



Washington Department of Fish and Wildlife Aquatic Invasive Species Unit Update

Columbia River Basin Team Meeting
June 27, 2017 Helena, MT

WDFW AIS Unit

AIS Coordinator 1 FTE
Allen Pleus - Olympia

Lieutenant 1 FTE
Eric Anderson - Everywhere

Prevention Biologist 1 FTE
Jesse Schultz - Olympia

Sergeant 1 FTE
Pamela Taylor - Spokane

Prevention Technician 0.50 FTE
Richard Visser - Olympia

Prevention Technician 0.75 FTE
Michael Wilkinson - Spokane

Watercraft Inspector 0.50 FTE
2 Positions - Plymouth POE

Watercraft Inspector 0.50 FTE
1 Positions - Spokane POE

Ballast Water

Ballast Water Inspector 1 FTE – La Connor
Ballast Water Inspector 1 FTE – Vancouver
Ballast Water Support 1 FTE – Olympia
Ballast Water Data 0.50 FTE – Olympia

Aquatic Invasive Species Funding Advisory Committee

Report & Recommendations

April 13, 2016

Committee Members

- WA Water Resources Association
- Taylor Shellfish
- Chelan PUD
- WA Friends of Farms and Forests
- NW Marine Trade Association
- Recreational Boating Association of Washington
- Upper Columbia United Tribes
- Trout Unlimited
- City of Bellingham
- Farm Bureau
- Pacific Merchant Shipping Association
- NW Indian Fisheries

Draft AIS Legislation

CURRENT

Funding Source	Revenue	Program
\$2 resident boater fee	\$.5M	AIS mgmt/ prevention
ALEA	\$.38M	Ballast water

PROPOSED

Funding Source	Revenue	Program
Resident boater fee	\$0.5M	AIS mgmt/ prevention
Non-resident boater fee	\$0.5M	
Aquatic conveyance/seaplane fee	\$0.25M	
Public Utility Tax diversion/ GFS	\$1.0M	

