as part of the WHMP five-year report.

6. MODIFICATION OF NOXIOUS WEED MANAGEMENT PLAN

The Plan is intended to guide the management of noxious weeds throughout the term of the license. Modifications to the Plan will be proposed as part of the WHMP reporting process and provided to the WDFW and USFWS. The District Biologist will consult, as needed, with the Snohomish County Noxious Weed Board Coordinator on proposed changes to the Plan.

Weed management is dynamic in terms of regulatory requirement, weed occurrence, site conditions, and treatment methodology. Specific elements of the Plan require annual review and update, including the list of target noxious weed species required to be managed and the list of weed species occurring within the Project boundary. The list of sites to be treated and/or monitored and the list of available treatments and prevention practices will also require periodic review and update, although not necessarily on an annual basis.

6.1. Five-Year Plan Review

Every five years, the District will review the Plan to reflect changing management priorities and the results of ongoing treatment and monitoring. These modifications will be reflected in the implementation and monitoring schedules for the next five-year period.

7. IMPLEMENTATION AND MONITORING SCHEDULE

Monitoring of Project roads, facilities, and treated weed sites will be conducted regularly during the growing season by trained District personnel. Newly treated sites as well as those weed sites currently under management on Project lands will be monitored and retreated as necessary. In addition to monitoring of known weed infestations, District Biologists and other field personnel will conduct general monitoring of Project lands in conjunction with other tasks on site. During the course of field activity, staff will note and report the occurrence of new infestations of target weed species on Project lands as part of the WHMP reporting.

8. WEED PREVENTION PRACTICES

- Consider weed risk factors during planning of proposed ground and habitat disturbing projects, such as road and facility construction or maintenance, and fish and wildlife restoration projects. Consult weed inventory maps to determine known occurrences of regulated noxious weed species within the Project boundary.

- Clarify the roles and responsibilities of all parties involved in day-to-day maintenance performed by District staff.

- Utilize performance bonds, responsibility clauses, or accountability statements for contractors and subcontractors to effect weed management to a desired condition.

- Specify in all relevant contracts that heavy equipment, hand tools, personal or contractor vehicles, and off-road vehicles brought onto the Project for construction or maintenance projects be free of all dirt, mud, and plant parts.

- Specify in all relevant contracts that all heavy equipment, including mowing equipment, excavators, trucks, personal vehicles, and off-road vehicles used in a weed-infested site be power washed to remove dirt, mud, and plant parts before moving to a new work area to avoid spreading the infestation. Hand tools, small power tools, and personal gear should also be inspected and manually cleaned to remove all dirt, mud, and plant parts before being transported to a new site. To the extent practical, District staff will inspect all District equipment brought onto Project lands and direct the removal of dirt, mud and plant parts as needed. Exception to this practice may be made during emergency repairs.

- Seek to minimize ground and habitat disturbance, and removal of overstory shrubs and trees, to reduce opportunity for weed establishment, when feasible and not required for other project purposes or safety.

- When feasible, defer disturbance of weed-infested sites until weed treatments have been implemented and allowed appropriate time to take effect. When work in untreated, weed-infested areas is necessary, work from the outer edges of the infestation inward if possible, to avoid spreading propagules.

- When feasible, incorporate weed removal into projects involving excavation; utilize heavy equipment to remove weed infestations, provided that appropriate disposal sites can be secured.

- District biologists will work with District staff and contractors conducting construction and maintenance work in weed-infested areas to, when feasible, schedule the work to reduce potential spreading of weeds. This may involve conducting the work outside the flowering/seed production season, or controlling weeds prior to work being conducted. When this is not feasible, equipment will be washed down prior to leaving each weed-infested area.

- Dispose of noxious weed material and weed-contaminated soils in a way that ensures that no seeds, roots, or other portions of the plant capable of reproduction, are spread. Material may be disposed of at an approved landfill or contained disposal site. District staff will coordinate with District Biologists regarding appropriate weed disposal.

- Provide contractors, survey crews, inspectors, etc. with weed awareness information and weed transport prevention techniques.

