

WHATCOM BOAT INSPECTIONS

2017

Aquatic Invasive Species
Prevention Program

ANNUAL REPORT



February 2018



T. WARD

TABLE OF CONTENTS

Introduction..... 3

Program Development..... 4

Watercraft Inspection Program..... 5

Lake Whatcom..... 7

Lake Samish..... 10

Wire Seal Program..... 11

On-Site Watercraft Inspections..... 12

Lake Terrell..... 13

Early Detection and Monitoring..... 14

Watercraft Inspection Training..... 16

Education and Outreach..... 17

Regional Collaboration, Partnerships, and Information Sharing..... 18

2017 Program Expenditures and Revenues..... 19



Lake Whatcom Management Program
lakewhatcom.whatcomcounty.org



The Lake Whatcom Management Program is a joint effort of the City of Bellingham, Whatcom County, and the Lake Whatcom Water and Sewer District to protect Lake Whatcom as a source of drinking water for over 100,000 residents. The Whatcom Boat Inspection Program is one of many programs sponsored by this coordinated effort.

INTRODUCTION

The Whatcom Boat Inspection Program was launched in 2012 to prevent the introduction of zebra and quagga mussels, and other aquatic invasive species, to Whatcom County waters. To date, the program has conducted over 40,000 inspections and has intercepted nine boats transporting or suspected of transporting quagga mussels, 680 boats transporting vegetation, and another 784 boats that were either wet or were found to be transporting standing water. These boats were of particular concern given the potential for standing water to act as a vector for the transport of microscopic life stages of aquatic invasive species (AIS), such as zebra or quagga mussel larvae.

If introduced, the impacts of these invasive mussels would be felt by our entire community. The mussels could attach to and damage public and private infrastructure, make shoreline areas hazardous or uninviting for recreational users and property owners, cause long-term taste and odor problems in our drinking water, and displace and outcompete native aquatic species.



2017 AIS Crew | AIS STAFF

Figure 1 | Annual total number of watercraft inspections conducted by Whatcom Boat Inspection Program 2013–2017



DATA SOURCE: Whatcom Boat Inspection Program inspection data from 2013–2017.

The Whatcom Boat Inspection Program completed its sixth season in 2017. The program requires all watercraft to be inspected and permitted prior to launching or operating on Lake Whatcom or Lake Samish. AIS Check Stations were located at the Bloedel Donovan Park boat launch, the South Bay Washington Department of Fish and Wildlife (WDFW) launch, the Sudden Valley Marina, and the Lake Samish WDFW launch. Additional inspections were conducted at private residences in the Lake Whatcom and Lake Samish watersheds. In 2017, AIS inspectors conducted over 12,000 inspections at Lake Whatcom and Lake Samish.

In August 2017, AIS inspectors conducted shoreline surveys at Lake Whatcom and Lake Samish to monitor for new AIS infestations. As a result of this survey effort, two additional Asian clam colonies were discovered at Lake Whatcom. No Asian clams were discovered at Lake Samish. Whatcom County Noxious Weed Control Board staff conducted aquatic plant surveys by boat on Lake Whatcom and Lake Samish in 2017. No new aquatic invasive species were documented as a result of this effort.

This report highlights prevention program achievements for 2017 and includes updates on early detection and monitoring, as well as education and outreach efforts.

PROGRAM DEVELOPMENT

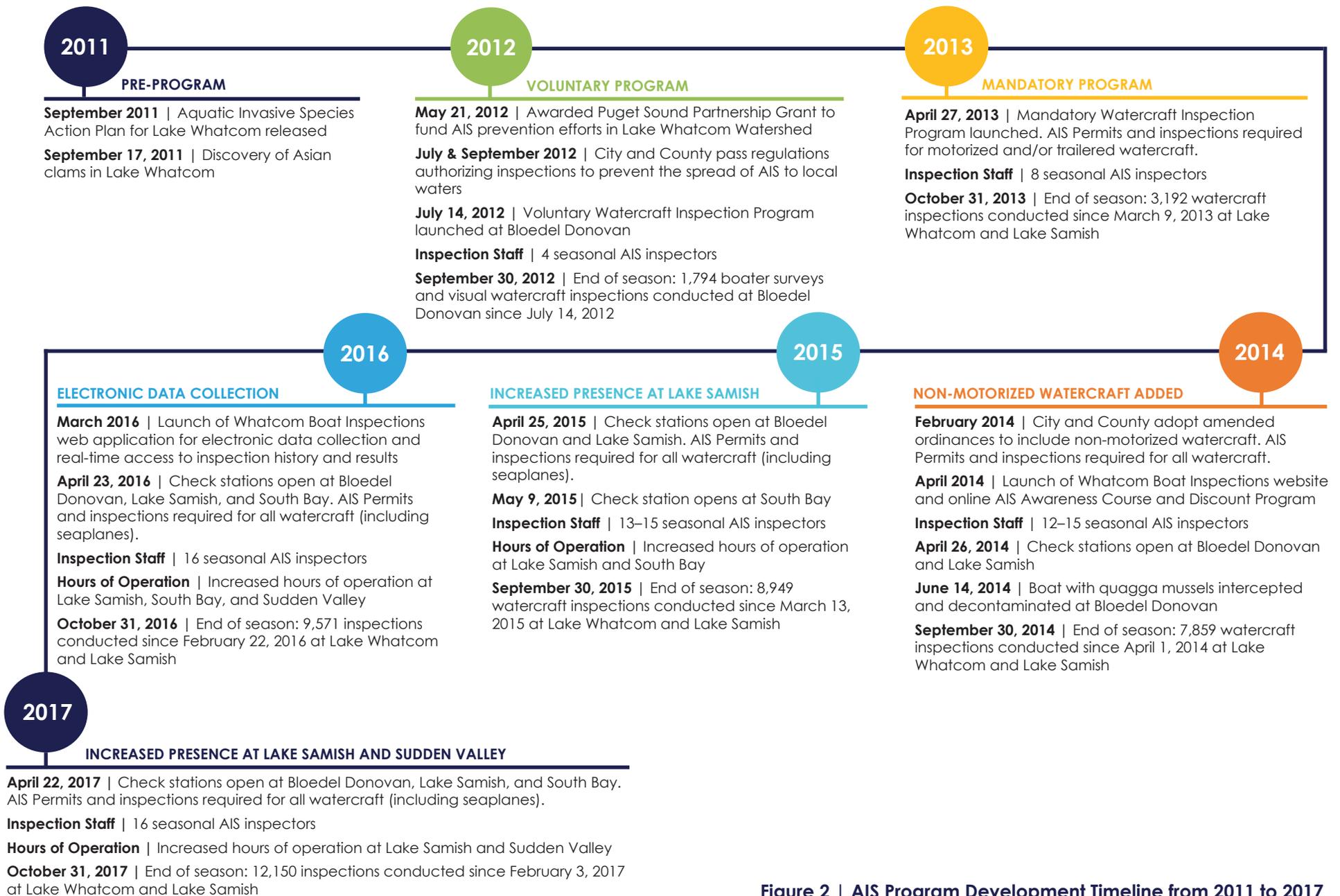


Figure 2 | AIS Program Development Timeline from 2011 to 2017

WATERCRAFT INSPECTION PROGRAM

In 2017, inspectors conducted 12,150 inspections at Lake Whatcom and Lake Samish in an effort to prevent the spread of aquatic invasive species (AIS)—a 27 percent increase when compared to the 2016 season. While most of these inspections took place at Bloedel Donovan, additional check stations were operated at the Lake Samish and South Bay Washington Department of Fish and Wildlife (WDFW) launches and at the Sudden Valley Marina throughout the season. Around 1,500 inspections were also conducted at private residences by appointment in the Lake Whatcom and Lake Samish watersheds for boats that could not be trailered to a check station or at residences with multiple watercraft requiring inspection.

