

AVISTA CORPORATION

LAKE SPOKANE AND NINE MILE RESERVOIR 2017 AQUATIC WEED SUMMARY REPORT

SPOKANE RIVER LICENSE APPENDIX B
WASHINGTON 401 CERTIFICATION SECTION 5.3(E)

SPOKANE RIVER HYDROELECTRIC PROJECT
FERC PROJECT NO. 2545

Prepared By:
Avista Corporation

February 26, 2018

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1.0 INTRODUCTION

The Lake Spokane Aquatic Weed Summary Report (Report) summarizes aquatic weed management efforts that Avista Corporation (Avista) implemented in 2017 in accordance with the Lake Spokane and Nine Mile Reservoir Aquatic Weed Management Program (AWMP) (Avista, 2010). These efforts included site-specific aquatic weed herbicide treatments in Lake Spokane and Nine Mile Reservoir, flowering rush (*Butomus umbellatus*) control in Lake Spokane and Nine Mile Reservoir, winter drawdown monitoring, and educational and public outreach activities. Treatment and monitoring locations discussed in this Report are identified in Figure 1.

In order to effectively implement the AWMP, Avista coordinates its weed control activities with the Washington Department of Ecology (Ecology), Washington Department of Fish and Wildlife (WDFW), Washington Department of Natural Resources (WDNR), Washington State Parks and Recreation Commission (State Parks), Stevens County Conservation District, Stevens County Noxious Weed Control Board, Spokane County Conservation District, Spokane County Noxious Weed Control Board, Lincoln County Weed Control Board, and the Lake Spokane Association (LSA), which are collectively referred to as the Cooperating Parties.

1.1 Background

On June 18, 2009, the Federal Energy Regulatory Commission (FERC) issued Avista a License (License) for the Spokane River Hydroelectric Project (Project) for a 50-year term (FERC, 2009). The Project consists of five hydroelectric developments (HEDs) located on the Spokane River in northern Idaho (Kootenai and Benewah Counties) and eastern Washington (Spokane, Stevens, and Lincoln Counties). The five HEDs, from upstream to downstream, include:

- Post Falls (River Mile [RM] 102.0)
- Upper Falls (RM 74.2)
- Monroe Street (RM 74.0)
- Nine Mile (RM 58.1)
- Long Lake (RM 34.0)

1.2 License Requirements

In 2010, Avista developed the AWMP as required by Ecology's Section 401 Water Quality Certification (Certification), which is incorporated as Appendix B of the License. As required by the Certification, the AWMP was prepared in consultation with Ecology, WDFW, and WDNR. On January 13, 2011, FERC issued an Order modifying and approving the AWMP pursuant to Article 401(a)(5).

1.3 Lake Spokane and Nine Mile Reservoir Aquatic Weed Management Program

The AWMP was developed to control non-native, invasive, and nuisance aquatic weeds in Lake Spokane, a 5,060-acre, 23.5-mile-long reservoir, created by Long Lake Dam at River Mile (RM) 33.9. The AWMP also includes monitoring for and controlling invasive aquatic weeds in Nine Mile Reservoir, a 440-acre, 6-mile-long reservoir created by Nine Mile Dam (located at RM 58.1). Lake Spokane was surveyed for aquatic weeds in its entirety in 2000 (TetraTech 2001), in 2007 (AquaTechnex 2007), 2012 (AquaTechnex 2012) and again in 2016 (AquaTechnex 2016). The AWMP summarizes the 2000 and 2007 surveys and identifies the following noxious weeds in Lake Spokane: curly-leaf pondweed (*Potamogeton crispus*), Eurasian watermilfoil (milfoil) (*Myriophyllum spicatum*), fragrant waterlily (*Nymphaea odorata*) and yellow floatingheart (*Nymphoides peltata*). Flowering rush (*Butomus umbellatus*) was identified in Lake Spokane in 2010 by Ecology. Additionally, in 2012 Avista identified milfoil and reaffirmed flowering rush in Nine Mile Reservoir. As such, a revised monitoring and control plan was completed and included in the 2013 Summary Report. Additionally, Avista has completed annual aquatic weed surveys in both Lake Spokane and Nine Mile Reservoir between 2011 and 2017.

The goals of the AWMP are to: (1) reduce invasive and nuisance aquatic weeds at public and community boat access points, (2) maintain a moderate level of ongoing control of aquatic weeds in areas from 0 to 14 feet in depth through the use of winter drawdowns in Lake Spokane, and (3) support weed control efforts and facilitate coordination among the entities involved in aquatic weed control on Lake Spokane. Elements of the AWMP include:

- Coordinating aquatic weed management actions with the Cooperating Parties,
- Implementing site-specific aquatic weed control actions at the primary recreation access points on Lake Spokane,
- Implementing a reservoir-wide winter drawdown for the purpose of aquatic weed control on Lake Spokane,
- Monitoring to evaluate the effectiveness of site-specific aquatic weed control actions and reservoir-wide winter drawdowns,
- Periodic monitoring for invasive, non-native aquatic plants in Nine Mile Reservoir, and
- Preparing an annual report summarizing aquatic weed management activities and their effectiveness.

Avista implements prioritized aquatic weed monitoring and control activities in accordance with the annual Program Task List (List). This List is developed in coordination with the Cooperating Parties on an annual basis. The List includes activities that Avista is directly responsible for and other tasks (i.e. local workshops, conferences, other agreed upon site-specific weed control efforts) that Avista may support. Items on the List include, but are not limited to: education and outreach related to aquatic weed control, monitoring or surveys for aquatic weeds, and site-specific control activities targeting specific public and private lake access points (see Section 2.1).

2.0 2017 PROGRAM TASK LIST IMPLEMENTATION

2.1 Coordination with the Cooperating Parties

On April 4, 2017, Avista held an annual meeting with the Cooperating Parties and presented proposed tasks for 2017 (Ecology, WDFW, State Parks, and the LSA were in attendance). The 2017 List was refined in coordination with the Cooperating Parties and included the following tasks:

- Evaluate the public and community boat launches in Lake Spokane and potential areas of weed infestation in Nine Mile Reservoir for invasive and/or problematic aquatic weeds, delineate herbicide treatment areas where necessary, and conduct pre-treatment surveys;
- Complete herbicide treatments on Lake Spokane and in Nine Mile Reservoir as needed;
- Conduct pre-drawdown monitoring on Lake Spokane; and
- Implement flowering rush control in Lake Spokane and/or Nine Mile Reservoir.

2.2 Aquatic Weed Herbicide Treatments in Lake Spokane and Nine Mile Reservoir

Lake Spokane

Avista retained Lakeland Restoration Services (Lakeland) to complete the herbicide applications to reduce aquatic weeds identified in Section 1.3 at the public recreation areas with boat launches and community boat launch sites on Lake Spokane. Lakeland applied a total of 37.5 gallons of diquat dibromide, a contact herbicide, along with 35 gallons of Hydrothol 191, and 32.5 gallons of Aquathol on July 17, 2017 to treat a total of 30.74 acres. The treatments were applied at the following locations: Spokane Lake Park Community Boat Launch (CBL), Nine Mile Recreation Area, Nine Mile Boating Lane, Lake Ridge Park CBL, West Shore CBL, Suncrest CBL, West Shore Boating Lane, Lake Forest CBL (Felton Slough), Willow Bay Resort/Lakeview, and Lakeshore Estates (Figures 2-9).

The data collected and recorded by Lakeland, on field monitoring sheets, is contained in the 2017 Lake Spokane Herbicide Treatment Summary Report (Lakeland, 2017) and maintained electronically by Avista. This data includes species observed, relative abundance (percent cover by species) and total cover by species.

Pre- and post-treatment surveys were completed, and included visual observations and rake toss samples from a boat at each location. Rake tosses generally consisted of 3-4 rake throws within the treatment area and 2-3 rake throws outside the treatment area. The number of rake throws varied, based upon the size of the treatment area. In addition to the rake tosses, BioBase mapping was completed in and out of the treatment areas to measure the plant volume present before and after treatments. The treatment areas ranged in size from 0.50 acres to 11.60 acres. The species observed, relative abundance, and total cover by species were recorded. Data collected during pre-treatment surveys was compared with the data collected during the post-treatment surveys (Table 1). The total aquatic vegetation cover (all aquatic species included) for each location was estimated during the pre-treatment surveys and then compared to the total

aquatic vegetation cover estimated at each location during the post-treatment surveys to evaluate the effectiveness (efficacy) of the treatments. The lake bottom and/or the aquatic vegetation was visible at all sampling locations therefore, visual observations were utilized to estimate total cover. If the lake bottom or aquatic vegetation had not been visible, cover estimates would have been completed based upon the density of vegetation found on the rake throws. The efficacy is measured by the percent reduction in total aquatic vegetation cover. Overall, the total aquatic vegetation cover was reduced by 70% for the combined treatment sites.

Table 1. Herbicide Treatment Effectiveness Table

Location	Acres Treated	Aquatic Vegetation Cover		
		Pre-	Post-	Efficacy*
Spokane Lake Park CBL	0.73	34%	7%	79%
Nine Mile Recreation Area	5.60	98%	14%	86%
Nine Mile Boating Lane	11.60	88%	15%	83%
Lake Ridge Park CBL	0.77	79%	14%	82%
West Shore CBL	1.13	96%	58%	40%
Suncrest CBL	2.70	31%	7%	77%
West Shore Boating Lane	3.01	95%	24%	75%
Lake Forest CBL	0.50	88%	26%	70%
Willow Bay Resort/Lakeview	3.55	84%	17%	80%
Lakeshore Estates	1.15	25%	35%	-40%
Total	30.74	72%	22%	70%

* Efficacy is determined by the difference between pre-treatment and post-treatment cover divided by the pre-treatment percent cover.

