

**AQUATIC NUISANCE SPECIES MANAGEMENT PLAN 2014 ANNUAL
REPORT**

WELLS HYDROELECTRIC PROJECT

FERC PROJECT NO. 2149

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Prepared by:
Public Utility District No. 1 of Douglas County
East Wenatchee, Washington

1.0 INTRODUCTION

The Aquatic Nuisance Species Management Plan (ANSMP) is one of six Aquatic Resource Management Plans contained within the Aquatic Settlement Agreement (Agreement). Collectively, these six Aquatic Resource Management Plans are critical to direct implementation of Protection, Mitigation, and Enhancement measures (PMEs) during the term of the new license and, together with the Wells Anadromous Fish Agreement and Habitat Conservation Plan (HCP) will function as the Water Quality Attainment Plan (WQAP) in support of the Clean Water Act Section 401 Water Quality Certification for the Wells Hydroelectric Project (Project).

To ensure active stakeholder participation and support, the Public Utility District No. 1 of Douglas County (Douglas) developed all of the resource management plans in close coordination with agency and tribal natural resource managers (Aquatic Settlement Work Group or Aquatic SWG). During the development of this plan, the Aquatic SWG focused on developing management priorities for resources potentially impacted by Project operations. Members of the Aquatic SWG include the U.S. Fish and Wildlife Service (USFWS), Washington Department of Ecology (Ecology), Washington State Department of Fish and Wildlife (WDFW), the Confederated Tribes of the Colville Reservation (Colville), the Confederated Tribes and Bands of the Yakama Indian Nation (Yakama), and Douglas.

The National Marine Fisheries Service (NMFS) was invited to participate in the development of Aquatic Resource Management Plans, but declined because its interests are currently satisfied by the measures within the HCP.

The goal of the ANSMP is to prevent the introduction and/or spread of aquatic nuisance species in Project waters. Douglas, in collaboration with the Aquatic SWG, has agreed to implement several PMEs in support of the ANSMP. The PMEs presented within the ANSMP are designed to meet the following objectives:

The ANSMP is intended to be compatible with other aquatic nuisance species management plans in the Columbia River mainstem. Furthermore, this management plan is intended to be supportive of the HCP, Bull Trout Management Plan, Pacific Lamprey Management Plan, Resident Fish Management Plan, White Sturgeon Management Plan, and Water Quality Management Plan by continuing to prevent the introduction and/or spread of aquatic nuisance species in Project waters. The ANSMP is intended to be not inconsistent with other management strategies of federal, state and tribal natural resource management agencies.

This document outlines the goals and objectives of the ANSMP and the actions undertaken in support of each in 2014. Within Section 2.0, under each goal or objective, a section entitled “Progress Towards Objective X in 2014” outlines actions taken in 2014 and other related information. To help differentiate between existing management plan language and actions taken in 2014, new information for 2014 is presented in italicized font in each section.

Additional background information on aquatic nuisance species issues in the Wells Project can be found in the most recent ANSMP, filed with FERC in 2013.

2.0 GOAL AND OBJECTIVES

The goal of the ANSMP is to prevent the introduction and/or spread of aquatic nuisance species in Project waters. Douglas, in collaboration with the Aquatic SWG, has agreed to implement several PME's in support of the ANSMP. The PME's presented within the ANSMP are designed to meet the following objectives:

Objective 1: Implement best management practices to prevent Eurasian watermilfoil proliferation during in-water (i.e., construction, maintenance and recreation improvements) improvement activities in the Project.

Objective 2: Continue participation in regional and state efforts to prevent the introduction and spread of aquatic nuisance species. Activities include continued monitoring for the presence of ANS, monitoring bycatch data collected during other aquatic management plan activities and conducting education outreach within the Project.

Objective 3: In response to proposed changes in the Project requiring FERC approval, the Aquatic SWG will assess the potential effects, if any, with respect to the introduction or proliferation of aquatic nuisance species in the Project to inform management decisions to support success of the ANSMP and will implement reasonable and appropriate measures to address any potential effects.