- Specify that contractors use regulated commercial gravel pits and fill sources to reduce the potential for weed transport onto Project lands. Specify that any gravel pit or fill source may be inspected to identify weed contaminated sources and may be rejected for use if unsatisfactory conditions are found. Treat weeds at infested sites prior to use or transport. Additional information on weed free gravel http://www.nwcb.wa.gov/nwcb_hay.htm#gravel

- To the extent practicable, require that all mulch and straw be weed-free. The Washington Wilderness Hay and Mulch (WWHAM) program now provides a list of growers whose hay and straw crops have been certified to North American Weed Management (NAWMA) standards. WWHAM/ NAWMA hay and straw bales will have a self-adhesive, tamper-proof WWHAM certification tag attached to the bale twine, or will have at least one strand of purple and yellow proprietary twine encircling the bale. A list of WWHAM producers and sellers is provided at: http://www.nwcb.wa.gov/nwcb_hay.htm.

- Specify in all construction specifications that all seed used on site is certified “free of noxious weeds”.

- Actively revegetate all disturbed sites, using a native seed mix, or a non-native seed mix comprised of non-invasive species (See section 2.1.3 of the WHMP). Apply mulch to conserve moisture and protect seed and soil. These seed mixes include relatively short-lived species that are intended to be replaced over time by natural seeding of natives.

8.1 Management Methods for Canada Thistle (*Cirsium arvense*)

Known Sites: Canada thistle was documented in scattered locations along the entire length of the penstock ROW. Most infestations were 100 square feet or less, and all were treated with broadleaf herbicide.

Habitats and Threats: Canada thistle is a widespread invader of croplands, rangelands, pasture, roadsides, lawns, and other disturbed, open, moist habitats. It also spreads to undisturbed sites via rhizomes, where it competes effectively for light, moisture, and nutrients and forms extensive infestations. Canada thistle is tolerant of a wide range of soil types but is intolerant of shade.

Reproduction and Flowering Period: Canada thistle spreads primarily by rhizomes, which can grow up to 20 feet horizontally in one season. Roots have been shown to regenerate successfully from very small pieces of rhizome. Canada thistle spreads secondarily by seed, and a single plant produces an average of 1,500 seeds. Because Canada thistle plants are either male or female, a population that has developed from a single rhizome will not produce seed. Flowers are produced in the Project vicinity beginning in June and extending through late summer.

Identification: First year Canada thistle plants form a basal rosette of linear leaves with lobed, spiny edges. Mature plants have leafy stems with lobed, wave-edged, spiny leaves. Flower heads are typically smaller than other thistles, supporting terminal pink to lavender flowers. Because Canada thistle spreads by rhizomes, extensive colonies are a distinguishing characteristic of the species.

Available Management Methods:

***Prevention*:** Specifying weed-free mulch, straw, seed and fill whenever possible will help to limit the introduction of seed source. Vehicles and equipment must be clean of dirt and any plants parts prior to entering the project lands. Additionally, vehicles and equipment and boots should be cleaned regularly when working in infested areas. Check for budding and early flowering plants in spring and treat before blooming.

***Manual*:** Hand pulling, digging, or grubbing of plants is effective for very small populations and must be repeated for several years. The entire plant, including the roots, must be removed, to avoid resprouting of rhizome fragments. Pulling plants at the bud stage is most detrimental to the plant. If flower heads have formed, they should be bagged and destroyed to prevent seed set and/or dispersal.

***Mechanical*:** Tillage of infested sites can be effective if repeated at 21-day intervals for at least two growing seasons. Because new plants sprout from rhizome fragments, less frequent tillage will lead to an increase in plants. Repeated mowings can be used to prevent seed set and to weaken stems, but generally does not kill the plants. This may be an effective short term control on low density infestations.

Cultural: Reseeding of tilled or herbicide-treated areas with fast-growing grasses and/or forbs can help establish a desired plant community. Shade cloth could be used experimentally to

determine its effectiveness at killing Canada thistle. Because the shade cloth will kill associated plants, this treatment is more appropriate for dense patches of Canada thistle than for sparse infestations mixed with desirable native plant species. Shade cloth should be placed to cover the infestation plus a border of one to two feet and left in place for one to two growing seasons. The status of the infestation should be monitored periodically to determine if roots and stolons have been killed and to remove any stolons extending out around the edges. To prevent reinfestation of the open soil, treated sites should be revegetated with desirable species. Shrubs can be planted through the shade cloth if a biodegradable product is used; otherwise a grass/forb seed mix appropriate for roadsides should be planted and mulched after removal of the cloth.