Lakeshore Estates was the only treatment site with a lower efficacy (-40%). This is consistent with previous year's lower efficacies for this location and is likely due to treatment location relative to flows, the size and shape of the treatment area, species composition, or additional weed growth following treatments.

Pre-and post-treatment surveys were completed by Avista and Lakeland. Table 2 identifies all of the species observed during the pre- and post-treatment surveys. Detailed data sheets identifying the species present at each location and the cover by species are maintained electronically by Avista for future comparisons or reference.

Table 2. Species Observed during Pre- and Post-Treatment Surveys

Species Observed During Surveys	
Common Name	Scientific Name
Sago pondweed	<i>Potamogeton pectinatus</i>
Small pondweed	<i>Potamogeton pusillus</i>
Elodea	<i>Elodea canadensis</i>
Richardson's pondweed	<i>Potamogeton richardsonii</i>
Najas	<i>Najas spp.</i>
Muskwort	<i>Chara spp.</i>
Coontail	<i>Ceratophyllum demersum</i>
Curlyleaf pondweed	<i>Potamogeton crispus</i>
Flat-stem pondweed	<i>Potamogeton zosteriformis</i>
Fragrant waterlily	<i>Nymphaea odorata</i>
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Flowering rush	<i>Butomus umbellatus</i>

Nine Mile Reservoir

On August 21, 2017, Lakeland performed a herbicide application to 18 acres of milfoil and other nuisance weeds in Nine Mile Reservoir (Figures 10-11). A total of 10 gallons of Hydrothol and 17.5 gallons of Diquat were applied to two separate treatment locations, a 6.5 acre treatment area on the north end of the reservoir, and an 11.5 acre treatment area in the southern third of the reservoir. The northern treatment area had sparse to moderate milfoil, whereas the southern treatment area had dense milfoil. A post-treatment analysis of the areas will be conducted in 2018.

2.3 Flowering Rush Control in Lake Spokane and Nine Mile Reservoir

Lake Spokane

Ecology completed a survey of Lake Spokane identifying and mapping approximately 100 flowering rush plants in 2010. Subsequently, between 2011-2016, Avista implemented hand removal of flowering rush utilizing a diver suction dredge, which removed approximately 200, 900, 485, 580, 1,583 and 238 flowering rush plants, respectively.

Avista continued to implement flowering rush control and contracted with ACE Diving to locate and remove flowering rush during September and October of 2017. Treatments were carried out by SCUBA divers, aided by people wading and/or snorkeling in shallow sites, as appropriate. Prior to initiating any flowering rush treatments, Avista completed reconnaissance level surveys with ACE Diving to locate the plants. The preferred option for controlling flowering rush was by hand pulling, utilizing a diver suction device, taking special care to ensure the entire plant was removed. Approximately 392 flowering rush plants were removed from the locations identified in Figure 12.

Nine Mile Reservoir

Flowering rush was identified in 2012 during informal surveys of Nine Mile Reservoir that were completed independently by Avista and Ecology. In 2013, Avista and Ecology completed a visual survey of Nine Mile Reservoir for flowering rush and identified approximately 200 flowering rush plants. In 2014, Avista completed another visual survey and identified approximately 1,150 plants.

Between 2014-2016, Avista implemented diver hand removal (described above) and removed approximately 170, 160, and 235, respectively, flowering rush plants from Nine Mile Reservoir. In 2017, ACE Diving focused on the most densely populated areas and removed approximately 660 flowering rush plants from the locations identified in Figure 12.

2.4 Lake Spokane and Nine Mile Reservoir Monitoring

Lake Spokane and Nine Mile Reservoir Aquatic Weed Monitoring

Avista and Lakeland completed, pre-treatment surveys and post-treatment surveys for the herbicide treatment locations discussed in Section 2.2. Avista did not complete a lake-wide survey for aquatic weeds in 2017, because one was completed in 2016, when Aquatechnex LLC completed an Aerial Shoreline Analysis (ASA) of both Lake Spokane and Nine Mile Reservoir to identify and map aquatic weeds. The ASA was completed utilizing a high resolution digital camera linked to a GPS receiver that recoded location points to identify areas with aquatic weeds. The areas were then mapped and the species identified utilizing the point-intercept method and hydroacoustic aquatic vegetation biovolume mapping.

The 2016 survey indicated a total of 1,479 acres of aquatic vegetation in Lake Spokane, which included the following estimated acreages, listed by dominant plant species:

- Milfoil - 221 acres;
- Curly leaf pondweed - 152 acres;
- Flowering rush - 34 acres;
- Native pondweed and/or elodea - 771 acres;
- Floating Yellow Heart - 66 acres; and
- Fragrant water lily - 235 acres.

A total of 46.9 acres of aquatic vegetation was identified in Nine Mile Reservoir, which included the following estimated acreages, listed by dominant plant species:

- Milfoil - 20.3 acres;
- Native pondweed and/or elodea - 26.6 acres; and
- Flowering rush (scattered plants throughout the reservoir).

Lake Spokane Drawdown Vegetation Monitoring

Lake Spokane was drawn down 10 feet or more for 30 consecutive days, between January 12 and February 10, 2017. Avista was not able to maintain a 13-14 foot drawdown, as originally planned, due to warm weather and higher than normal precipitation in the form of rain events. Ten monitoring locations (identified on Figure 1) were established in recreation areas and boat launches, community boat launch areas, and in problematic aquatic weed areas for drawdown monitoring. Monitoring was completed during June-August and consisted of rake throws and visual observations made at each of the ten monitoring locations. Data recorded on field monitoring sheets included the specific dates, monitoring locations, species observed, relative abundance, total cover by species, estimated plant height and/or biomass (when possible) for each 10 x 10 foot sampling plot. This information has been collected for multiple years to assist in determining if the overall plant cover and biomass is reduced due to the winter drawdowns.

Avista has scheduled and attempted annual drawdowns for the past seven years as part of implementing the AWMP. Out of the seven years, Avista was able to draw the reservoir down 10-14 feet in five years, and down 13-14 feet for a minimum of three weeks during two of those five years (2012, 2014). During these drawdown years, no conclusive evidence has been determined that the drawdown is reducing overall aquatic vegetation cover and biomass in Lake Spokane. However, in 2015 and 2016, milfoil was observed more frequently and with greater distribution in Lake Spokane than in the previous years. This could be due to the temperatures that were unseasonably warmer, and earlier than in previous years, thus resulting in a longer growing season. The results of the 2011-2017 drawdown monitoring are identified in Table 3.

Table 3. Winter Drawdown Monitoring - Total Cover of All Species Observed

Winter Drawdown Data	2011	2012	2013	2014	2015	2016**	2017**
Total days water level was lowered 10-14 feet	0	57	23	50	0	32	30
Total days soil temperature was below zero*	0	0	0	0	0	0	0
Dates of drawdown	0	Jan 20-Mar16	Feb 21-Mar15	Jan 20-Mar10	0	Jan 13-31 and Feb 14-26	Jan12-Feb10
Monitoring Location	Total Cover of all Species*						
Lake Spokane Campground W	5%	0%	0%	0%	2%	5%	1%
Lake Spokane Campground E	16%	20%	45%	10%	15%	20%	30%
Lakeshore Estates	43%	70%	85%	65%	75%	65%	40%
Willow Bay Resort	66%	46%	75%	75%	75%	80%	45%
Lake Forest Community	85%	50%	45%	100%	100%	100%	50%
Sportsman's Paradise	100%	45%	105%	105%	105%	105%	100%
Suncrest	63%	64%	60%	30%	35%	30%	35%
Lake Ridge/Nine Mile Boat Lane	90%	97%	35%	35%	65%	65%	100%
Nine Mile Rec Area W	75%	75%	55%	40%	55%	60%	100%
Nine Mile Rec Area E	95%	95%	55%	55%	60%	60%	90%

*The species composition is a combination of species identified in Table 2. Total cover includes more than one vegetation strata, and could result in cover over 100%.

**Water elevation was not lowered consistently or for a duration that allowed for soil temperature monitoring. As such, soil temperature monitoring was not completed in 2016 or 2017. Based on all previous years that data has been collected, it is highly unlikely the soil froze those two years either.

Soil Temperature Monitoring

Soil temperature monitoring was not completed in 2017 due to warmer weather and high precipitation in the form of rain events resulting in a shortened drawdown period. Importantly, during the 2012 and 2014 drawdown periods, no soil temperatures below freezing were observed. Anecdotal observations, during the other five years, indicated that the soil never dropped below freezing temperatures.

Note: Avista, in consultation with the Cooperating Parties will continue to evaluate the effectiveness of the drawdowns as a weed control method and/or whether any adjustments should be made to the drawdowns in accordance with the AWMP.

2.5 Education

The AWMP requires Avista to implement education and outreach activities relevant to minimizing the spread of aquatic weeds as part of the comprehensive Interpretation and Education (I&E Plan). As described in the I&E Plan, Avista cooperates with the relevant agencies to develop brochures and other outreach materials that explain how to minimize the spread of invasive aquatic species.

Avista distributed an aquatic weed brochure, specific to Lake Spokane that discusses the elements of Avista's AWMP, the benefits of a healthy aquatic weed ecosystem, negative effects of invasive aquatic weeds, and ways to prevent the spread of invasive aquatic weeds. Avista also worked closely with the Lake Spokane Association to provide educational information on aquatic weed management during its annual meeting.