The ANSMP is intended to be compatible with other aquatic nuisance species management plans in the Columbia River mainstem. Furthermore, this management plan is intended to be supportive of the HCP, Bull Trout Management Plan, Pacific Lamprey Management Plan, Resident Fish Management Plan, White Sturgeon Management Plan, and Water Quality Management Plan by continuing to prevent the introduction and/or spread of aquatic nuisance species in Project waters. The ANSMP is intended to be not inconsistent with other management strategies of federal, state, and tribal natural resource management agencies.

The schedule for implementation of specific measures within the ANSMP is based on the best information available at the time the Plan was developed. As new information becomes available, implementation of each activity may be adjusted through consultation with the Aquatic SWG.

3.0 PROTECTION, MITIGATION AND ENHANCEMENT MEASURES

In order to fulfill the goals and objectives described in Section 3.0, Douglas, in consultation with the Aquatic SWG, has agreed to implement the following PME's.

3.1 Implement Best Management Practices During Recreational Improvement Activities (Objective 1)

If at any time during the new license term, Douglas is required to construct, improve or maintain recreation access at boat launches and swim areas and the removal or disturbance of aquatic macrophyte beds that contain Eurasian watermilfoil may potentially occur, Douglas will implement containment efforts utilizing best management practices agreed to by the Aquatic SWG during such activities.

Douglas will implement the following best management practices (BMPs) to prevent the spread of ANS during contracted construction or maintenance of recreation enhancement measures:

For any contracted construction and maintenance activities requiring in-water work, Douglas will require, as part of construction bids, the inclusion of BMPs to address potential ANS threats. Prior to contract award, Douglas contract management staff will review and approve the sufficiency of proposed ANS BMPs with contractors and if necessary, require modifications in proposed ANS BMP implementation scope. Contractors will be instructed to share information with all sub-contractors prior to the start of work.

All equipment will undergo thorough inspection prior to entry into the Project to prevent the introduction of ANS. Inspections will be carried out on construction equipment and watercraft at a staging area dedicated to equipment and watercraft cleaning. This site will be located away from the ordinary high water line and away from any storm drains that run into Project waters. Douglas will provide adequate training and information on ANS inspection and cleaning procedures to personnel responsible for inspections at field sites. An inspection process for vehicles and equipment that arrive onsite from other areas will be provided. Equipment from rental agencies, outside contractors, and managing partners will also be subject to inspection and cleaning. Precleaning inspections will be used to identify problem areas and determine whether hand removal of large accumulations of soil and debris is necessary before washing of equipment. Douglas will provide equipment necessary for conducting proper inspections.

Douglas will provide adequate training and information on ANS cleaning procedures to personnel responsible for cleaning watercraft and equipment. Specific information on cleaning of in-water equipment and watercraft will be provided. Special cleaning and decontamination protocols and methods will be required for equipment and watercraft that has been previously used in areas where zebra mussels and other Dreissenid species are present. Douglas will require that records of inspections and cleanings be provided for all watercraft and construction equipment used in or near project waters prior to, and after completion of construction projects. Inspection and cleaning records will include the location and date the watercraft or equipment was last used, date of inspection, findings of inspections, and the date and method used during the last cleaning. Inspection and cleaning records will be used to ensure that all watercraft and equipment has undergone proper inspection and cleaning before use in project waters.

3.1.1.1 Progress Towards Objective One in 2014

In 2013 modifications were made to section 4.1 of the ANSMP. Article 405 of the new FERC operating license for the Wells Project issued in November 2012 required that within 6 months of licenses issuance, Douglas PUD to modify sections 4.1 of the existing ANSMP. The modifications required were:

(a) Section 4.1 of the plan must include specific best management practices that will be implemented to prevent the spread of aquatic nuisance species during construction of recreation enhancement measures.

In consultation with the Aquatic SWG, these modifications were made to the ANSMP and the updated plan was filed with FERC on April 30, 2013. The FERC approved the updated ANSMP on May 30, 2013. The approval of the plan also included a change in the reporting date for the ANSMP annual report from May 31 to April 1 for the preceding year's activities.

No in-water construction activities took place during 2014; however, information on construction best management practices and necessary actions steps were provided to the Douglas Lands Services department to be conveyed to contractors bidding on boat launch construction and rehabilitation scheduled to take place in 2015.