***Chemical**:* Chemical control can be effective against Canada thistle, especially in combination with replanting of desired species. Herbicides that act only on broad-leaved species are recommended for sites where desirable grasses comprise a significant portion of the existing plant community. Multiple herbicide applications may be needed if a healthy plant community is not immediately re-established on the site; generally, herbicide application is most effective in the spring.

***Biological*:** Three biological controls are currently listed for Canada thistle in the Pacific Northwest Weed Management Handbook; two of these species are available in Washington. The two available agents received individual control ratings of 'good' and 'undetermined'. Biological control agents are typically only cost-effective on very large (many acres in size) populations; results may be sporadic and localized. Biological agents may reduce the density and vigor of a population, but are not likely to eradicate it.

Management Recommendations for Canada thistle at the Project:

Targeted application with a broadleaf herbicide, applied by a state licensed applicator ensures the quickest and most thorough kill of the target weed.

Hand pull small populations, removing entire plant and bagging any flower/seed stalks. Pull plants when soil is moist to facilitate removal of entire root.

Larger infestations in open areas may be mowed to prevent seed production. Multiple mowings may be necessary during the growing season.

To reduce re-establishment of Canada thistle, revegetate any sites where removal activities result in ground or vegetation disturbance of one square meter or more. Mulch and/or reseed with desired fast-growing species such as grasses. Because Canada thistle is shade-intolerant, planting of trees and shrubs can be considered on a site-by-site basis.

Long-Term Management Goal: Canada thistle is a Class C species selected for control (per WAC 16-750) by the Snohomish County NWCB. Control of Canada thistle (per WAC 16-750), with eventual reduction, is the Project-level goal.

Five-Year Management Objectives:

- Continue ongoing treatment along Project roads, the penstock right-of-way, and Project facilities. Continue to monitor these sites annually and retreat as necessary.
- After two consecutive years of monitoring show no presence of Canada thistle, reduce monitoring frequency and continue to evaluate site as part of ongoing general monitoring.

References:

King County Noxious Weed Control Board. 2007. Weeds Fact Sheets web page, Canada thistle fact sheet. http://dnr.metrokc.gov/wlr/lands/weeds/pdf/CanadaThistle_factsheet.pdf. April 2007. King County Noxious Weed Control Board, Seattle, WA

Oregon State University. 2008. Pacific Northwest Weed Management Handbook, online edition. http://pnwpest.org/pnw/weeds?01W_INTR06.dat

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Sheley, R.L. and J.K. Petroff (eds.) 1999. Biology and management of noxious rangeland weeds. Oregon State University Press, Corvallis, OR. 438p

Washington State Noxious Weed Control Board. 2008. Washington's Noxious Weed List Written Findings web page. Written findings of the WSNWCB for Canada thistle. http://www.nwcb.wa.gov/weed_info/Cirsium_arvense.html . Washington State Noxious Weed Control Board, Olympia, WA.

Whatcom County Noxious Weed Control Board. 2008. Whatcom Weeds Fact Sheets web page, Canada thistle fact sheet. http://www.co.whatcom.wa.us/publicworks/pdf/weeds/canada_thistle2.pdf Whatcom County Noxious Weed Control Board, Bellingham, WA.

8.2 Management Methods for Bull Thistle (*Cirsium vulgare*)

Known Sites: Bull thistle was recorded in scattered locations along the entire ROW, as individuals or small groups of plants.

Bull thistle is controlled on Project lands primarily by application of a broadleaf herbicide, as well as by hand pulling and mowing along roadsides.

Habitat and Threats: Bull thistle grows in a variety of soil types and is commonly found in disturbed soils. It occurs in meadows, open riparian areas, agricultural fields, pastures, roadsides, and other open habitats. Bull thistle is intolerant of heavy shade.

Reproduction and Flowering Period: Bull thistle is a biennial species that reproduces exclusively by seed. It forms a basal rosette during the first growing season, followed by a flowering stalk in mid-summer of the second season. Each plant can produce up to 4,000 seeds, but no rhizomes, root fragmentation, or other vegetative reproduction occurs.

Identification: Bull thistle is a biennial; basal rosettes are formed the first year and flowering heads form at the ends of branches during the second year. Leaves are hairy above and below, deeply lobed, and edged with sharp spines. Stems are also spiny. Although numerous individual plants may be present at an infested site, bull thistle does not spread by rhizomes, and does not form extensive colonies.