2.6 Planned Activities for 2018

Avista plans to meet with the Cooperating Parties in March 2018 to develop the List that will identify the annual weed control activities. Avista anticipates the following tasks will be included in the 2018 List:

- Evaluate the public and community boat launches in Lake Spokane (and potential areas of Nine Mile Reservoir) for invasive or problematic aquatic weeds, delineate herbicide treatment areas where necessary and conduct pre-treatment surveys;
- Implement up to 20 acres of herbicide treatments in Lake Spokane and/or up to 20 acres in Nine Mile Reservoir (Note: acreages may vary depending on the monitoring results);
- Conduct drawdown monitoring;
- Monitor, map and continue to implement control measures for flowering rush in Lake Spokane and Nine Mile Reservoir;
- Distribute educational brochures and outreach materials provided by Avista and the Cooperating Parties;
- Work with the Cooperating Parties to assess the effectiveness of Lake Spokane drawdowns on controlling aquatic weeds;

- Work with State Parks and DNR to develop a boat wash station at DNR's Lake Spokane Campground in 2018-2019;
- Submit the Annual Summary Report to Ecology, WDFW and WDNR; and
- Submit the Annual Summary Report to FERC following agency review.

3.0 PROPOSED CHANGES TO THE PLAN

No changes are proposed to the AWMP at this time.

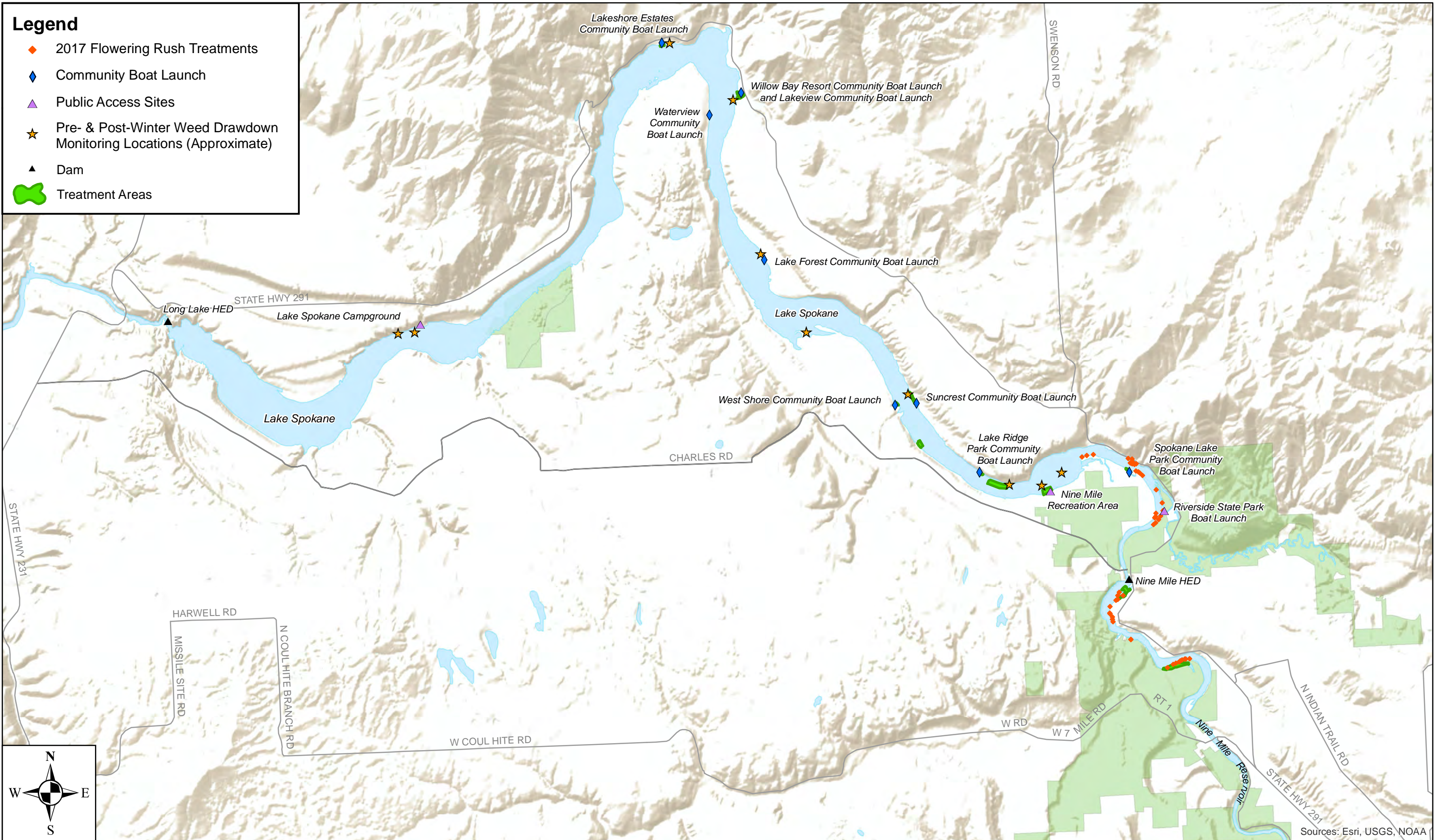
4.0 REFERENCES

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- AquaTechnex. 2012. Aquatic Plant Survey and Mapping Project for Lake Spokane. Prepared by AquaTechnex, Centralia, WA for Avista Corporation, Spokane, WA. Fall 2012.
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- Avista. 2011. Lake Spokane and Nine Mile Reservoir Monitoring Plan for the Lake Spokane and Nine Mile Reservoir Aquatic Weed Management Program. Spokane River Hydroelectric Project FERC Project No. 2545-091.
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- Lakeland Restoration Service. 2017. Lake Spokane and Nine Mile Reservoir Herbicide Treatment Summary Report.
- TetraTech. 2001. Lake Spokane Integrated Aquatic Plant Management Plan. Prepared by TetraTech, Inc., Seattle, WA. Prepared for Stevens County Conservation District and Washington State Department of Ecology. February 2001.

FIGURES

Legend

- ◆ 2017 Flowering Rush Treatments
- ◆ Community Boat Launch
- ▲ Public Access Sites
- ★ Pre- & Post-Winter Weed Drawdown Monitoring Locations (Approximate)
- ▲ Dam
- Treatment Areas



Sources: Esri, USGS, NOAA

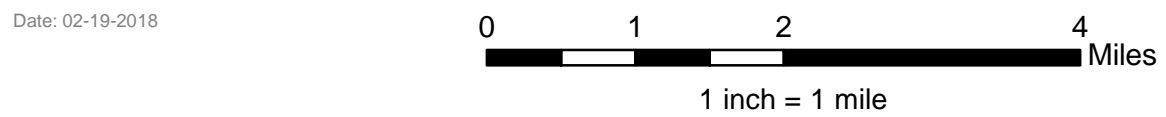
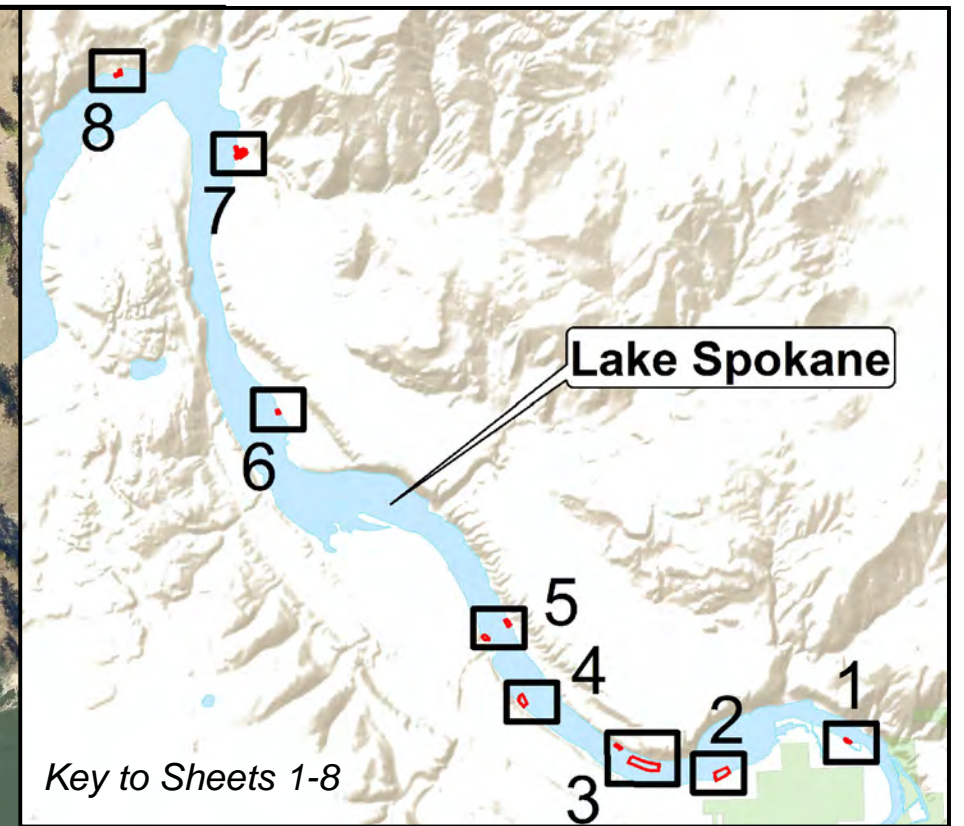