3.1.1.2 Aquatic Macrophyte Control

On July 15, 2014 aquatic herbicide was applied to control aquatic macrophytes at swimming areas at Pateros Park, Columbia Cove Park (Brewster), and Marina Park (Bridgeport). The aquatic herbicide used was Tribune™ (active ingredient- diquat bromide). The control efforts were successful and no re-application of herbicide was required for the remainder of 2014.

3.2 Participation in Regional and State ANS Efforts (Objective 2)

3.2.1 Coordination with Regional and State Entities

Douglas shall continue to coordinate with regional and state entities to implement activities in Project waters to monitor for the presence of ANS, specifically zebra and quagga mussels. Activities covered by this objective will consist of monitoring for the presence of zebra and quagga mussels as is identified in Section 2.2.3. If ANS are detected during monitoring activities, Douglas will immediately notify the appropriate regional and state agencies and assist in the implementation of reasonable and appropriate measures to address the ANS presence as is consistent with ANS Management protocols.

In the event of positive identification of new ANS within the Project area, Douglas will conduct the following response activities:

- Douglas will immediately notify Ecology and WDFW of positive or suspected ANS species identified during monitoring and/or boat inspections. Photographs will be taken and sent to Ecology or WDFW for assistance in identification. If necessary, samples may also be collected
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for positive identification.

- Once the presence of ANS has been positively determined, Douglas will within 30 days of the positive identification (requiring confirmation by relevant agencies), begin monitoring at multiple sites throughout the Project to determine the extent and distribution of the new ANS within the Project. Monitoring methods will vary depending on species and will be developed in consultation with the Aquatic SWG.
- If zebra mussels or other Dreissenid species are discovered in Project waters, Douglas will also notify upstream and downstream operators (Corps and Chelan PUD) and the Columbia River Basin Team. Douglas will help coordinate subsequent Columbia River Basin Team rapid response actions as applicable to the Project, such as implementing mandatory boat inspections, boat launch closures, quarantines, treatments, etc., in consultation with the Aquatic SWG.
- Douglas will work collaboratively with Ecology and WDFW, and in consultation with the Aquatic SWG, to develop an appropriate control response. Douglas will cooperate with the Columbia River Basin Team in implementing rapid response actions. It is anticipated that the Columbia River Basin Team will use up to the date technical information to guide decisions. The Columbia River Basin Team is also expected to follow the protocols contained within the 100th Meridian Initiative (Heimowitz and Phillips 2011) as it applies to the containment of zebra and other Dreissenid species.
- Appropriate information will also be provided to the public about any new ANS observations. Up-to-date outreach will be provided the public with information about the presence and distribution of the ANS in Project waters, and on the appropriate measures being implemented to prevent the proliferation of the species.
- After initial response efforts are conducted, Douglas will assist the Columbia River Basin Team in implementing control and/or eradication actions as appropriate based on the location, extent,

Douglas shall participate in information exchanges and regional efforts to coordinate monitoring activities.

3.2.1.1 Progress Towards Objective Two in 2014

Similar to in previous years, Douglas coordinated zebra and quagga mussel monitoring with WDFW during 2014. Monitoring consisted of plankton net tows for mussel veligers at three locations and the inspection of artificial substrates at three locations in the Wells Reservoir. Sites were monitored on three occasions in 2014. Samples collected were sent for analysis and results were provided to WDFW. Results from sample analysis determined no presences of either species at any of the sites monitored in the Wells Project (Table 1). Douglas PUD will continue to monitor for these species in 2014, in consultation with the Aquatic SWG.