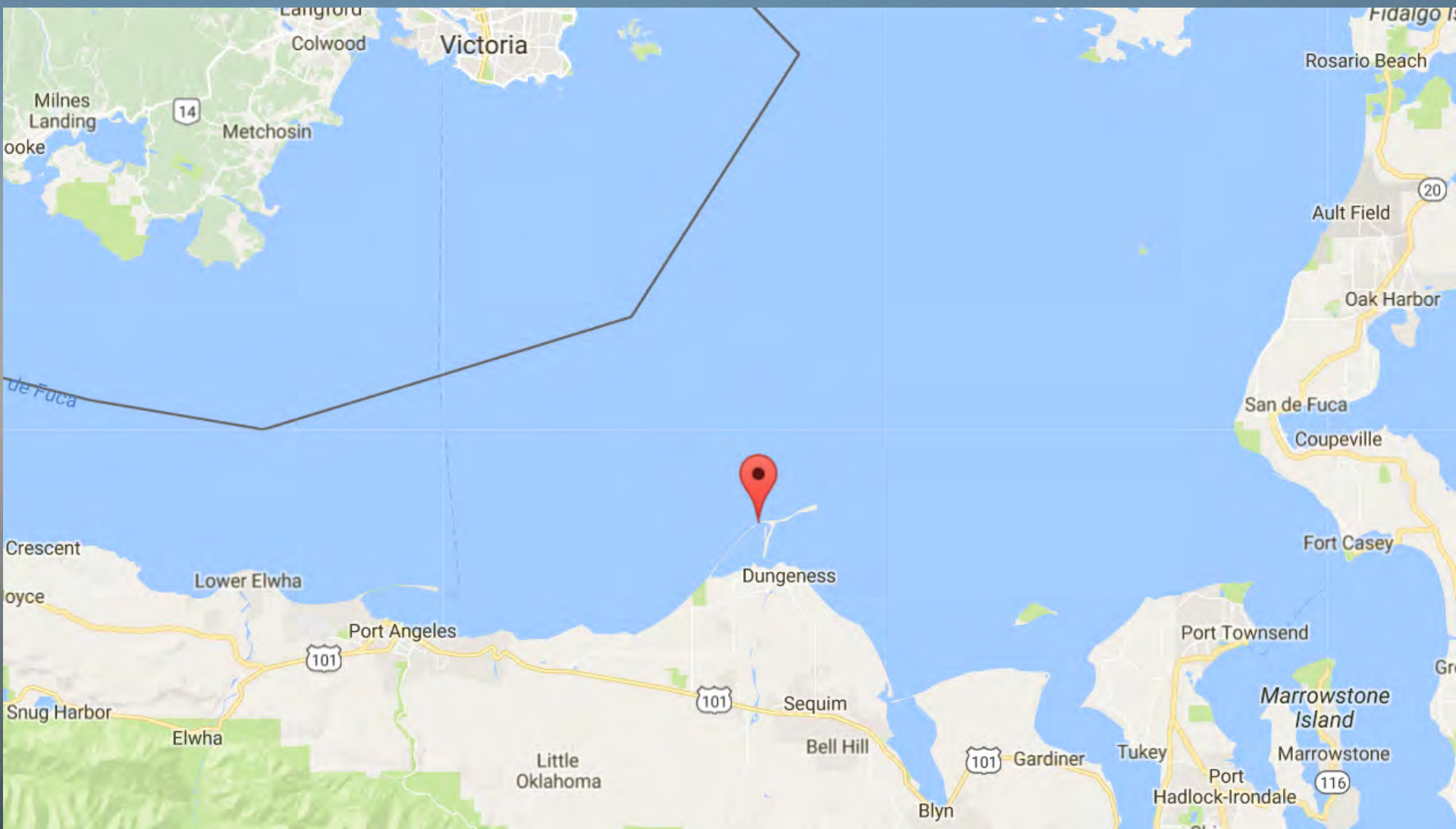
Next Steps

- ❑ Legislature still in session.
- ❑ Both SB 5303 and HB 1429 are in the House.
- ❑ Confident they will pass.
- ❑ Lots of stakeholder support from WISC, utilities, shellfish growers, boaters, cities and counties.
- ❑ TVW segment will air next week on AIS and the need for increased prevention and management.
- ❑ Big thanks to WISC for support!



DUNGENESS SPIT

EUROPEAN GREEN CRAB DETECTION AND RAPID RESPONSE



European Green Crab

Carcinus maenas

- **Prohibited Level 1 Species**
 - (1)(a) Species classified as prohibited level 1 pose a high invasive risk and are a priority for prevention and expedited rapid response management actions.



Detection

➤ When

- April 13, 2017.

➤ Who

- United States Fish and Wildlife Service (USFWS) and volunteers.
- University of Washington Sea Grant Green Crab Team and volunteers.

➤ Why

- Early detection monitoring administered by Sea Grant Green Crab Team.