Figure 1. 2017 Aquatic Weed Treatment Areas

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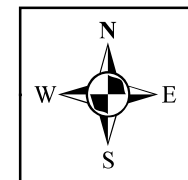
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Key to Sheets 1-8

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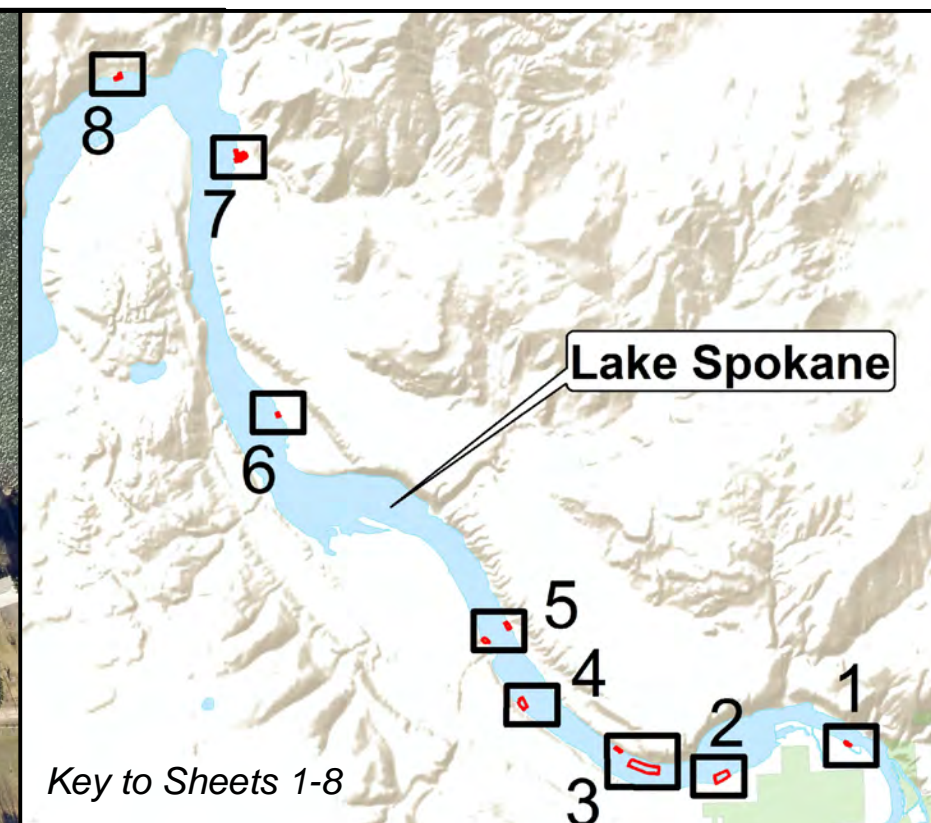
- 2017 Treatment Locations
- Community Boat Launch
- Recreation Sites



1 inch = 200 feet

Figure 2
Sheet 1 - Spokane Lake Park Treatment Area

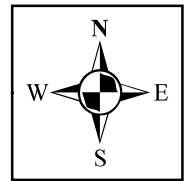
Sheet 1 of 8



Key to Sheets 1-8

Legend

- 2017 Treatment Locations
- Community Boat Launch
- Recreation Sites



1 inch = 200 feet

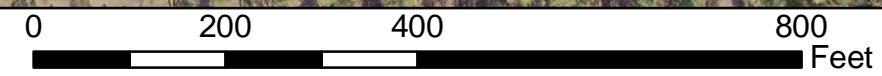
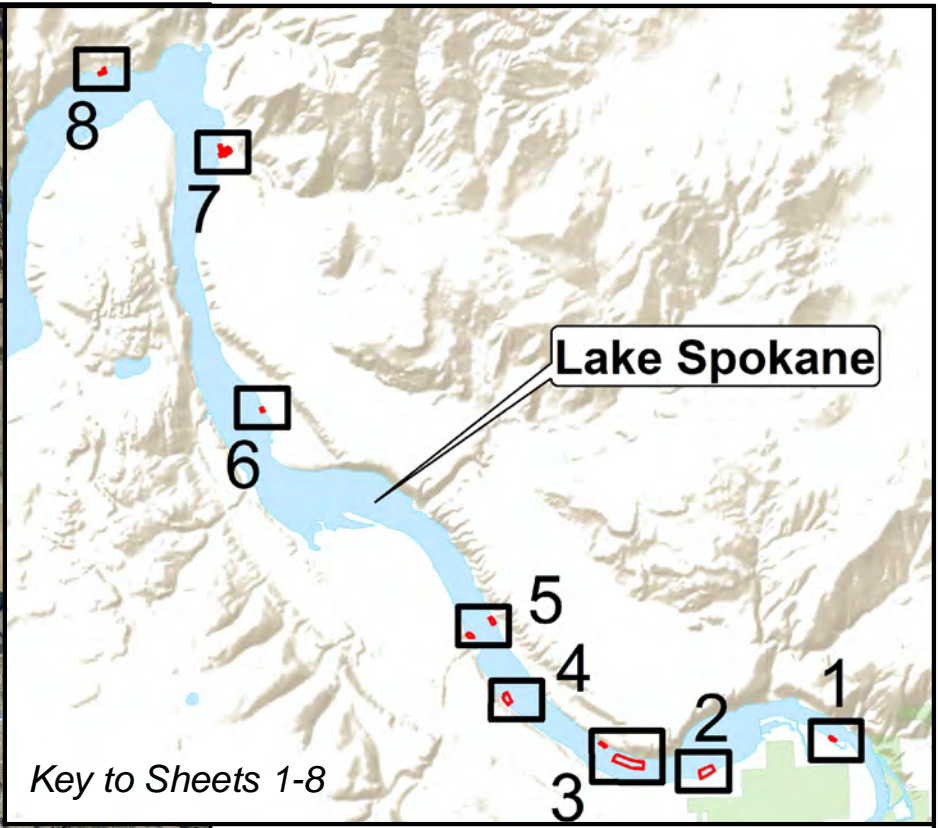
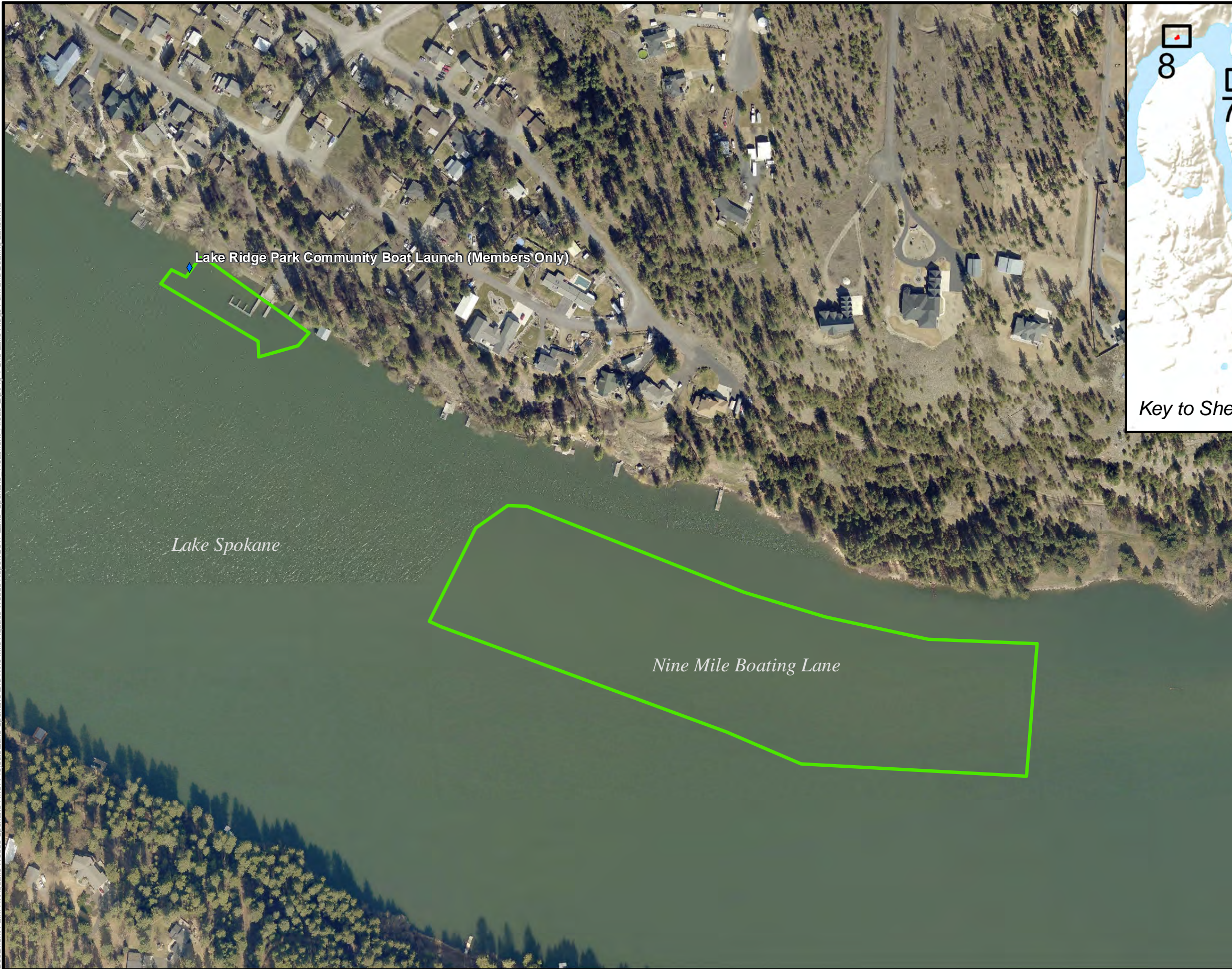