Available Management Methods:

Prevention: Specifying weed-free mulch, straw, seed and fill whenever possible will help to limit the introduction of seed source. Vehicles and equipment must be clean of dirt and any plants parts prior to entering the project lands. Additionally, vehicles and equipment and boots should be cleaned regularly when working in infested areas. Check for budding and early flowering plants in spring and treat before blooming.

Manual: Hand pulling or digging can be performed; this technique is most readily performed on young plants with a small taproot. The taproot must be cut at least an inch below the ground surface to kill the plant. The resulting disturbed soil may allow sprouting of Bull thistle seeds. If flower heads have formed, they should be bagged and destroyed to prevent seed set and/or dispersal.

Mechanical: Cutting the flowering stems at the soil surface when in bud stage can result in some mortality; plants thus treated should be rechecked later in the growing season and the following season. Repeated mowing can be effective at preventing seed production, but will not necessarily kill the plant. Mowing should be performed once between the bolting and flowering stages and again one month later. Repeated cultivation can also be used to effectively control bull thistle.

Biological: The Bull thistle gall fly has been used as a biological control in Washington with fair results. Whatcom County NWCB notes that this agent can reduce seed production up to 60

percent. Biological agents are typically only cost-effective for large infestations; they may reduce the density and vigor of a population, but are not likely to eradicate it.

***Chemical**:* Herbicides can be effective in controlling Bull thistle, especially in combination with replanting of desired species. Herbicides that act only on broad-leaved species are recommended for sites where desirable grasses comprise a significant portion of the existing plant community. For best results, herbicide should be applied to the rosette stage. When non-selective herbicides are used, apply to rosettes in fall when surrounding plants may be less susceptible to the herbicide.

***Cultural*:** Reseeding of treated areas with fast-growing grasses and/or forbs can help establish a desired plant community. Bull thistle does not tolerate deep shade, and establishment of shrub and tree cover can reduce infestations.

Management Recommendations for Bull thistle at the Project:

Targeted application with a broadleaf herbicide, applied by a state licensed applicator ensures the quickest and most thorough kill of the target weed.

Remove individual plants in small infestations by digging the taproot completely out and bagging and destroying any flowering heads; remove plants before bud formation to reduce potential for seed formation.

Control larger infestations in open areas by mowing; repeated mowings may be necessary during the growing season.

To reduce re-establishment of bull thistle from seed, revegetate any sites where removal activities result in ground disturbance of one square meter or more. Mulch and/or reseed with desired fast-growing species such as grasses.

Long-Term Management Goal: Bull thistle is a Class C species selected for control (per WAC 16-750) by the Snohomish County NWCB. Control of Bull thistle (per WAC 16-750), with eventual reduction, is the Project-level goal.

Five-Year Management Objectives:

- Continue ongoing treatment along Project roads, the penstock ROW, and Project facilities. Continue to monitor these sites annually and retreat as necessary.
- After two consecutive years of monitoring show no presence of Bull thistle, reduce monitoring frequency and continue to evaluate site as part of ongoing general monitoring.

References:

King County Noxious Weed Control Board. 2007. Noxious Weed Control Program web page, Bull thistle best management practices bulletin. http://dnr.metrokc.gov/wlr/lands/weeds/pdf/bull-thistle-control.pdf . January 2007. King County Noxious Weed Control Board, Seattle, WA.

Oregon State University. 2008. Pacific Northwest Weed Management Handbook, online edition. http://pnwpest.org/pnw/weeds?01W_INTR06.dat

Public Utility District No. 1 of Snohomish County and Smayda Environmental Associates. 2009. Henry M. Jackson Hydroelectric Project Noxious Weed Management Plan.

Whatcom County Noxious Weed Control Board. 2008. Whatcom Weeds Fact Sheets web page, Bull thistle fact sheet. http://www.co.whatcom.wa.us/publicworks/pdf/weeds/bull_thistle2.pdf. Whatcom County Noxious Weed Control Board, Bellingham, WA.

8.3 Management Methods for Scotch Broom (*Cytisus scoparius*)

Known Sites: Scotch broom was documented in a borrow pit along the penstock ROW, approximately half way up the pipeline from the powerhouse. Numerous mature plants were found around the edges of the pit, with many more seeding into the newly abandoned area.