AIS inspectors had an additional 7,995 interactions with boaters throughout the season as a result of the Wire Seal Program. Over 1,600 visitors also stopped by the AIS check stations to ask questions about the program.

All of these interactions continue to help increase awareness in our community about AIS and the threats they pose to our local waters.



Inspection at Bloedel Donovan | AIS STAFF

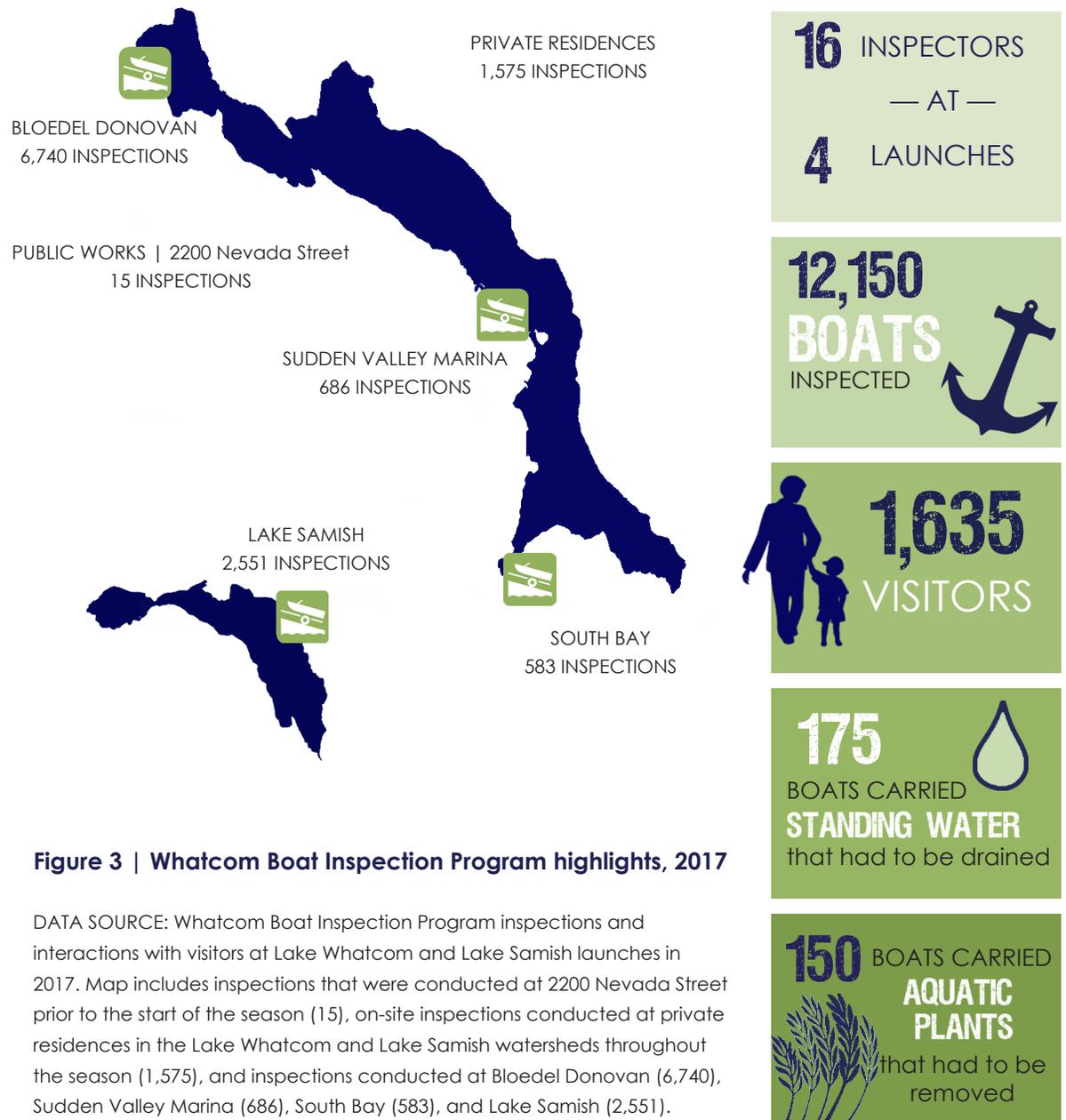


Figure 3 | Whatcom Boat Inspection Program highlights, 2017

DATA SOURCE: Whatcom Boat Inspection Program inspections and interactions with visitors at Lake Whatcom and Lake Samish launches in 2017. Map includes inspections that were conducted at 2200 Nevada Street prior to the start of the season (15), on-site inspections conducted at private residences in the Lake Whatcom and Lake Samish watersheds throughout the season (1,575), and inspections conducted at Bloedel Donovan (6,740), Sudden Valley Marina (686), South Bay (583), and Lake Samish (2,551).

WATERCRAFT INSPECTION PROGRAM

Boater survey information was also collected during each watercraft inspection to provide information on usage patterns, traffic flow, and to assess the level of risk an individual watercraft may have posed to our local lakes. While most of the boats inspected had originated in Whatcom County, boats had previously visited 728 different waterbodies in 45 different states/provinces at some point in the past including 54 mussel-infested waters.

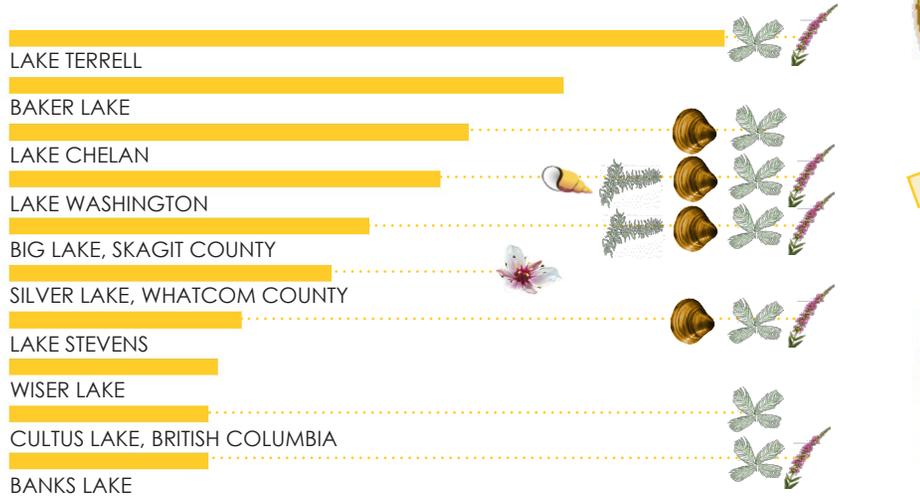
The top ten freshwater bodies most recently visited are all in Washington with Lake Terrell being the most frequently visited waterbody just prior to launching at Lake Whatcom or Lake Samish. While none of these waterbodies are positive for invasive mussels, some are home to potential invaders that pose a risk to our local waters.