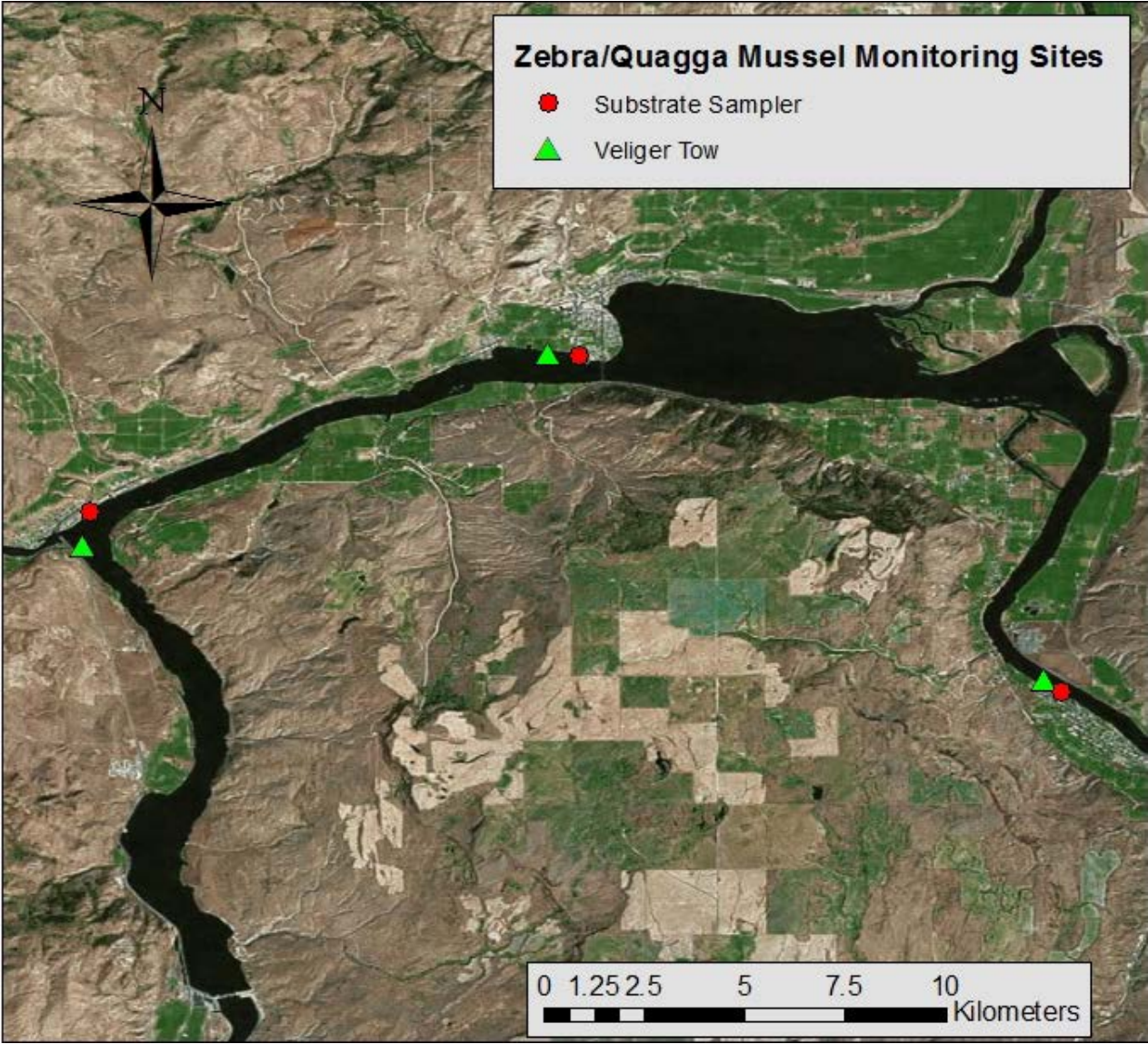


Figure 1. Location of sites monitored for zebra and quagga mussels in 2014 in the Wells Reservoir.

Table 1. Summary of zebra and quagga mussel monitoring efforts in 2014.