Habitat and Threats: Scotch broom is a drought-tolerant shrub which produces large numbers of long-lived seeds. It is typically found in well-drained soils on sunny sites, but is tolerant of a wide range of soil conditions. Seeds are dispersed explosively from the plants, transported by birds and ants, and may be unintentionally relocated through vehicle tires, heavy equipment, and in contaminated soils. Seeds and other parts of the plant are toxic to humans, horses, and other livestock. The species can invade open habitats and cleared forestland, excluding many native plant species. In large expanses of dense cover, it may increase the severity of fire events.

Reproduction and Flowering Period. The primary means of reproduction in Scotch broom is by seed. Flower production typically peaks between April and June, although small numbers of flowers can be produced at other times during the growing season. A single plant can produce up to 10,000 seeds, which mature in late summer. Seeds germinate in spring; however many seeds lay dormant in the soil and can remain viable for up to 60 years.

Identification: Scotch broom is an evergreen shrub that can reach a height of ten feet. Branches are upright, angled and dark green; leaves are three parted or single. Yellow flowers are produced in spring and early summer.

Available Management Methods:

Prevention: Specifying weed-free mulch, straw, seed and fill whenever possible will help to limit the introduction of seed source. Vehicles and equipment must be clean of dirt and any plants parts prior to entering the project lands. Additionally, vehicles and equipment and boots should be cleaned regularly when working in infested areas. Check for budding and early flowering plants in spring and treat before blooming.

***Manual*:** Hand pulling or grubbing can be effective for small infestations, particularly of young plants. Pull or dig up entire plant, including roots. A Weed Wrench™ or similar tool is recommended for medium to large plants with well-developed root systems. Plants are easiest to pull in the spring, while the soil is still moist. Seeds in the soil will resprout for several years, so repeated treatments will be necessary.

Mechanical: Tilling and bulldozing of large Scotch broom sites is discouraged due to the propensity for seed in the soil to germinate after soil disturbance. Cutting, mowing, or other mechanical methods can be used to manage flower and seed production, but the plants are not likely to be killed. Cutting late in the summer after seeding will use more of the plant's root reserves, and may reduce resprouting. Plants with a stem diameter of greater than 2 inches are most susceptible to mortality through cutting. Surviving stems and seed in the soil will resprout for several years, so repeat treatment will be needed.

Cultural: Application of weed free mulch to sites where Scotch broom has been treated will help to reduce germination of seed. Reseeding of treated areas with fast-growing grasses can help establish a desired plant community and reduce Scotch broom seed sprouting.

Chemical*:* A variety of chemical control options are available for Scotch broom, including both selective and non-selective herbicides. If non-selective herbicides are used, reseeding of the site with appropriate species is necessary for effective site restoration. Application of herbicide to cut stems reduces resprouting.

Biological: Goats will graze on Scotch broom plants and chickens will consume the seeds. Initial testing is being conducted in Washington State on two insect biological agents, a beetle and a seed weevil, for their effectiveness against Scotch broom. Results of these tests are preliminary.

Disposal Considerations: Scotch broom seeds are long-lived and tolerant of extremely high temperatures. Plant parts, including seeds, should be disposed of in a landfill or other contained disposal facility.

Management Recommendations for Scotch broom at the Project:

Targeted application with a broadleaf herbicide, applied by a state licensed applicator ensures the quickest and most thorough kill of the target weed.

Hand pull stems less than ½ inch diameter. For small infestations, use Weed Wrench™ or equivalent tool to remove plants with stem diameters between 1/2 and 2 inches. For larger infestations, and plants with stems greater than 2 inches diameter, cut or mow to remove top of plant. Stem cutting and/or mowing may be followed with herbicide treatment of cut stems wherever permissible in accordance with regulations and label directions.

Repeat treatment at least once each year for several years, until resprouting plants have been killed and seed bank is diminished.

Minimize soil disturbance to the extent practicable during treatment to reduce the potential for seed germination. Actively revegetate sites where Scotch broom removal results in ground disturbance of one square meter or more. Use preventative measures to reduce introduction of Scotch broom seed into the area.

Long-Term Management Goal: Scotch broom is a Class B undesignated species in Snohomish County. Containment and eventual reduction of Scotch broom populations is the Project-level goal.