These boater survey results underscore the continued importance of our inspection efforts in the prevention of aquatic invasive species both to and within Washington State.

45 STATES + PROVINCES
728 WATER BODIES

TOP 10 FRESHWATER BODIES PRIOR TO LAUNCHING AT LAKE WHATCOM OR LAKE SAMISH

Relative number of vessels and potential invaders



DATA SOURCE: Inspection data collected from surveys in 2017. Includes some AIS already present in top 10 freshwater bodies. Note: Most frequent freshwater bodies visited prior to launching at Lake Whatcom or Lake Samish were Lake Whatcom, Lake Samish, and Lake Padden (not included above). Map Credit: C. BEHEE

Some Potential Invaders:

- Asian Clam
- New Zealand mudsnail
- Flowering rush
- Eurasian watermilfoil
- Purple loosestrife
- Brazilian elodea

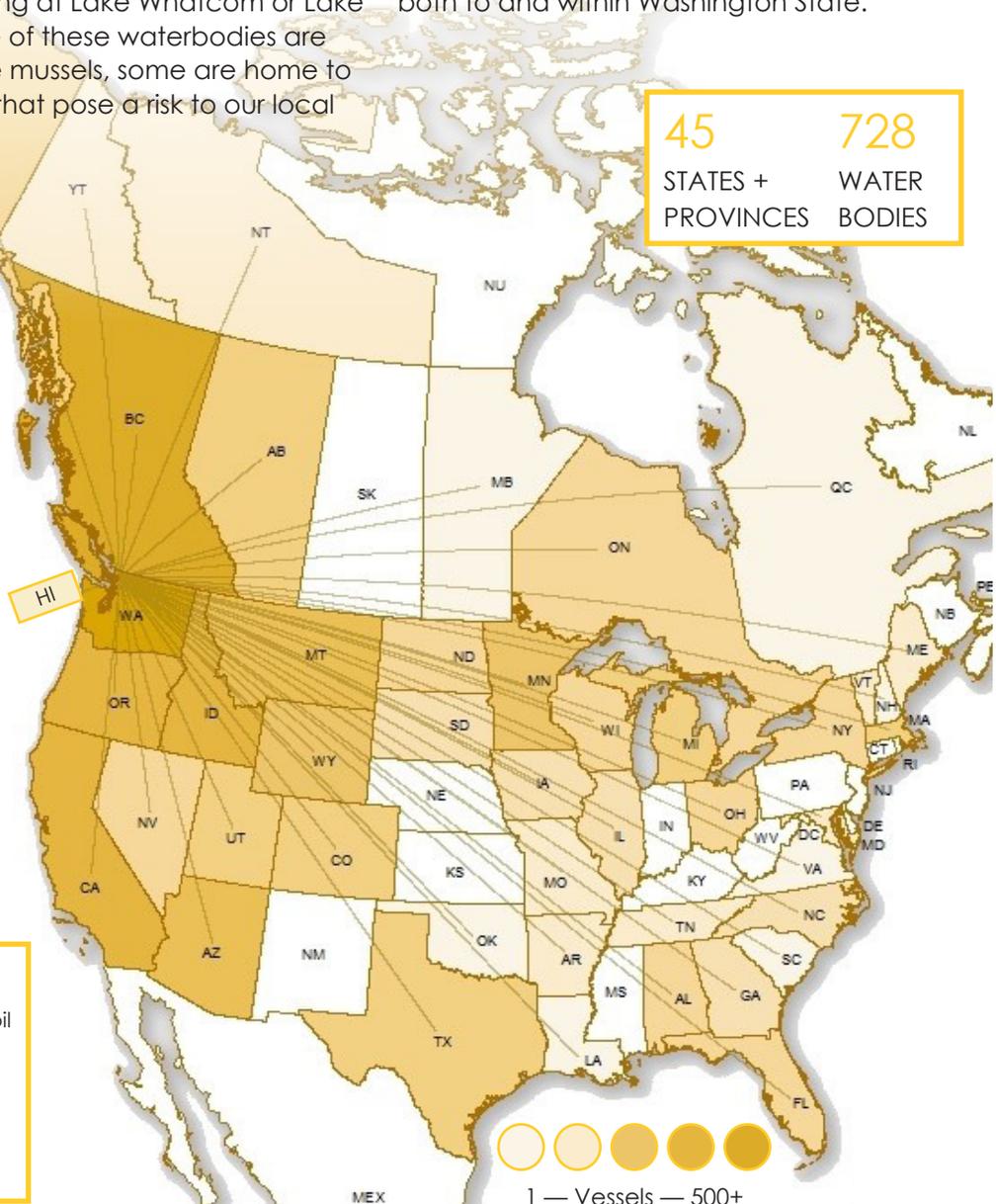


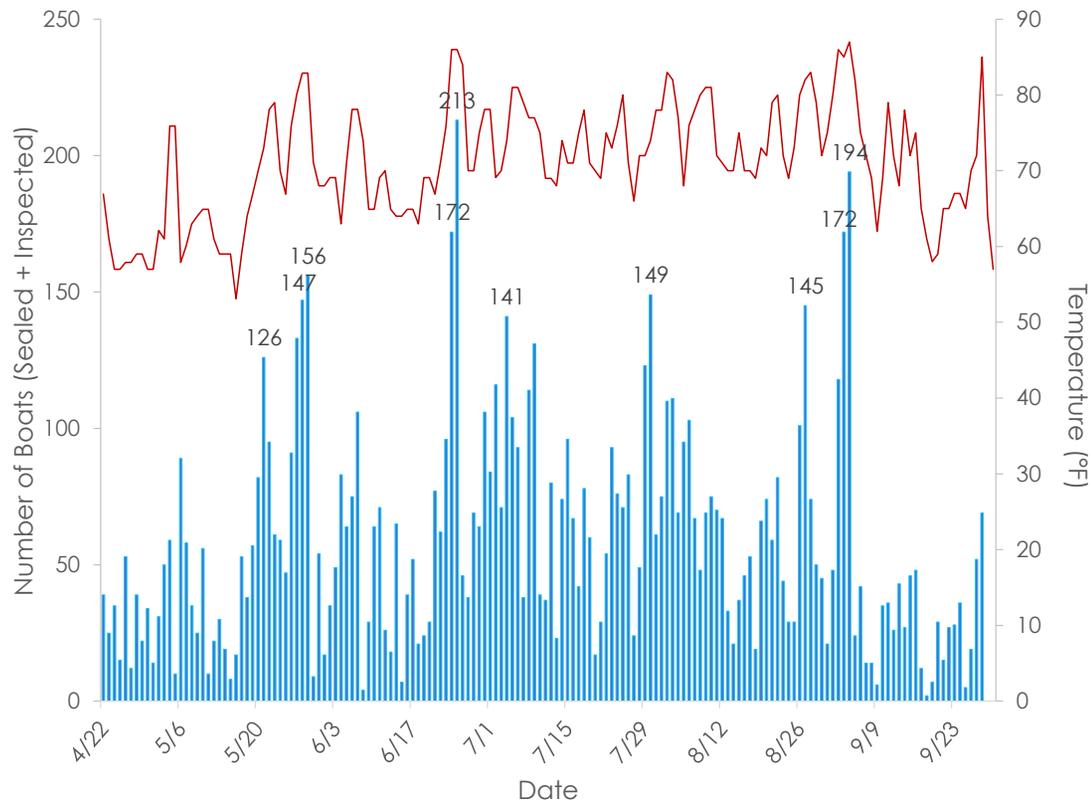
Figure 4 | Previous water bodies visited by vessels launching at Lake Whatcom or Lake Samish, 2017