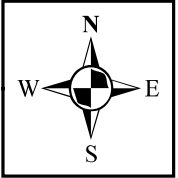
Figure 3
Sheet 2 - Nine Mile
Recreation Area
Treatment Area
Sheet 2 of 8

Document Path: H:\Aquatic Weeds\Spokane River Projects\Lake Spokane and Nine Mile Aquatic Weeds Report 2017\Lake Spokane Treatment Areas Zip\Fig 4 Sh3 Lake Ridge Park and Boating Lane.mxd



Legend

- 2017 Treatment Locations
- ◆ Community Boat Launch
- ▲ Recreation Sites

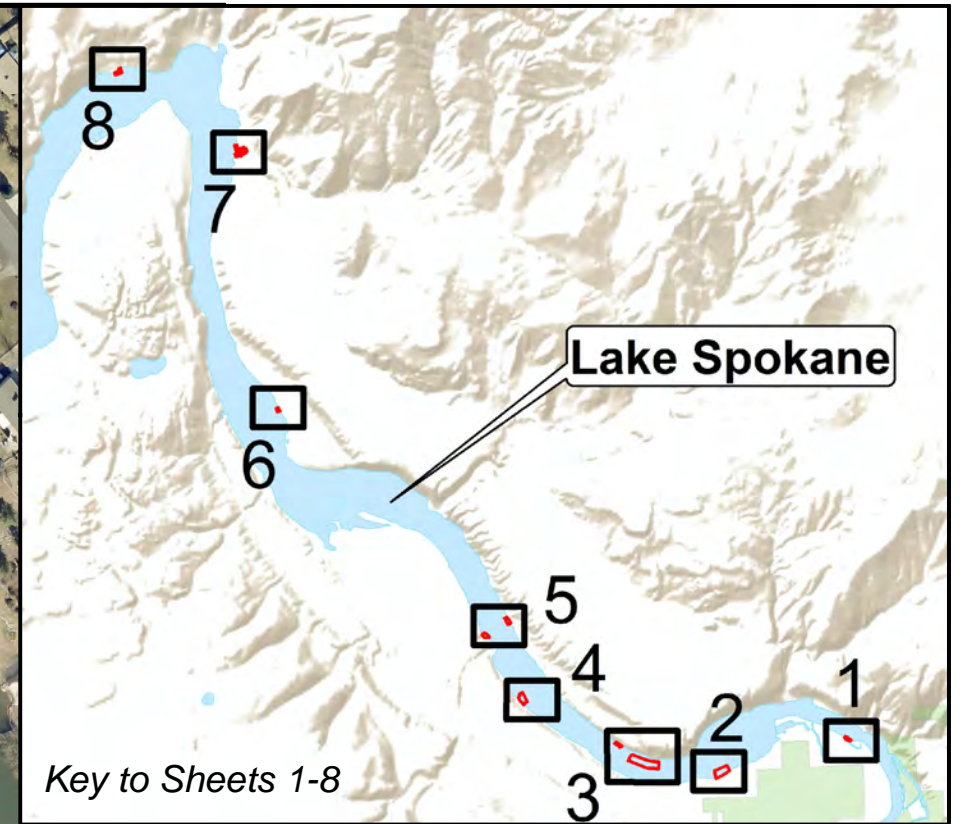


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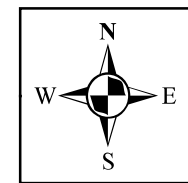
Figure 4
Sheet 3 - Lake Ridge Park and Nine Mile Boating Lane Treatment Areas

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Legend

- 2017 Treatment Locations
- ◆ Community Boat Launch
- ▲ Recreation Sites



1 inch = 225 feet

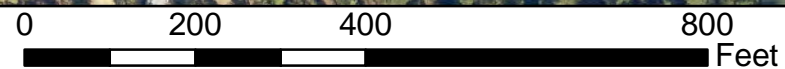
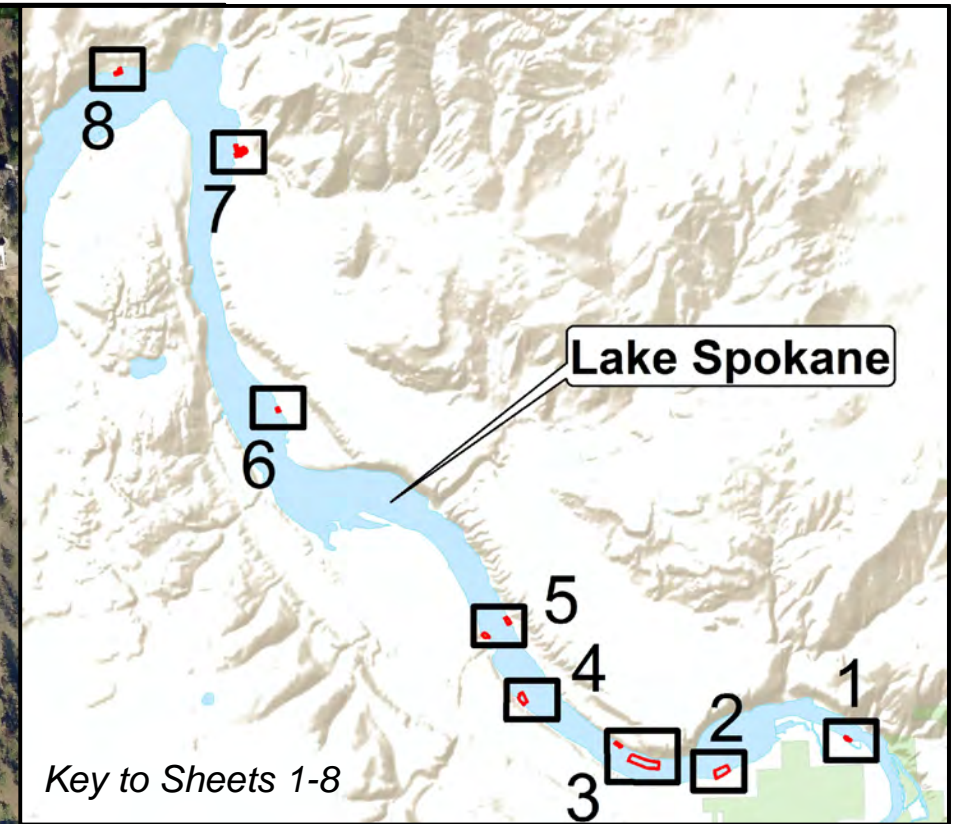


Figure 5
Sheet 4 - West Shore
Boating Lane
Treatment Area

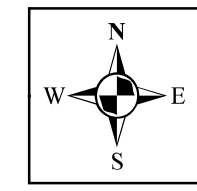


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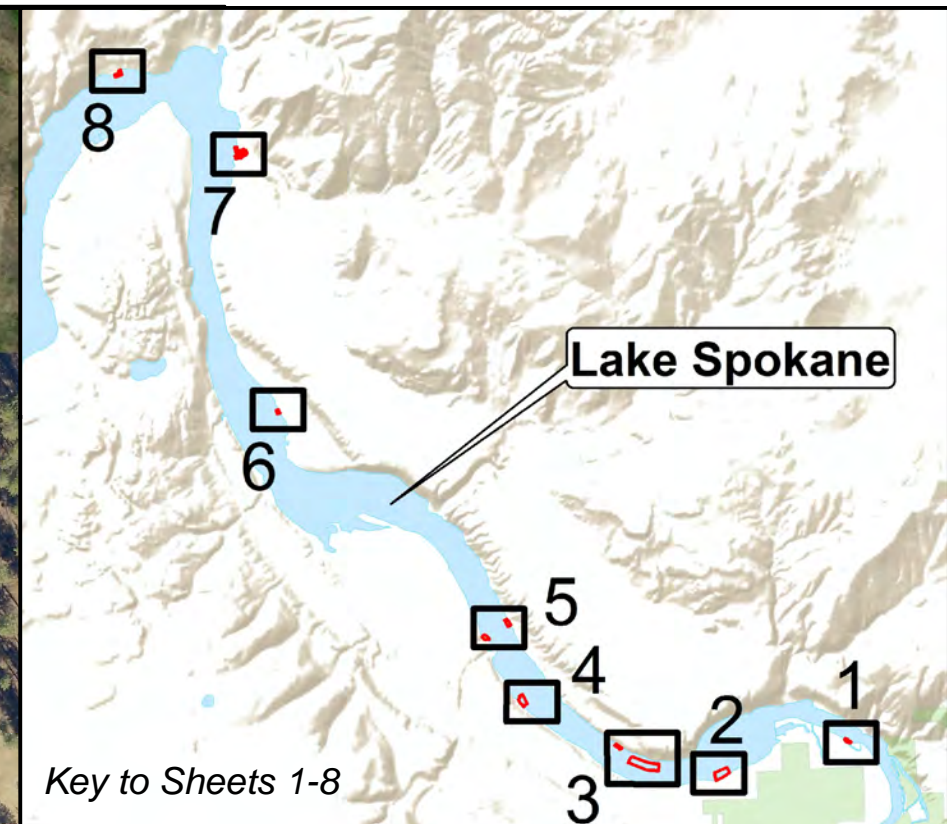
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- 2017 Treatment Locations
- ◆ Community Boat Launch
- ▲ Recreation Sites