Five-Year Management Objectives:

- Continue treatment of Scotch broom at known locations.
- Initiate treatment at newly detected sites within one year.
- Continue to monitor these sites annually and retreat as necessary.

- After two consecutive monitoring events show no presence of Scotch broom at a site, reduce monitoring frequency and continue to evaluate site as part of ongoing general monitoring.

References:

King County Noxious Weed Control Board. 2008. Noxious Weed Control Program web page, Scotch broom best management practices bulletin. http://dnr.metrokc.gov/wlr/lands/weeds/pdf/scotch-spanish-broom-control.pdf. January 2008. King County Noxious Weed Control Board, Seattle, WA.

King County Noxious Weed Control Board. 2008. Noxious Weed Control Program web page, Scotch broom weed alert. http://dnr.metrokc.gov/wlr/lands/weeds/pdf/Scotch_Broom_factsheet.pdf . February 2008. King County Noxious Weed Control Board, Seattle, WA.

Oregon State University. 2008. Pacific Northwest Weed Management Handbook, online edition. http://pnwpest.org/pnw/weeds?01W_INTR06.dat

Public Utility District No. 1 of Snohomish County and Smayda Environmental Associates. 2009. Henry M. Jackson Hydroelectric Project Noxious Weed Management Plan.

Washington State Noxious Weed Control Board. 2001. Washington's Noxious Weed List Written Findings web page. Written findings of the WSNWCB for Scotch broom. http://www.nwcb.wa.gov/weed_info/written_findings/CLASS%20B%20PDFs/Cytisis%20scoparius,%20partial%202001.pdf. Washington State Noxious Weed Control Board, Olympia, WA.

Washington State Noxious Weed Control Board. 2008. Washington's Noxious Weed Information web page. Weed information for Scotch broom. http://www.nwcb.wa.gov/weed_info/Cytisus_scoparius.html. Washington State Noxious Weed Control Board, Olympia, WA.

Whatcom County Noxious Weed Control Board. 2008. Whatcom Weeds Fact Sheets web page, Scotch broom fact sheet. http://www.co.whatcom.wa.us/publicworks/weeds/factsheets.jsp. Whatcom County Noxious Weed Control Board, Bellingham, WA.

8.4 Management Methods for Butterfly Bush (*Buddleja davidii*)

Known Sites: A single mature butterfly bush was noted in a former laydown area adjacent to the penstock ROW.

Habitat and Threats: Butterfly bush is an ornamental species from China that has escaped from cultivation. It spreads rapidly via its small, wind and water dispersed seeds, colonizing disturbed habitats such as roadsides, pastures, clear cuts, riparian areas, and gravel bars. It can become established in low nutrient soils and can form dense thickets that exclude native plants. Butterfly bush does not function as a host plant for native butterflies and may adversely affect butterfly populations by displacing native host plants.

Reproduction and Flowering Period: Butterfly bush reproduces very effectively by seeds. Flowering occurs from mid-summer to fall and plants may produce seed the first year. Mature plants may produce upwards of three million seeds, which can remain viable and dormant in the soil for many years. Butterfly bush also reproduces vegetatively, as stem segments can form adventitious roots. Cut stumps will resprout readily.

Identification: Butterfly bush is a deciduous shrub that may reach 10 to 15 feet in height. Leaves are lance-shaped, green above with whitish hairs providing a green-gray appearance below. Flowers are produced on terminal spikes and are typically lavender. White, pink and other color varieties also occur.

Available Management Methods:

Prevention: Specifying weed-free mulch, straw, seed and fill whenever possible will help to limit the introduction of seed source. Vehicles and equipment must be clean of dirt and any plants parts prior to entering the project lands. Additionally, vehicles and equipment and boots should be cleaned regularly when working in infested areas. Check for budding and early flowering plants in spring and treat before blooming.

Manual: Hand pulling, digging, or grubbing of plants is effective for small populations. The disadvantage of this method is that soil disturbance stimulates the sprouting of seeds; treatment must be repeated for several years.

Mechanical: Clipping or cutting of flowering heads is recommended as the most effective means of preventing seed production. Flowering heads must be bagged and disposed of at an approved landfill or other contained disposal site. Treatment must be repeated annually. Plants may also be cut to the base; however, this will not kill the plant, and seeds may be produced again the following year. If annual flower clipping is selected as a long-term management method, plants can be maintained at a moderate height (4-5 feet) to facilitate access and clipping.