➤ Captured

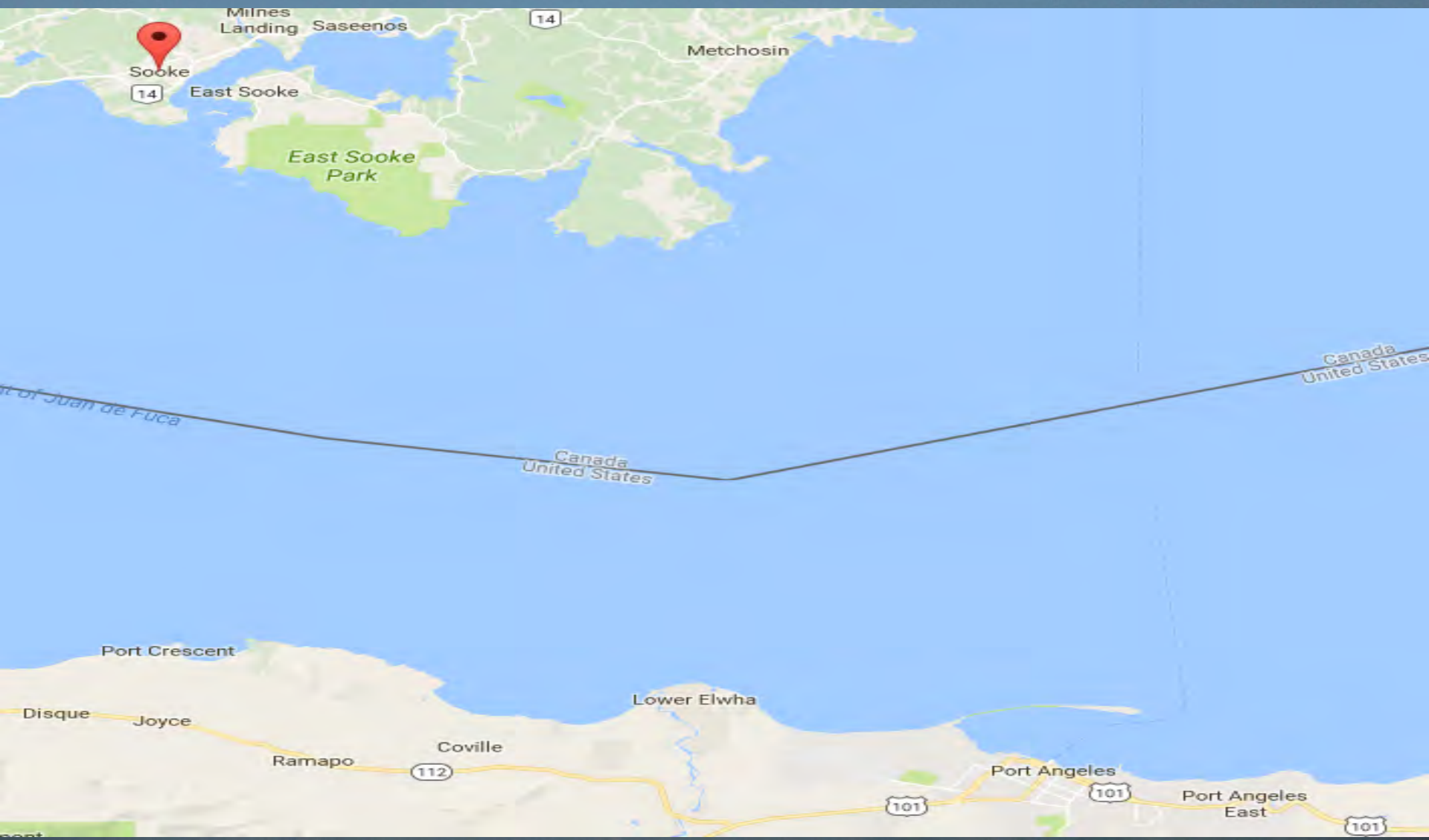
- 4 EGC.



Detection: Dungeness Spit Clallam County



Source?



Rapid Response

➤ Equipment

- Traps
- Bait
- Transportation

➤ Logistics

- Eradication/control strategy
- Assess EGC population and scope
- Coordination/communications/stakeholder outreach
- Access

➤ Staff

- Training
- Safety



Rapid Response

- ~3.5 miles from USFWS HQ
- UTV Beach access + Hike
- 3-5 staff/day
- 25-125 traps/day
- Determined by tides



Intensive Trapping



Results

As of June 23, 2017

- 80 EGC
 - 50 Males
 - 30 Females

Still high ratio
natives to invasives



Stone Soup Management

- ▣ USFWS (federal) landowner – WDFW in advisory role
- ▣ WDFW provides context, coordination , and authorities to manage the situation
- ▣ WSG provides species expertise and early detection infrastructure
- ▣ WDFW provides rapid response coordination
- ▣ Stakeholders provide energy and main ingredients to fulfill
- ▣ Everyone owns success
- ▣ Also like to thank Jamestown S’Klallam Tribe and Washington Conservation Corp.