Date	Location	Sample Type	Zebra/Quagga Present
11-Jul	Pateros winter boat launch dock	Artificial Substrate	No
11-Jul	Brewster boat launch dock	Artificial Substrate	No
11-Jul	Bridgeport boat launch dock	Artificial Substrate	No
11-Jul	100 m downstream of Methow River mouth	Veliger Tow	No
11-Jul	100 m downstream of Brewster Swimming Area	Veliger Tow	No
11-Jul	100 m downstream of Bridgeport boat launch	Veliger Tow	No
20-Aug	Pateros winter boat launch dock	Artificial Substrate	No
20-Aug	Brewster boat launch dock	Artificial Substrate	No
20-Aug	Bridgeport boat launch dock	Artificial Substrate	No
20-Aug	100 m downstream of Methow River mouth	Veliger Tow	No
20-Aug	100 m downstream of Brewster Swimming Area	Veliger Tow	No
20-Aug	100 m downstream of Bridgeport boat launch	Veliger Tow	No
3-Oct	Pateros winter boat launch dock	Artificial Substrate	No
3-Oct	Brewster boat launch dock	Artificial Substrate	No
3-Oct	Bridgeport boat launch dock	Artificial Substrate	No
3-Oct	100 m downstream of Methow River mouth	Veliger Tow	No
3-Oct	100 m downstream of Brewster Swimming Area	Veliger Tow	No
3-Oct	100 m downstream of Bridgeport boat launch	Veliger Tow	No

3.2.2 Monitor Bycatch from other Project Aquatic Resource Management Activities

Douglas shall monitor bycatch data collected from ongoing Project aquatic resource management activities for aquatic nuisance species presence to support regional and state efforts and the ANSMP. Such ongoing activities may consist of broodstock collection activities at Wells Dam and in associated Project tributaries, the northern pikeminnow removal program, water quality monitoring and any other aquatic resource activities related to implementation of Aquatic Resource Management Plans for bull trout, Pacific lamprey, white sturgeon, and resident fish.

3.2.2.1 Progress Towards Objective Two in 2014

Douglas monitored bycatch for aquatic nuisance species during aquatic resource management activities in 2014. Specific activities in which monitoring of bycatch occurred included: the subyearling Chinook life-history study, northern pikeminnow removal program, temperature station monitoring, and the crayfish monitoring. In addition, Douglas conducting the 2014 resident fish assemblage study which examined the relative abundance on bot native and non-native fish species inhabiting the Wells Reservoir.

3.2.3 ANS Information and Education

Douglas shall make information regarding the effects of ANS introductions and the importance of prevention available to the public. Such outreach activities may consist of posting signage at Project recreation areas and boat launches.

Douglas shall also provide literature produced by appropriate state entities (Ecology and WDFW) for distribution at the visitor centers of local communities of the Project (Pateros, Brewster, Bridgeport) including Wells Dam.

3.2.3.1 Progress Towards Objective Two in 2014

As part of new license requirements, in 2014, Douglas maintained ANS signage at all public boat launch facilities in the Wells Project. Signs included information about preventing the spread of ANS. Douglas also provided educational literature in the form of brochures and fact sheets on ANS prevention measures and the risks of ANS introductions, which were placed at boat launches around the Project area and the Wells Dam Overlook. This information has been available to the public since May 2013. Douglas will continue to make this information available in 2015.

3.3 Monitor and Address ANS Effects to Aquatic Communities During Changes in Project Operations (Objective 3)

If at any time during the new license term, future changes in Project operations requiring FERC approval are proposed and the Aquatic SWG concludes that such proposed operations may encourage the introduction or proliferation of aquatic nuisance species within the Project, the Aquatic SWG will assess the potential effects, if any, in order to make informed management decisions.

If the assessment identifies adverse effects to Aquatic Resources due to aquatic nuisance species attributable to changes in Project operations, Douglas shall consult with the Aquatic SWG to select and implement reasonable and appropriate PME(s) to address the identified adverse effect(s).

3.3.1.1 Progress Towards Objective Three in 2014

No significant changes in Project operations occurred in 2014.

3.4 Reporting

Douglas will provide a draft annual report to the Aquatic SWG summarizing the previous year's activities undertaken in accordance with the ANSMP. The report will document all ANS activities conducted within the Project. Furthermore, any decisions, statements of agreement, evaluations, or changes made pursuant to this ANSMP will be included in the annual report. If

significant activity was not conducted in a given year, Douglas will prepare a memorandum providing an explanation of the circumstances in lieu of the annual report.

Consistent with the FERC License Order for Wells Dam, the Wells Dam Water Quality 401 Certification, and ANSMP, this report will be updated annually with the assistance of the Aquatic SWG. Each year the Report will be filed on or prior to April 1st. The report will include a summary of the progress made towards the implementation of the ANSMP and focus on the previous year's developments.