Tilling of infested sites is not recommended due to its stimulation of germination of the soil seed bank.

Cultural: Application of mulch around treated plants can help reduce seed germination. At sites where plants have been treated with herbicide or grubbed out, reseeding with fast-growing species can help quickly establish a desired plant community and suppress butterfly bush seed sprouting.

Chemical: Glyphosate-based herbicides without surfactants have been shown effective on small butterfly bush plants.

Biological: Experimental studies have been conducted with seed weevils and a wasp species; however, no insect controls are currently available for use in the U.S.

Management Recommendation for Butterfly bush at the Project:

Targeted application with a broadleaf herbicide, applied by a state licensed applicator ensures the quickest and most thorough kill of the target weed.

Hand pull, dig, or grub out small plants, being careful to remove the entire root system. Large, established shrubs should be treated by clipping and bagging flower heads annually. Plants may be pruned to a manageable size to facilitate flower head removal. All flower heads and other plant material should be bagged and disposed of at an approved landfill or other contained disposal facility.

To reduce re-establishment of butterfly bush, revegetate any sites where treatment activities result in ground disturbance of one square meter or more. Reseed with desired fast-growing species and mulch.

Long-Term Management Goal: Butterfly bush is a Class C weed and currently is not selected for control in Snohomish County. Reduction of the existing population on Project lands is the District's goal for butterfly bush.

Five-Year Objectives:

- Continue treatment of butterfly bush at known locations.
- Continue to monitor treated sites annually, and spray, hand pull or dig out seedlings.
- Initiate treatment at new sites within one year.
- After two consecutive monitoring events show no presence of butterfly bush at a site, reduce monitoring frequency and continue to evaluate site as part of ongoing general monitoring.

References:

Oregon State University. 2008. Pacific Northwest Weed Management Handbook, online edition. http://pnwpest.org/pnw/weeds?01W_INTR06.dat

Public Utility District No. 1 of Snohomish County and Smayda Environmental Associates. 2009. Henry M. Jackson Hydroelectric Project Noxious Weed Management Plan.

Washington State Noxious Weed Control Board. 2006. Washington's Noxious Weed List Written Findings web page. Written findings of the WSNWCB for Butterfly bush. http://www.nwcb.wa.gov/weed_info/Written_Findings1/Buddleja_davidii_wf.pdf Washington State Noxious Weed Control Board, Olympia, WA.

Washington State Noxious Weed Control Board. 2008. Washington's Noxious Weed Information web page. Weed information for Butterfly bush. http://www.nwcb.wa.gov/weed_info/buddleja_davidii.html. Washington State Noxious Weed Control Board, Olympia, WA.

Whatcom County Noxious Weed Control Board. 2008. Whatcom Weeds Fact Sheets web page, Butterfly bush fact sheet. http://www.co.whatcom.wa.us/publicworks/pdf/weeds/butterflybush_t.pdf Whatcom County Noxious Weed Control Board, Bellingham, WA.

APPENDIX 2

Consultation Documentation Regarding Draft Report

Presler, Dawn

From: Presler, Dawn
Sent: Monday, December 09, 2013 11:42 AM
To: 'Tim_Romanski@fws.gov' (Tim_Romanski@fws.gov); 'brock.applegate@dfw.wa.gov' (brock.applegate@dfw.wa.gov)
Cc: Schutt, Mike; Binkley, Keith
Subject: Youngs Creek Hydro Project (FERC No. 10359) - 2013 WHMP Annual Report
Attachments: 2013_YC_DraftWHMPAnnRpt.pdf

Dear Tim and Brock,
Attached is the Wildlife Habitat Mitigation Plan 2013 Annual Report for the Youngs Creek Project. Pursuant the WHMP, we are to provide an annual summary to the WDFW and USFWS by December 31 of each year. Please let Mike know (cc: me) by January 8 if you have any comments on the report. And as always, feel free to contact Mike or Karen at any time if you would like a tour of the site or what to discuss the WHMP in more detail.

Happy Holidays!