African Clawed Frogs (*Xenopus laevis*) in City of Lacey Stormwater Ponds Detection

ACF Identification Tadpole

- Translucent, has a tentacle on each side of its mouth, and a slender tail ending in a filament
- Up to 70 mm



ACF Identification Adult

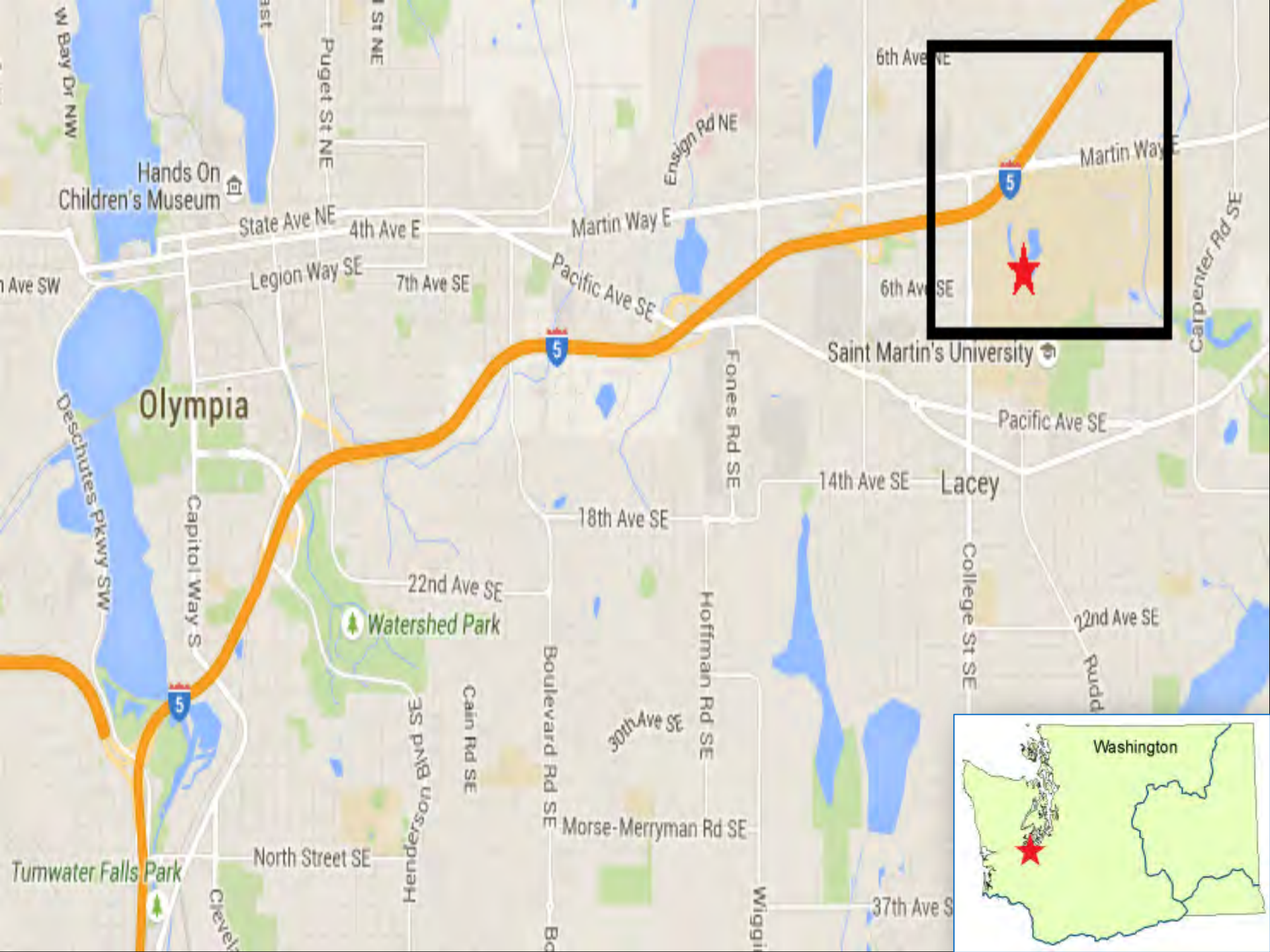
- Hind legs are large, webbed, 3 inside toes have **black claws**
- Front legs slender and unwebbed fingers
- Dorsoventrally flattened with relatively small head
- Dorsal coloration of X, olive to brown
- Underside whitish with a yellow tinge
- Very slippery smooth skin