LAKE WHATCOM

In 2017, the Lake Whatcom Management Program operated three AIS Check Stations at Lake Whatcom: one at Bloedel Donovan Park, one at the South Bay WDFW Launch, and one at the Sudden Valley Marina. Additional inspections were also conducted at private lake residences.

The Bloedel Donovan Check Station opened on April 22 and operated 7 days a week from dawn to dusk through September 28. Additional inspection days were also scheduled intermittently at this site through the month of October. A total of 6,740 inspections were conducted at the Bloedel Donovan Check Station in 2017. This number accounts for approximately 60 percent of all inspections conducted during the 2017 season.

Figure 5 | Number of boats launching at Bloedel Donovan with temperature, 2017



DATA SOURCE: Whatcom Boat Inspection Program inspection and sealed boat data collected at the Bloedel Donovan Check Station between April 22 and September 28, 2017. Temperature data is based on maximum air temperature recorded at the Bellingham International Airport and compiled by the National Climatic Data Center—Global Surface Summary of Day.

The day with the highest boat traffic at the Bloedel Donovan Check Station was June 25 with 213 boats (including 131 inspections and 82 sealed boats being checked in). This day was also one of the hottest days at Bloedel Donovan with a maximum air temperature of 86°F.

As in previous years, high boat traffic days appear to be associated with high temperatures. In 2017, the highest traffic days also coincided with public holidays.



Boat inspection lane at Bloedel Donovan | T. WARD

LAKE WHATCOM

The South Bay Check Station opened on April 22 and operated from 10:00 a.m. to 5:00 p.m., primarily on weekends and holidays, through September 24. This launch is used by boaters coming up from Skagit and Snohomish counties, and also by many residents along South Bay Drive. A total of 583 inspections were conducted at the South Bay Check Station during the 2017 season; a 39 percent increase when compared to the 2016 season.

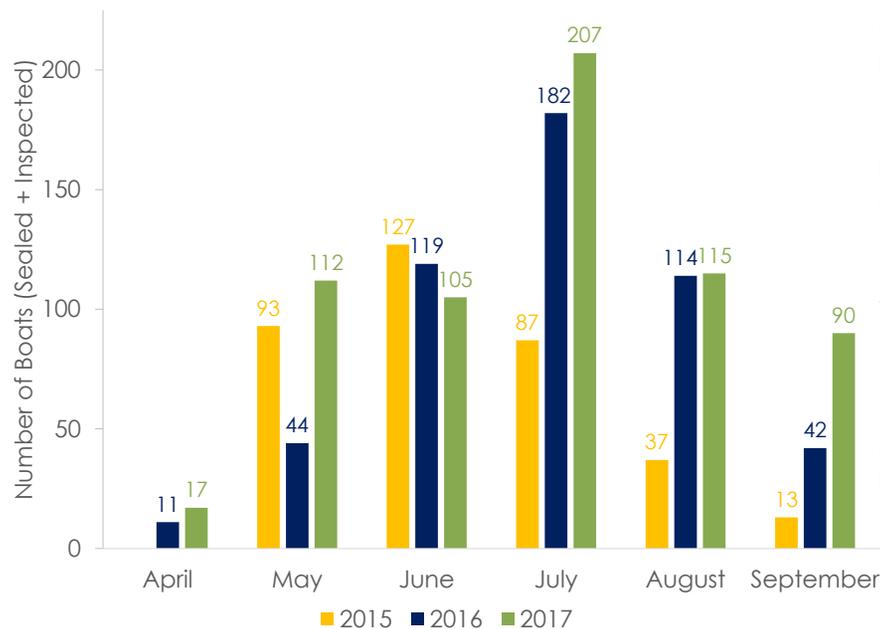
The day with the highest boat traffic was September 3 with a total of 38 boats launching via the South Bay Check Station.

The Lake Whatcom Management Program also operated a check station at the Sudden Valley Marina in 2017. The first inspection day was held on April 15 and was also a training opportunity for new AIS inspectors prior to the start of the season. The Sudden Valley Check Station opened officially on May 7 and operated from 9:00 a.m. to 4:00 p.m. on weekends through September 24.

A total of 686 inspections were conducted at the Sudden Valley Marina Check Station during the 2017 season; a 281 percent increase when compared to the 2016 season.

An additional 1,169 inspections were also conducted by appointment at private residences on Lake Whatcom for boats that could not be trailered to a check station or for people with multiple watercraft requiring inspection.

Figure 6 | Number of boats launching at South Bay WDFW Launch by month, 2015–2017



DATA SOURCE: Whatcom Boat Inspection Program inspection and sealed boat data collected at the South Bay WDFW Launch by month during the 2015, 2016 and 2017 seasons. This check station is open primarily on weekends and holidays.

PHOTOS: Top and Middle: South Bay Check Station. Bottom: Sudden Valley Training Day.



AIS STAFF



T. WARD



AIS STAFF

LAKE WHATCOM

In 2017, five boats were fully decontaminated prior to being allowed to launch at Lake Whatcom. The boats had been recently purchased from or were visiting from the following states or provinces: Arizona, Quebec, Texas, Utah, and Wisconsin. These boats were all considered to be high risk for the potential transport of zebra and/or quagga mussels to Lake Whatcom based on their recent waterbody history.

Three of the boats in question had multiple ballast tanks on board that had to be fully flushed and drained using 120 degree water to kill any possible mussel veligers that could have remained on board. Visible standing water was also discovered in the bilge compartments of two of the boats. These compartments were fully drained and then flushed with hot water. Additionally, several dead zebra mussels were also discovered inside a sea strainer on one of the boats. These mussels were removed and the sea strainer was fully decontaminated prior to allowing the boat to launch.