Dawn Presler
Sr. Environmental Coordinator
Generation Resources
(425) 783-1709
****
PUD No. 1 of Snohomish County
PO Box 1107
Everett, WA 98206-1107

Presler, Dawn

From: Applegate, Brock A (DFW) <Brock.Applegate@dfw.wa.gov>
Sent: Thursday, January 02, 2014 4:34 PM
To: Presler, Dawn; 'Tim_Romanski@fws.gov' (Tim_Romanski@fws.gov)
Cc: Schutt, Mike; Binkley, Keith; Milner, Ruth L (DFW); Allegro, Justin K (DFW)
Subject: RE: Youngs Creek Hydro Project (FERC No. 10359) - 2013 WHMP Annual Report

Hi Mike, WDFW has reviewed the Youngs Creek WHMP and we have the following initial comments.

2.1.1 Line of Sight Reduction/ Establishment of Hiding Cover: Thanks for breaking up the line-of-sight and creating hiding cover with boulders and woody debris in the ROW for grazing deer and elk. WDFW recommends that you also use shrubs and taller vegetation to break up line-of-sight, create hiding cover, and also provide forage and browse for deer and elk.

4.1. Nest Boxes: What is the WHMP nest box check schedule?

5.0 Mitigation Lands: What kind of change do you want to see? Would change from the present condition trigger a management action like thinning, patch cuts, or snag creation? What is the current status of the CAPA? WDFW recommends that SnoPUD include some detail in this section like current vegetation type, size, approx. dbh, species, understory species, and possible future management actions.

Site Visit: A site visit sounds great, but after Feb 15 and when the lack of snow and ice allows access to the intake structure.

Thanks for writing up the Annual Report.

Sincerely, Brock

Brock Applegate
Major Projects Mitigation Biologist
Washington Department of Fish and Wildlife
16018 Mill Creek Boulevard
Mill Creek, WA 98012-1541

(425) 775-1311 x310
(360) 789-0578 (cell)
(425) 338-1066 (fax)

From: Presler, Dawn [mailto:DJPresler@SNOPUD.com]
Sent: Monday, December 09, 2013 11:42 AM
To: 'Tim_Romanski@fws.gov' (Tim_Romanski@fws.gov); Applegate, Brock A (DFW)
Cc: Schutt, Mike; Binkley, Keith
Subject: Youngs Creek Hydro Project (FERC No. 10359) - 2013 WHMP Annual Report

Dear Tim and Brock,
Attached is the Wildlife Habitat Mitigation Plan 2013 Annual Report for the Youngs Creek Project. Pursuant the WHMP, we are to provide an annual summary to the WDFW and USFWS by December 31 of each year. Please let Mike know (cc: me) by January 8 if you have any comments on the report. And as always, feel free to contact Mike or Karen at any time if you would like a tour of the site or what to discuss the WHMP in more detail.

Happy Holidays!

APPENDIX 3

Response to Comments Regarding Draft Report

Comment No.	Comment	Response
1	WDFW, 1/2/2014 email 2.1.1 Line of Sight Reduction/ Establishment of Hiding Cover: Thanks for breaking up the line-of-sight and creating hiding cover with boulders and woody debris in the ROW for grazing deer and elk. WDFW recommends that you also use shrubs and taller vegetation to break up line-of-sight, create hiding cover, and also provide forage and browse for deer and elk.	The PUD intends to allow native vegetation (except trees or willows) to naturally revegetate the penstock ROW outside of the maintenance road alignment. The species most likely to re-vegetate are salmonberry and thimbleberry, based on their common proximity to the penstock. Both of these species would provide hiding cover and palatable forage for ungulates as well as other wildlife in the area.
2	WDFW, 1/2/2014 email 4.1. Nest Boxes: What is the WHMP nest box check schedule?	Table 1 was amended to reflect dates of nest box checks.
3	WDFW, 1/2/2014 email 5.0 Mitigation Lands: What kind of change do you want to see? Would change from the present condition trigger a management action like thinning, patch cuts, or snag creation? What is the current status of the CAPA? WDFW recommends that SnoPUD include some detail in this section like current vegetation type, size, approx. dbh, species, understory species, and possible future management actions.	The District intends to allow natural succession to occur in this 5.3 acre parcel; no active management is planned. Section 5 was updated to include further description of this parcel.
4	WDFW, 1/2/2014 email Site Visit: A site visit sounds great, but after Feb 15 and when the lack of snow and ice allows access to the intake structure.	Please contact the District to schedule a site visit for after May 1 when snow levels are such that allow easy access to the intake area.