ACF Detection

- July 15, 2015 WDOE staff reported on the WISC reporting site and contacted WDFW
- Confirmed by WDFW amphibian and independent expert
- First known detection in Washington







WDOE

ACF
Ponds

USFW
S

Saint Martin's
University

St Martins
Park

Woodland Creek

109

College St SE



Captured Animals as of 8/17/2016

	ACF	Bullfrogs	Native Amphibians	Goldfish	Total
Pond 1	2810	198	17	1101	4,126
Pond 2	2223	3250	131	0	5,604
Pond 3	462	618	193	44	1,317
Total	5,495	4,066	341	1,145	11,047
Sp. %	49.7%	36.8%	3.1%	10.4%	



Photo Jackson Gross Smith-Root



Ranavirus

Biology:

- 1st detection in Pacific Northwest
- Known to affect 72 amphibian species
 - up to 100% kill rate
- Crossover among amphibians, fish, reptiles
- Suspected to have caused die-offs in fish and reptiles worldwide
- Remain viable for months wet/dry
- Multiple human pathway spread –
 - Release of infected pets
 - Transmission from infested amphibians, fish, reptiles
 - Non-decontaminated wading gear/aquatic equipment
- Death by severe cellular/organ necrosis

International OIE*
Reportable Disease







Fences around all 3 ponds



Proposed 100% Sodium Chloride Eradication Chemical Treatment

- Conduct sodium chloride trails for 100% mortality on ACF.
- Obtain Washington Department of Ecology permit to discharge a chemical and Washington State Department of Agriculture label to use sodium chloride for ACF eradication.

Sodium Chloride Trails

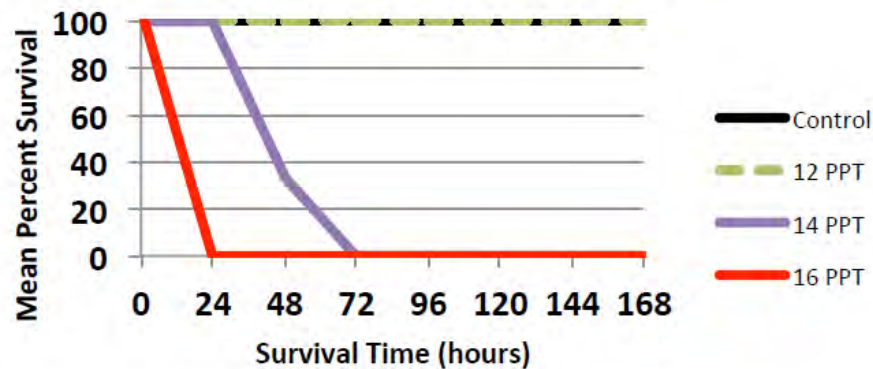
- Conducted by Jackson Gross MSPH PhD
Research Scientist Conservation and Aquatic
Nuisance Species Program Manager of Smith-
Root Inc.