While boats with ballast tanks pose the highest risk for transporting aquatic invasive species, a quagga mussel shell was also discovered on a kayak launching at Bloedel Donovan in 2017. The kayak had last been used in Lake Havasu, Arizona. The shell and some dried sand were removed from the kayak and after passing a thorough inspection it was allowed to launch.

PHOTOS: Top: AIS inspectors decontaminate boat from Texas on June 17. Middle: AIS inspectors prepare to decontaminate boat from Wisconsin on June 22. Bottom: AIS inspector flushes ballast tanks on boat from Utah on July 2.



AIS STAFF



AIS STAFF



AIS STAFF

What did we find?

Almost five percent of all boats inspected at Lake Whatcom required additional attention because they were not clean, drained, or dry and were at risk for transporting AIS. Particular attention was paid to boats that had standing water on board that could be harboring microscopic life stages of AIS, such as zebra or quagga mussels, Asian clams, or small invasive plant fragments.

Drained/towel dried: 107 boats

Plant removal: 100 boats

Decontamination: 5 boats



AIS STAFF

Inspectors find standing water and dead zebra mussels in sea strainer during high-risk inspection at Bloedel Donovan.

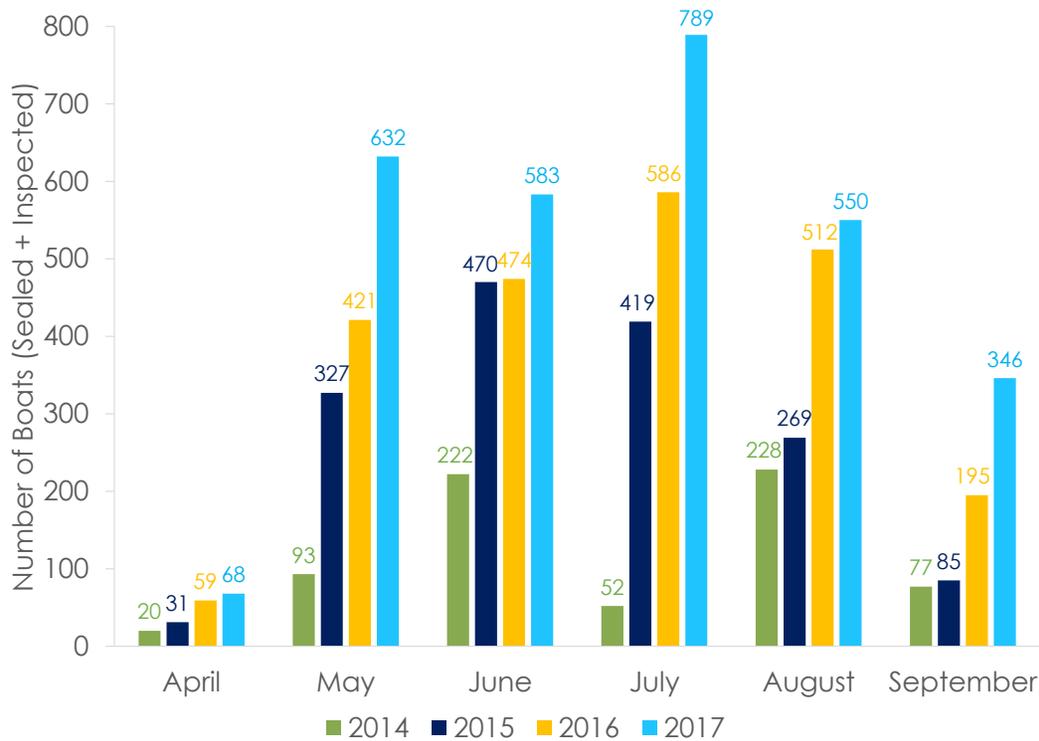
LAKE SAMISH

The Lake Samish Check Station opened on April 22 and operated from dawn to dusk, 7 days a week, through September 28. A total of 2,551 inspections were conducted at the Lake Samish Check Station in 2017—a 30 percent increase when compared to the 2016 season. This increase can be attributed to increased days and hours of operation at the site in 2017.

The day with the highest boat traffic at the Lake Samish Check Station was May 29 with 89 boats (including 78 inspections and 11 sealed boats being checked in). This day was also one of the hottest days at Lake Samish with a maximum air temperature of 82.9°F.

An additional 406 inspections were conducted by appointment at residential properties around Lake Samish in 2017.

Figure 7 | Number of boats launching at Lake Samish WDFW Launch by month, 2014–2017



DATA SOURCE: Whatcom Boat Inspection Program inspection and sealed boat data collected at the Lake Samish WDFW Launch by month during the 2014, 2015, 2016 and 2017 seasons. The Lake Samish Check Station was restricted during July 2014 pending permit approval by the Washington Department of Fish and Wildlife. The permit was re-negotiated in 2015 to increase site safety. Hours of operation were increased in later years to better accommodate Lake Samish boaters.

What did we find?

Almost five percent of all boats inspected at Lake Samish required additional attention because they were not clean, drained, or dry and were at risk for transporting AIS.

Given that Lake Samish is currently only known to have one AIS, the fragrant water lily, inspectors paid particular attention to any boats that were coming from lakes known to have Asian clams that could be unintentionally transporting their larvae in any standing water on board. Additional emphasis was also placed on boats coming from lakes with known Eurasian watermilfoil infestations, such as Lake Terrell.

Drained/towel dried: 68 boats

Plant removal: 24 boats



T. WARD

AIS inspectors check PWCs for invasive species at Lake Samish Check Station, 2017

WIRE SEAL PROGRAM



AIS inspector seals boat at Bloedel Donovan | AIS STAFF



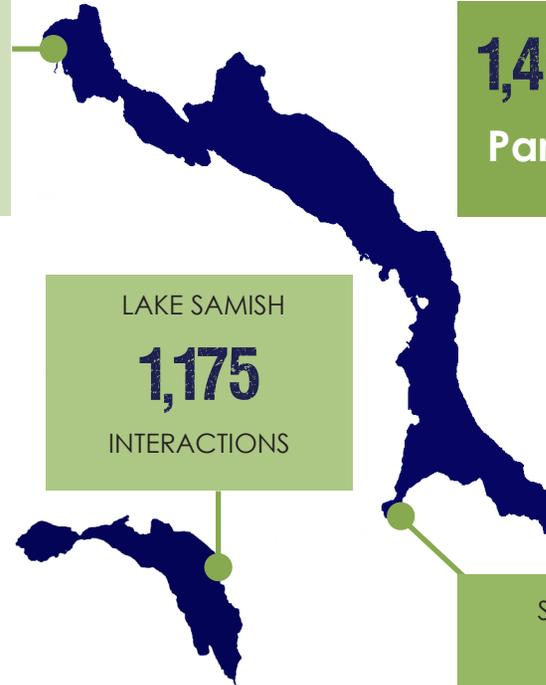
Blue seal | AIS STAFF

BLOEDEL DONOVAN
6,609
INTERACTIONS

LAKE SAMISH
1,175
INTERACTIONS

1,462 BOATS
Participated

SOUTH BAY
182
INTERACTIONS



Boaters that plan on returning to the same lake on their next visit can participate in the Wire Seal Program and have their boats tethered to their trailers as they exit the launch. Wire is threaded through the eyebolt on the bow of the boat and the winch on the trailer and then threaded through a small, plastic, plunger seal. Once the plunger has been pushed in, the wire must be cut to break the tether. Boats returning with intact wire seals go through an expedited process when returning to launch helping to alleviate any traffic build-up, and frustration that could result on hot, busy days.