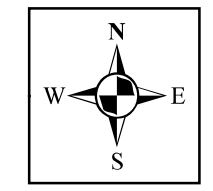
1 inch = 250 feet

Figure 6
Sheet 5 - Suncrest and West Shore Treatment Area
 Sheet 5 of 8



Legend

- 2017 Treatment Locations
- ◆ Community Boat Launch
- ▲ Recreation Sites



1 inch = 200 feet

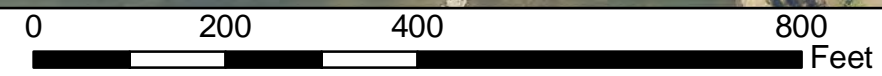
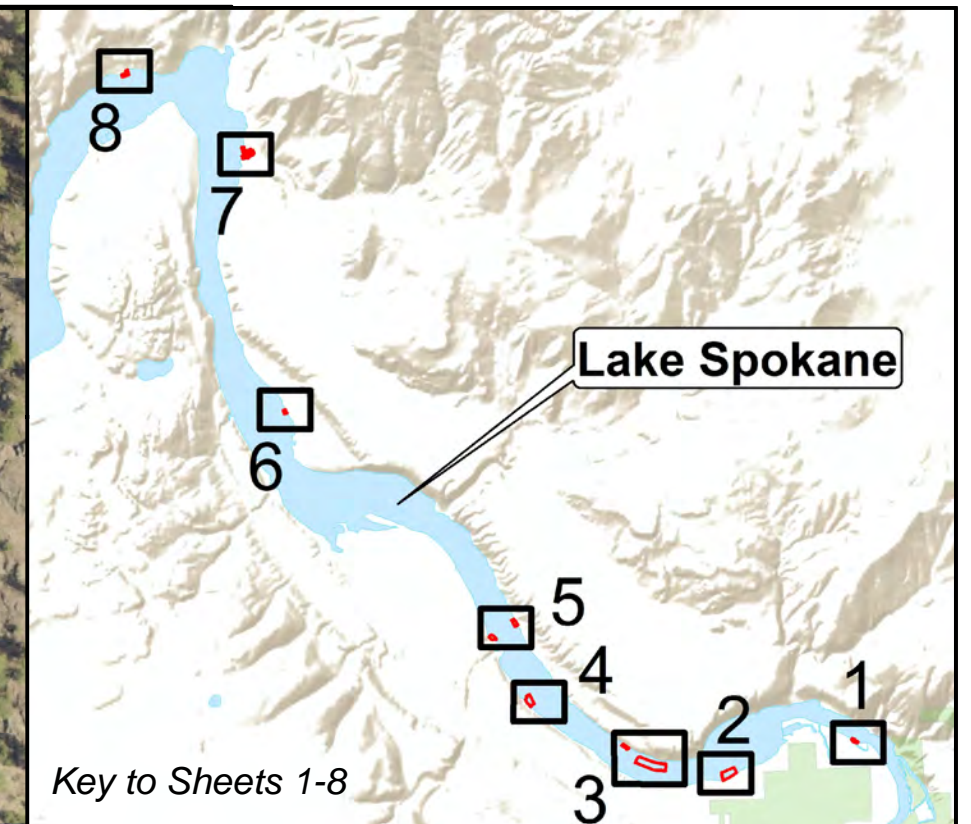
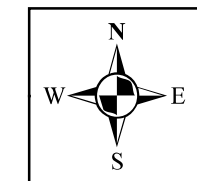


Figure 7
Sheet 6 - Lake Forest
Treatment Area



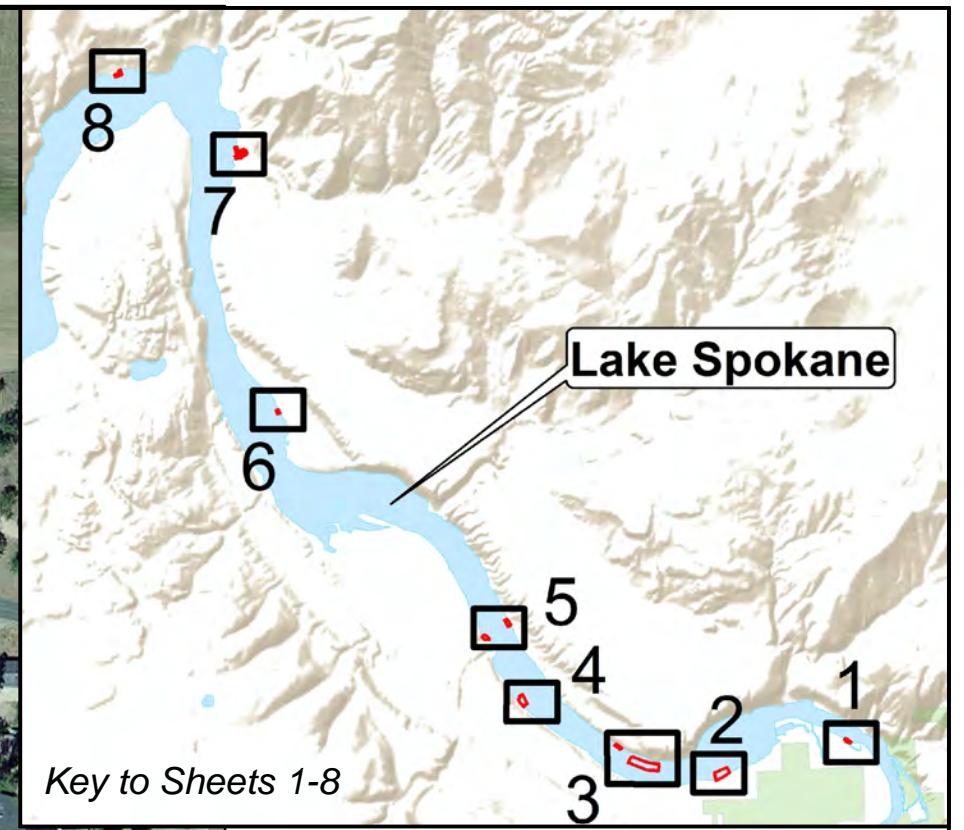
Legend

- 2017 Treatment Locations
- ◆ Community Boat Launch
- ▲ Recreation Sites



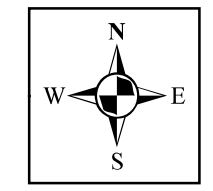
1 inch = 200 feet

Figure 8
Sheet 7 - Willow Bay Resort and Lakeview Treatment Areas



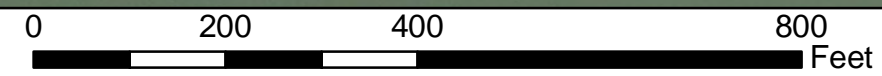
Legend

- 2017 Treatment Locations
- ◆ Community Boat Launch
- ▲ Recreation Sites

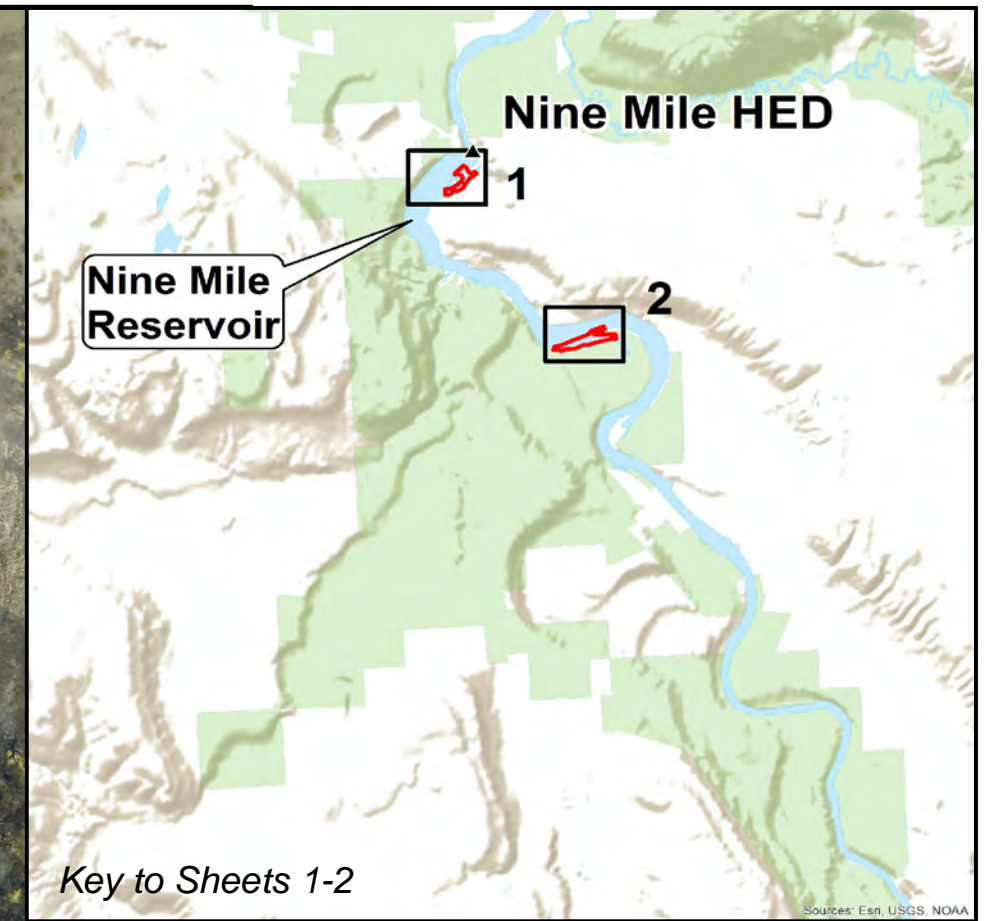
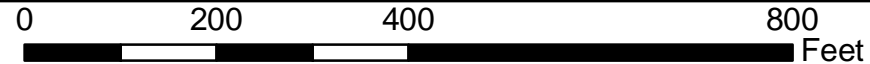