In 2017, the Wire Seal Program was offered at the Bloedel Donovan Check Station, the South Bay Check Station, the Sudden Valley Marina Check Station, and the Lake Samish Check Station. Different colored seals were used to distinguish between boats exiting from Lake Whatcom (blue) or Lake Samish (yellow) to prevent the spread of aquatic invasive species between the two lakes.

A total of 1,462 boats participated in the Wire Seal Program at Lake Whatcom and Lake Samish. In 2017, the number of boats participating in the Wire Seal Program at the Bloedel Donovan and Lake Samish WDFW check stations was 1,143 and 319, respectively. As a result of the Wire Seal Program, AIS inspectors had an additional 7,995 interactions with boaters while sealing/unsealing boats that provided staff with the opportunity to further engage these boaters in the program. Increased hours at Lake Samish in 2017 resulted in a twelve percent increase in the number of interactions resulting from sealing/unsealing boats compared to the 2016 season.

Figure 8 | Number of Wire Seal Program interactions with boaters by launch site, 2017

What is the Wire Seal Program?

Wire seals act like an express pass for boats returning to the same lake. Boats with intact wire seals do not need to be re-inspected when they return to the lake—making their re-entry process much faster than for boats originating from out of the area. The Wire Seal Program also provides AIS inspectors with additional opportunities to interact with boaters: to provide program information and to answer any questions the boaters may have.

ON-SITE WATERCRAFT INSPECTIONS

In 2017, inspections were also offered at private residences for watercraft that could not be trailered to an inspection station or for people who had multiple watercraft requiring inspection. A total of 1,575 boats were inspected at those on-site appointments in 2017 (approximately 13 percent of all inspections). These inspections were conducted at 277 locations including: private residences, camps, university facilities, and outdoor/sporting goods stores. In many instances, boat owners were able to coordinate with their neighbors to get all of their watercraft inspected at a single appointment.

The larger yellow circles represent between 30–70 boats being inspected at a single location and include inspections conducted at Western Washington University’s Lakewood Facility, Camp Firwood, and the Lutherwood Camp and Retreat Center. Additional group inspection days were organized for residents of the Geneva neighborhood, Whatcom Meadows, Wildwood, West Lake Samish Drive, Shallow Shore Road, and Calmor Cove. These group inspection days were often organized with help from lake residents.



On-site inspection at Lake Samish | AIS STAFF

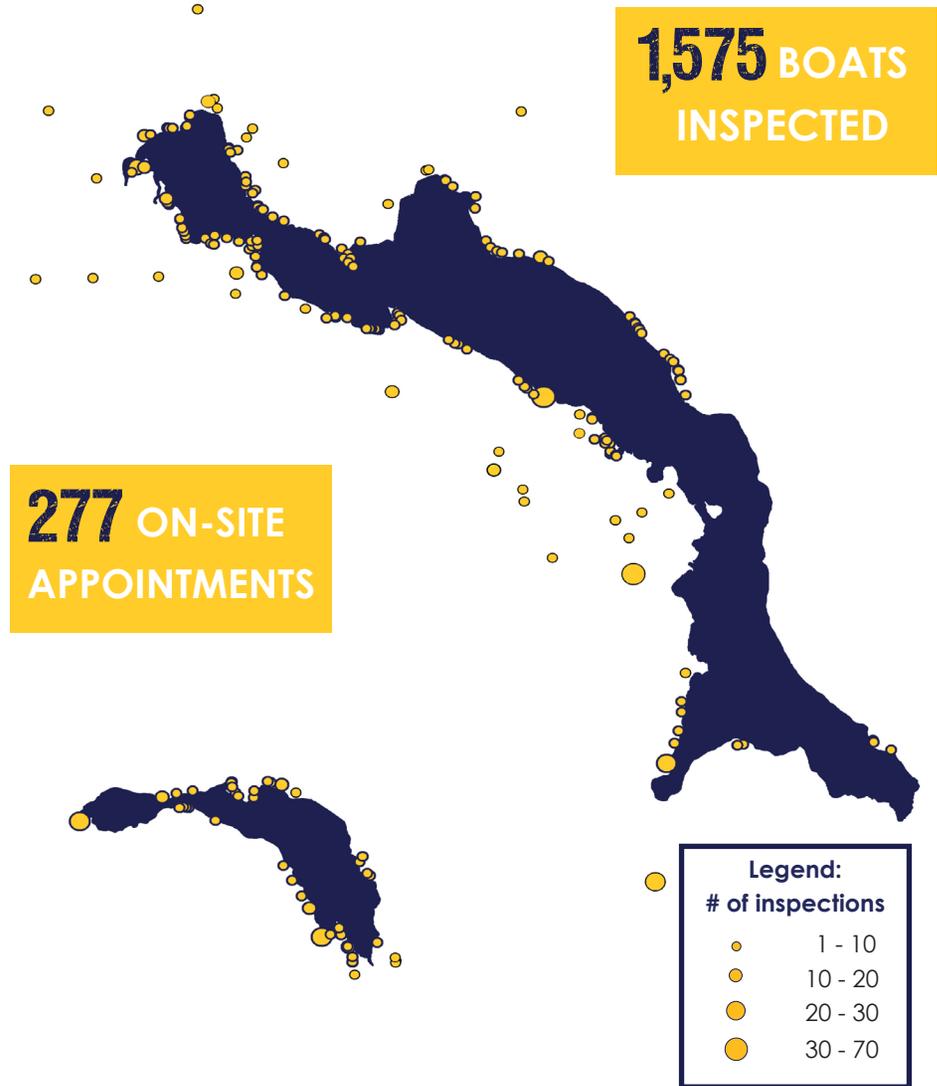


Figure 9 | Distribution of on-site inspections conducted in the Lake Whatcom and Lake Samish watersheds, 2017

DATA SOURCE: Distribution of on-site inspections conducted in Whatcom County in 2017 by the Whatcom Boat Inspection Program. Larger yellow circles represent between 30–70 boats being inspected at a single location. Map does not include some inspections conducted outside of the Lake Whatcom and Lake Samish watersheds. Map Credit: F. WANG

LAKE TERRELL

Lake Terrell is a 550 acre lake located in Whatcom County that is managed by the Washington Department of Fish and Wildlife. In 2013, the Whatcom County Noxious Weed Control Board discovered a significant infestation of Eurasian watermilfoil at Lake Terrell covering an area of approximately 100 acres with a thick canopy. Since 2013, the thick canopy of Eurasian watermilfoil has spread throughout the lake making it much more likely to be a source for the spread of Eurasian watermilfoil to other Whatcom County lakes.

In 2017, the Washington Department of Fish and Wildlife (WDFW) received a grant from the Washington State Department of Ecology to address the Eurasian watermilfoil infestation at Lake Terrell. As part of this grant, the Washington Department of Fish and Wildlife contracted with the Whatcom AIS Program to conduct aquatic invasive species outreach and education activities at Lake Terrell during bass tournaments and on other high-use days.

AIS inspectors conducted voluntary exit watercraft inspections at the primary boat launch at Lake Terrell. If aquatic plant material was found on a watercraft, it was identified and removed to prevent it from spreading to other Whatcom County lakes. AIS inspectors also collected voluntary survey information from the boaters regarding their fishing experience at Lake Terrell, where they intended to go after Lake Terrell, and if they take any precautions to prevent the spread of aquatic invasive species between lakes.

AIS inspectors conducted four outreach events at Lake Terrell in 2017. As a result of these efforts, staff conducted 49 exit watercraft inspections, seven entrance inspections, and interacted with an additional 37 visitors at Lake Terrell. Aquatic plant material was removed from 38 boats upon exiting Lake Terrell. Eurasian watermilfoil was identified on and removed from 29 of these boats in an effort to prevent it from spreading to other area lakes.

In September, the WDFW treated approximately 36 acres around the boat launch area with a herbicide application of 2, 4-D. Additional treatments and outreach activities are planned for 2018.



T. WARD

PHOTOS: Left: AIS Check Station at Lake Terrell WDFW Boat Launch. Top: AIS inspectors conduct exit inspection at Lake Terrell. Middle: Eurasian watermilfoil on trailer at Lake Terrell. Bottom: AIS inspector conducts exit inspection at Lake Terrell.



AIS STAFF

EARLY DETECTION AND MONITORING

In August 2017, aquatic invasive species (AIS) inspectors conducted shoreline surveys for Asian clams and other AIS at several public access points at Lake Whatcom, Lake Samish, and Lake Padden. Thirteen sites at Lake Whatcom had already been identified as having established populations of Asian clams during survey work conducted from 2011 through 2016. Several of these sites were used to train the new staff on invasive species identification and monitoring and equipment decontamination protocols prior to surveying new sites.

In addition to recording Asian clam presence/absence, AIS inspectors also recorded and identified any other species present in the area including native mollusks, worms, tadpoles, and aquatic plants. At sites where Asian clams were present, inspectors used transects and quadrats to determine the extent of the infestation and the approximate density of clams per square meter at that location. This data will be collected annually to monitor population changes at these sites over time.

Several private beaches were also monitored around Lake Whatcom after receiving calls from concerned citizens. As a result of this monitoring effort, two additional Asian clam colonies were discovered at private beaches on S Lake Whatcom Boulevard and on N Shore Road. Sites with the highest density of Asian clams were Bloedel Donovan, South Bay WDFW Launch, Britton Road/N Shore Beach, and N Shore Road with up to 125, 116, 72, and 50 clams per square meter, respectively. Density estimates were not calculated for all sites in 2017.



Figure 10 | Aquatic invasive species monitoring locations and results at Lake Whatcom, 2017



Monitoring for Asian clams at Bloedel Donovan (Left), South Bay (Middle), and Sudden Valley (Right) | T. WARD

EARLY DETECTION AND MONITORING

Additional shoreline surveys for Asian clams were also conducted at Lake Samish and Lake Padden in 2017. No Asian clams were discovered at Lake Samish Park or at the Lake Samish WDFW Launch in 2017; however, one invasive aquatic plant, fragrant water lily was observed at the survey locations along with extensive patches of non-native water celery. Asian clams were discovered at Lake Padden in 2011 and a shoreline survey was conducted at the swimming area in 2017 to determine the extent of the infestation and the approximate density of Asian clams at the swimming beach (34 clams/m²).

In August 2017, Whatcom County Noxious Weed Control Board staff conducted aquatic plant surveys by boat on Lake Whatcom and Lake Samish. Participating staff came from Whatcom County as well as the Whatcom Boat Inspection Program.

Over the course of four days, staff collected aquatic plant samples at random using a double-sided sampling rake thrown from a boat near the shoreline at depths of up to 30 feet. All species sampled were recorded on a species list and any samples requiring further identification were collected and bagged. Shoreline species were also recorded on the species list and specific locations of any listed noxious weed species were entered into Collector for ArcGIS and iForm, customized applications through the Washington Department of Agriculture.

As a result of these surveys, we now have a more complete list of all of the aquatic plant species that are present in both lakes as well as their distributions. No new aquatic invasive species were discovered as a result of these surveys; however, five additional garden loosestrife locations were discovered along the shoreline of Lake Whatcom.

In 2017, the Washington Department of Fish and Wildlife (WDFW) included Lake Whatcom and Lake Samish in their state-wide invasive mussel monitoring program. Several artificial substrates were installed to monitor for adult zebra and quagga mussels. These substrates will be examined for attached mussels several times throughout the year. Horizontal and vertical plankton tows were also conducted at both lakes to monitor for mussel veligers. Samples were collected in the plankton net and then sent to a lab in New York for analysis. WDFW also collected environmental DNA (eDNA) samples in 2017 to be processed at their Molecular Genetics Lab. eDNA refers to DNA extracted from any tissues, cells, or other genetic material found within an environmental sample—in this case, a sample of lake water. These samples can be used to indicate if there is any genetic material from the invasive mussels present in the lakes. No zebra or quagga mussel evidence was detected as a result of this monitoring effort.

PHOTOS: Top: Whatcom County Noxious Weed Board staff conduct aquatic plant survey at Bloedel Donovan. Middle: Aquatic plant survey at Lake Samish. Bottom: Throw rake covered in aquatic plant species from Sudden Valley Marina.



WATERCRAFT INSPECTION TRAINING



M. MAIN

In February 2017, two lead aquatic invasive species inspectors participated in a regional watercraft inspection and decontamination training at Lake Mead. This two-day training is certified by the Pacific Marine Fisheries Commission, the Western Regional Panel on Aquatic Nuisance Species, and the 100th Meridian Initiative with their state and federal partners. The training includes hands-on inspection and decontamination of various types of watercraft and is followed up by a final written exam. This training provided our staff with an opportunity to collaborate with representatives from other agencies, organizations, and businesses who are also implementing inspection and decontamination programs throughout North America.



D. DAVIS

Before the start of the inspection season, prospective aquatic invasive species inspectors received inspection training based on the regional curriculum certified by the Pacific States Marine Fisheries Commission, the Western Regional Panel on Aquatic Nuisance Species, and the 100th Meridian Initiative. Through lectures and hands-on exercises, inspectors-in-training became proficient in basic aquatic invasive species biology, watercraft anatomy, and inspection and decontamination protocols. At the end of the training period, inspectors-in-training had to receive a passing score on a final written exam before being issued their certificate authorizing them as inspectors.