1 inch = 200 feet




Figure 9
Sheet 8 - Lakeshore
Treatment Area
 Sheet 8 of 8

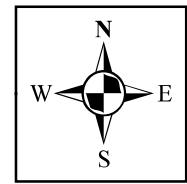


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Legend

-  2017 Treatment Locations
-  Community Boat Launch
-  Recreation Sites



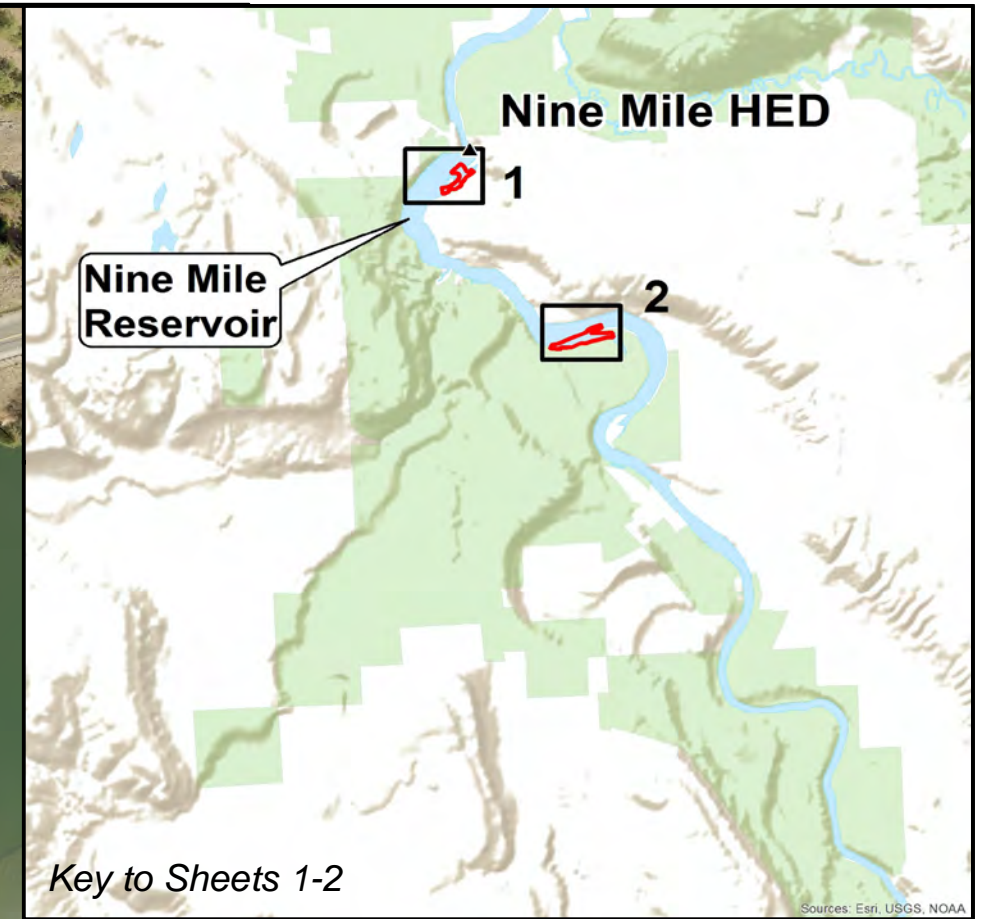
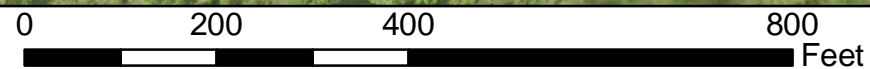
1 inch = 200 feet

Figure 10
Sheet 1 - Nine Mile Reservoir
Lower Treatment Area
 Sheet 1 of 2

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Nine Mile Reservoir

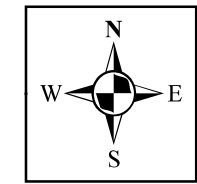


Key to Sheets 1-2

Sources: Esri, USGS, NOAA

Legend

-  2017 Treatment Locations
-  Community Boat Launch
-  Recreation Sites



1 inch = 200 feet

Figure 11
Sheet 2 - Nine Mile Reservoir
Upper Treatment Area
 Sheet 2 of 2

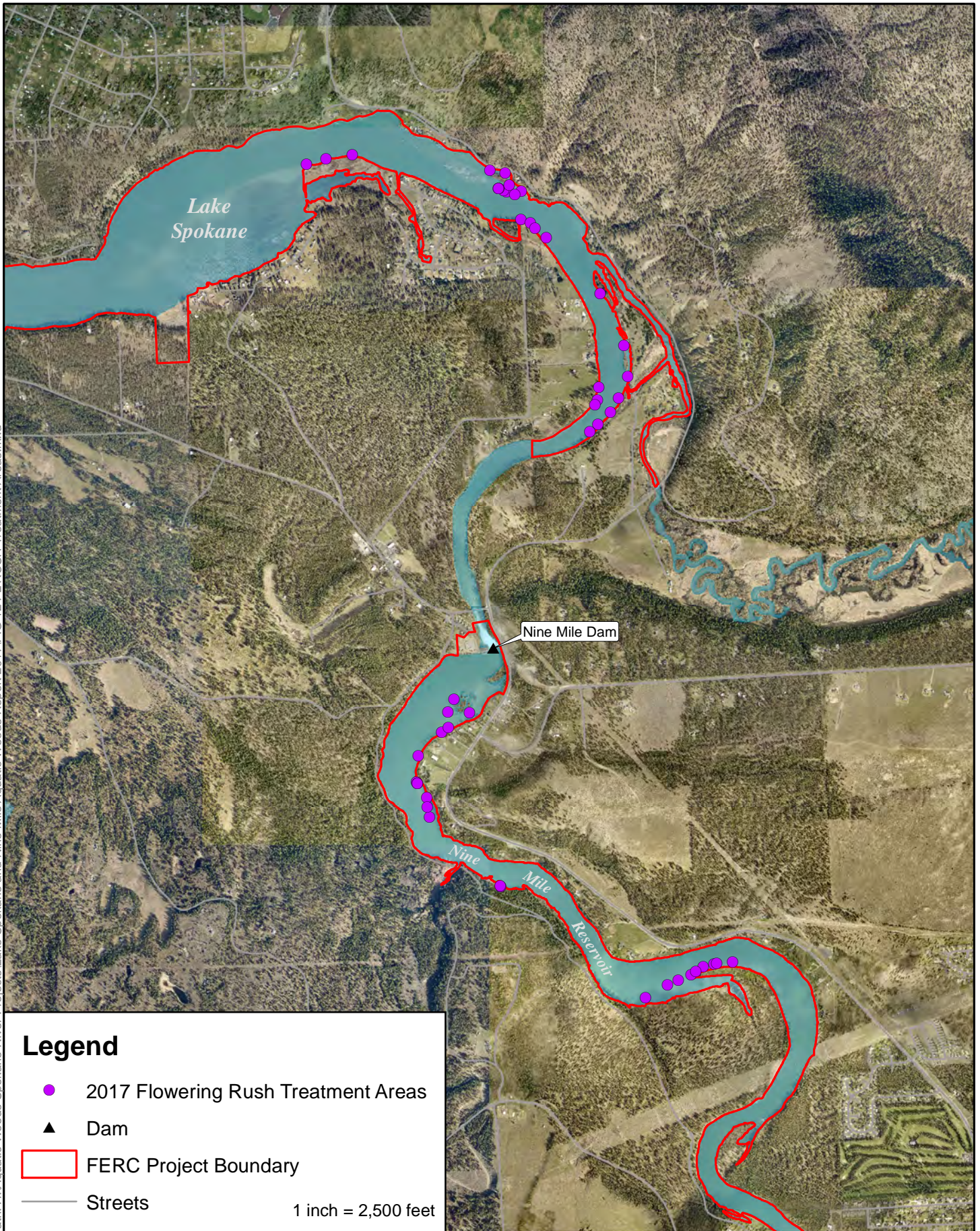
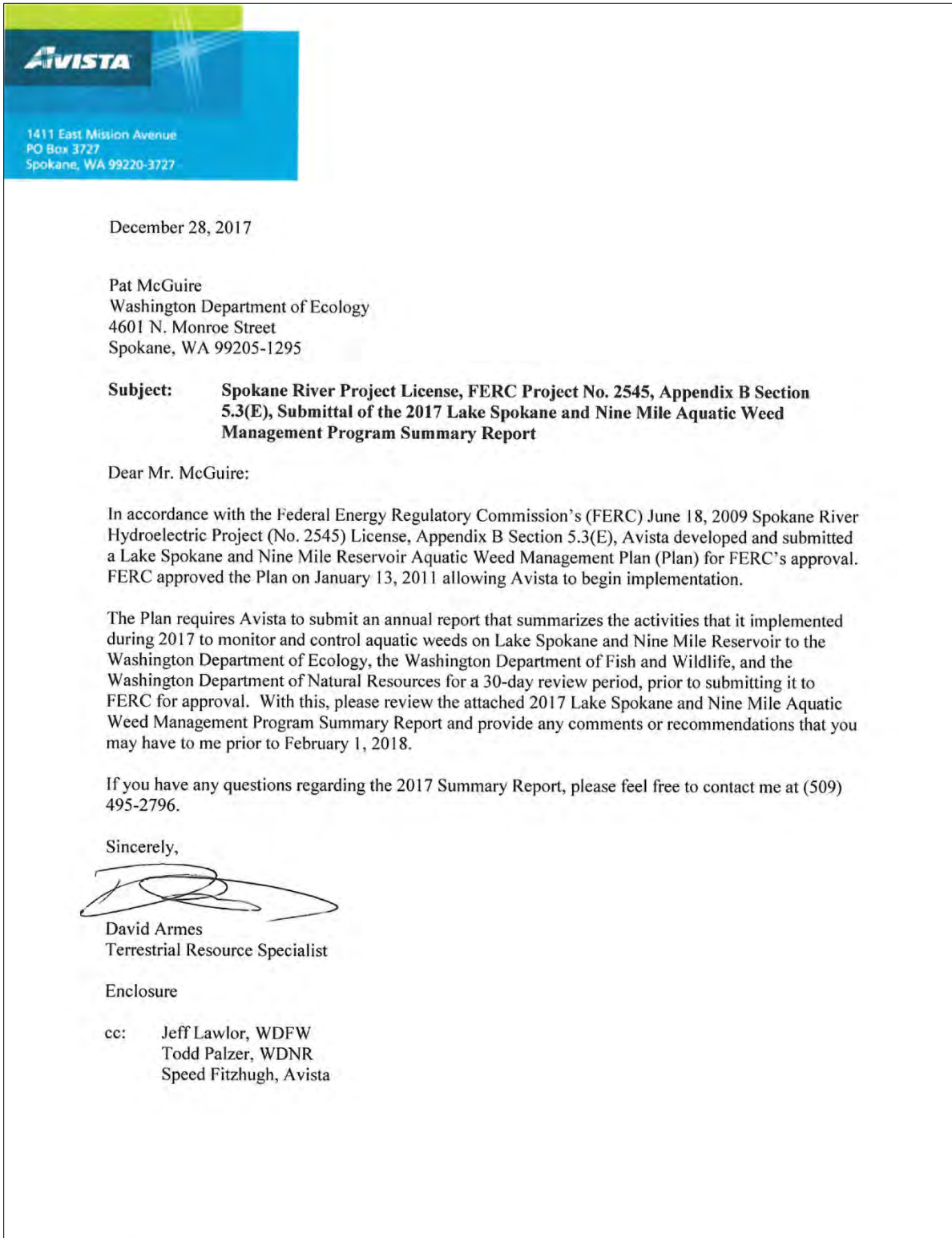