Inspectors received additional training on the City of Bellingham's policies and public service competencies, safety protocols, data collection and entry protocols, financial policies, and the use of online applications for communication and engagement, data collection, scheduling, and payment collection.

An inspection training day was held at the Sudden Valley Marina on April 15, 2017, for inspectors to practice inspecting boats and entering data in the field using the online web application that was developed in 2016. This application allows inspectors to access a watercraft's inspection history in real-time making the vessel survey and risk assessment processes much more efficient for the boaters and inspectors alike.



T. WARD

PHOTOS: Top (Left): AIS inspector practices decontaminating boat during Watercraft Inspection Training at Lake Mead. Bottom (Left): WIT Level II certified inspectors gather after completing training at Lake Mead. Above: Inspectors practice conducting inspections during training.

EDUCATION AND OUTREACH

In 2017, the Lake Whatcom Management Program continued to increase community awareness about aquatic invasive species (AIS) and the Whatcom Boat Inspection Program via newspaper and magazine advertisements, the AIS Awareness Course and Whatcom Boat Inspections website, brochures and electronic postcards, and by talking with boaters, park users, and members of the community at the AIS check stations. Events such as bass tournaments, paddling races, steam boat meets, and seaplane fly-ins also provide AIS inspectors with additional opportunities to increase awareness about AIS beyond Whatcom County.

In May, the Whatcom Boat Inspection Program was invited to participate in a Safety Fair organized by the Sudden Valley Emergency Preparedness Committee. Members of the Sudden Valley community were invited to come learn more about emergency preparedness and how to prepare for the unexpected while visiting booths and demonstration stations. Visitors to the Whatcom Boat Inspection Program booth were able to take turns being an inspector for the day while they searched for AIS on a kayak.

In June, over 100 students from Meridian High School visited the Bloedel Donovan AIS Check Station as part of a field trip to learn more about AIS prevention efforts at Lake Whatcom. Students looked at samples of different species, observed boats being inspected, and learned more about steps they can take to help protect our local lakes.

In 2017, the Whatcom Boat Inspections website and the online AIS Awareness Course continued to be successful education and outreach tools for the program. The website serves as a central location for information regarding the boat inspection program and was visited by over 6,800 unique users in 2017 with several visitors returning to the site on more than one occasion.

The AIS Awareness Course was passed successfully by 2,405 people in 2017—a 29 percent increase when compared to the 2016 season. The course takes around 30 minutes to complete and aims to educate participants about AIS prevention and boat inspection practices to help stop the spread of AIS to Whatcom County waters. Successful completion of the course entitles participants to a \$10 discount that can be applied to the purchase of each annual permit.

Visit our website for
more information:



PHOTOS: Top: Lake Whatcom Classic paddling event at Bloedel Donovan. Middle: AIS inspector engages fisherman during bass tournament at Lake Terrell. Bottom: Meridian High School field trip to Bloedel Donovan.

T. WARD



AIS STAFF



T. WARD



REGIONAL COLLABORATION, PARTNERSHIPS AND INFORMATION SHARING

The ongoing success of the Whatcom Boat Inspection Program would not be possible without the support of our partners at the local, state, and regional levels. These partnerships have fostered the sharing of news, information, training, and resources that have been essential to the development of this program. Additionally, these partnerships have provided local staff with the opportunity to participate in regional collaborative efforts to prevent the spread of aquatic invasive species (AIS) in the Pacific Northwest.

In 2017, the Whatcom Boat Inspection Program partnered with Whatcom County Noxious Weed Control Board staff to conduct aquatic plant surveys at Lake Whatcom and Lake Samish and to provide aquatic invasive plant identification training to AIS inspectors. This partnership provided AIS staff with the opportunity to network with other local staff working to prevent and manage invasive species.

The Whatcom Boat Inspection Program also partnered with the Washington Department of Fish and Wildlife and the Whatcom County Noxious Weed Control Board to conduct outreach activities and voluntary exit inspections at Lake Terrell.

In 2017, the Washington Department of Fish and Wildlife also provided AIS staff with the opportunity to observe and participate in mussel monitoring activities at Lake Whatcom and Lake Samish including: artificial substrate installation, plankton tows, and eDNA sample collection for the early detection of zebra and quagga mussels.

Additionally, aquatic invasive species staff were able to share ideas and program updates with aquatic invasive species program representatives from California, Colorado, Kansas, Nevada, Montana, and Utah at the Watercraft Inspection and Decontamination Training at Lake Mead in February 2017.

The Whatcom Boat Inspection Program continues to look for new ways to highlight program achievements and to increase awareness about AIS prevention and management efforts at the local and regional levels. 2017 inspection results and boater zip codes are available at: whatcomboatinspections.com/2017-story-map.

View the Whatcom Boat Inspections 2017 Story Map here:



PHOTOS: Top: AIS inspector practices decontamination at Watercraft Inspection Training at Lake Mead. Middle: AIS inspector assists Whatcom County staff during Lake Whatcom aquatic plant survey. Bottom: Washington Department of Fish and Wildlife, Whatcom County Noxious Weed Control Board, and City of Bellingham staff meet to discuss pre-treatment aquatic plant survey at Lake Terrell.



R. LEWIS



T. WARD



T. WARD

2017 PROGRAM EXPENDITURES AND REVENUES

Fee revenues collected by AIS permit sales are used to fund the AIS Program. This funding is supplemented by funding provided by Whatcom County, the City of Bellingham, and the Lake Whatcom Water and Sewer District. The tables below outline program expenditures and revenues collected from fees in 2017.

2017 PROGRAM EXPENDITURES

| Program Characteristic | Expenditures for 2017 (\$) |
|------------------------|----------------------------|
| AIS Program Staff | 402,346 |
| Other* | 45,464 |
| Total | 447,810 |

*Other costs include supplies, materials, equipment, and consultant fees.

FEE REVENUES COLLECTED IN 2017

| Type of Permit/Pass | Price (\$) | # Passes/Permits Sold | Total Revenue (\$) |
|-----------------------------------|------------|-----------------------|--------------------|
| Annual Permit | 50 | 1,614 | 80,700 |
| Annual Permit (Discounted) | 40 | 1,207 | 48,280 |
| 3-Day Pass | 20 | 453 | 9,060 |
| Non-Motorized Permit | 10 | 220 | 2,200 |
| Non-Motorized Permit (Discounted) | 0 | 2,942 | 0 |
| Total | | 6,407 | 140,240* |

*Electronic transaction fees (totaling \$3,679) not subtracted from total. Does not include all revenues collected from event or business permit fees.

CONTRIBUTION BY JURISDICTION

| Jurisdiction | Contribution (\$) |
|---------------------------------------|-------------------|
| City of Bellingham | 137,988 |
| Whatcom County | 123,000 |
| Lake Whatcom Water and Sewer District | 50,000 |
| Total | 310,988 |



T. WARD

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