FIGURE 12. FLOWERING RUSH TREATMENT AREAS

APPENDIX A
CONSULTATION RECORD

Avista's December 28, 2017 Letter to the Washington Department of Ecology



December 28, 2017

Pat McGuire
Washington Department of Ecology
4601 N. Monroe Street
Spokane, WA 99205-1295

Subject: Spokane River Project License, FERC Project No. 2545, Appendix B Section 5.3(E), Submittal of the 2017 Lake Spokane and Nine Mile Aquatic Weed Management Program Summary Report

Dear Mr. McGuire:

In accordance with the Federal Energy Regulatory Commission's (FERC) June 18, 2009 Spokane River Hydroelectric Project (No. 2545) License, Appendix B Section 5.3(E), Avista developed and submitted a Lake Spokane and Nine Mile Reservoir Aquatic Weed Management Plan (Plan) for FERC's approval. FERC approved the Plan on January 13, 2011 allowing Avista to begin implementation.

The Plan requires Avista to submit an annual report that summarizes the activities that it implemented during 2017 to monitor and control aquatic weeds on Lake Spokane and Nine Mile Reservoir to the Washington Department of Ecology, the Washington Department of Fish and Wildlife, and the Washington Department of Natural Resources for a 30-day review period, prior to submitting it to FERC for approval. With this, please review the attached 2017 Lake Spokane and Nine Mile Aquatic Weed Management Program Summary Report and provide any comments or recommendations that you may have to me prior to February 1, 2018.

If you have any questions regarding the 2017 Summary Report, please feel free to contact me at (509) 495-2796.

Sincerely,



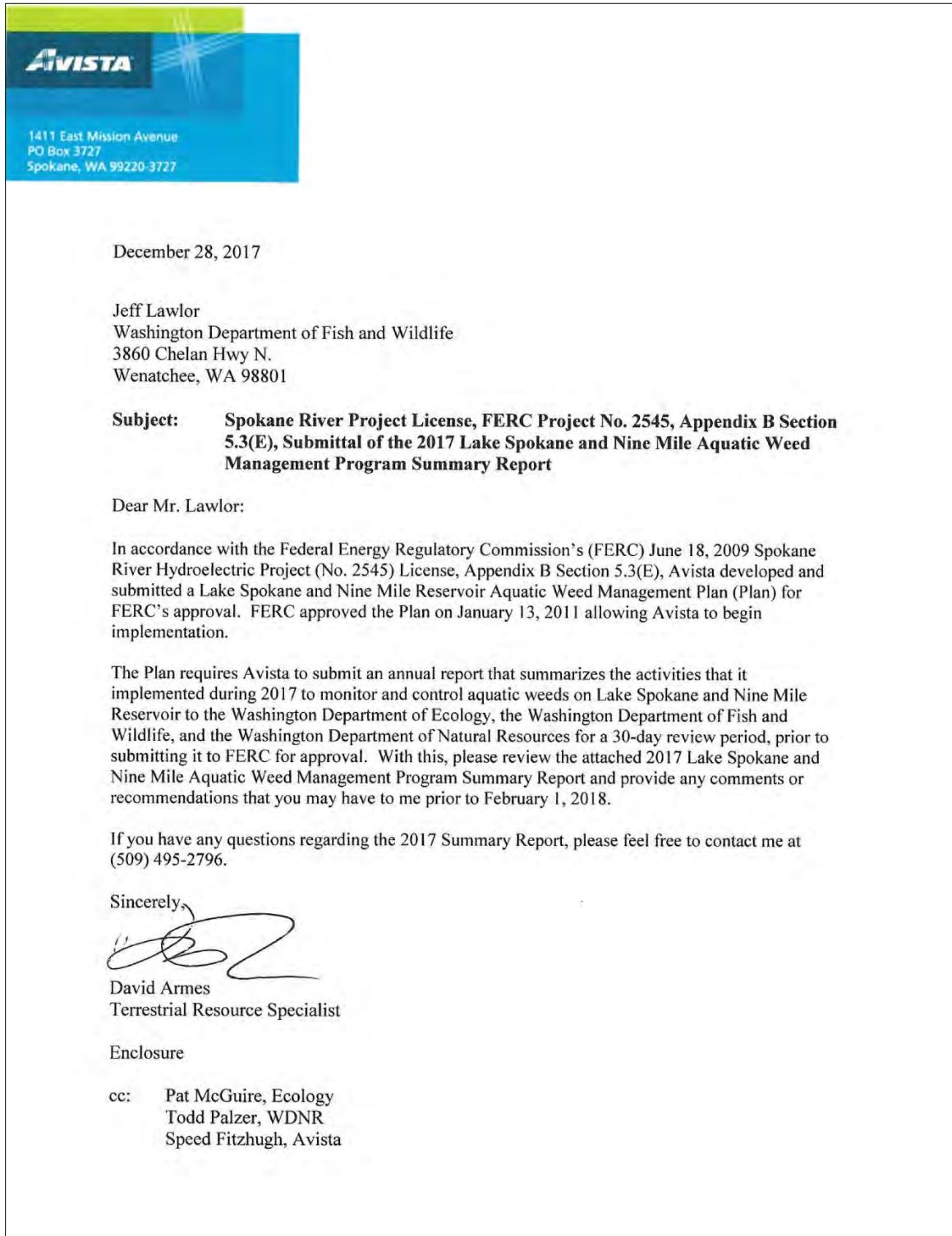
David Armes
Terrestrial Resource Specialist

Enclosure

cc: Jeff Lawlor, WDFW
Todd Palzer, WDNR
Speed Fitzhugh, Avista

The Washington Department of Ecology did not provide comments on the Summary Report.

Avista's December 28, 2017 Letter to the Washington Department of Fish and Wildlife



The Washington Department of Fish and Wildlife did not provide comments on the Summary Report.

Avista's December 28, 2017 Letter to the Washington Department of Natural Resources



December 28, 2017

Todd Palzer
Washington Department of Natural Resources
PO Box 47000
1111 Washington Street SE
Olympia, WA 98504-7000

Subject: Spokane River Project License, FERC Project No. 2545, Appendix B Section 5.3(E), Submittal of the 2017 Lake Spokane and Nine Mile Aquatic Weed Management Program Summary Report

Dear Mr. Palzer:

In accordance with the Federal Energy Regulatory Commission's (FERC) June 18, 2009 Spokane River Hydroelectric Project (No. 2545) License, Appendix B Section 5.3(E), Avista developed and submitted a Lake Spokane and Nine Mile Reservoir Aquatic Weed Management Plan (Plan) for FERC's approval. FERC approved the Plan on January 13, 2011 allowing Avista to begin implementation.

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If you have any questions regarding the 2017 Summary Report, please feel free to contact me at (509) 495-2796.

Sincerely,

A handwritten signature in black ink, appearing to read "David Armes".

David Armes
Terrestrial Resource Specialist

Enclosure

cc: Pat McGuire, Ecology
Jeff Lawlor, WDFW
Speed Fitzhugh, Avista

The Washington Department of Natural Resources did not provide comments on the Summary Report.