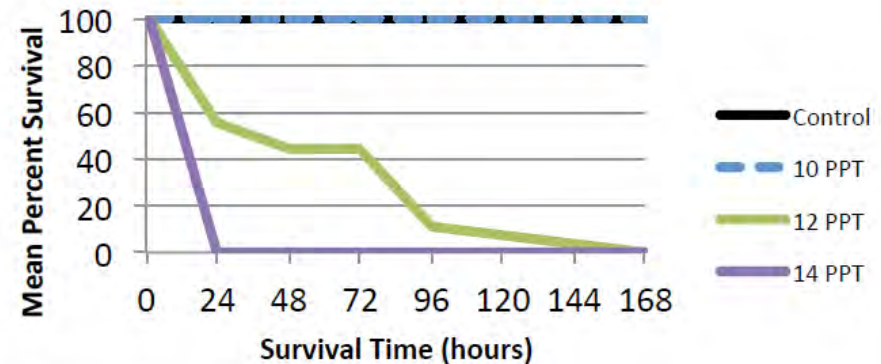
Sodium Chloride Trails Results

- 16 ppt for 24 hours results in 100% mortality

The Effects of NaCl on Sub-adult *Xenopus laevis* Survival



The Effects of NaCl on Metamorphic *Xenopus laevis* Survival



Permit and Label Obtained



August 17, 2016

Jesse Schultz
Washington Department of Fish and Wildlife
1111 Washington St SE 6th Floor
Olympia, WA 98501-1091

RE: Coverage under the Aquatic Invasive Species Management General Permit

Permit Number: WAG993002

Dear Jesse Schultz:

The Washington State Department of Ecology (Ecology) reissued the Aquatic Invasive Species Management General Permit (permit) on August 17, 2016. Ecology received your renewal application for coverage under the permit at least 180 days before the expiration date of the previous permit. Ecology is issuing you coverage under the updated permit on August 17, 2016 and the permit and your coverage become effective on September 16, 2016. **Retain this letter with your permit. It is part of the official record of permit coverage for your operations.**

Please read the permit carefully, a copy is included with this letter. As a Permittee, you are legally obligated to comply with its terms and conditions. Please refer to the permit number above when contacting Ecology.

Treatment Timing Windows

Ecology conditions each permit coverage to mitigate impacts to salmon, steelhead, dolly varden/bull trout and Washington Department of Fish and Wildlife priority habitats and species using Treatment Windows. In addition, there may also be Timing Windows that are voluntary and should be considered if work schedules allow. For reference, the complete set of Treatment Windows may be accessed here: http://www.ecy.wa.gov/programs/wa/pesticides/final_pesticide_permits/aquatic_plants/permitdocs/wdftiming.pdf.

Permit Fees

State law (RCW 90.48.465) requires that all permit holders pay an annual fee based upon the state fiscal year. The state fiscal year begins each year on July 1, and ends on June 30 the following year. Ecology will mail permit fee bills to all permit holders annually each August. Permittees that have permit coverage on July 1 are billed for annual fees. If you would like more information on the fee process, contact Charles Gilman, Permit Fee Administrator at charles.gilman@ecy.wa.gov or (360) 407-6425.

996880-15001_Salt Crystals_20161013.pdf

Salt Crystals

Salt Crystals (sodium chloride) is a state restricted use pesticide and is to be distributed only by licensed pesticide dealers. Only certified applicators or persons under the direct supervision of a certified applicator may use or apply Salt Crystals (sodium chloride).

KEEP OUT OF REACH OF CHILDREN CAUTION

For use only in the City of Lacey's Stormwater Retention Pond #1 by applicants approved under the Aquatic Invasive Species Management / National Pollutant Discharge Elimination System Waste Discharge General Permit (NPDES Permit No. WAG 993002) issued by the Washington State Department of Ecology. For management of Prohibited Level 3 Non-Native Species in City of Lacey's SRP (#1) located in Thurston County. Treatment of SRP #1 allowed only between September 26, 2016 and October 28, 2016. This label for Salt Crystals expires and must not be distributed or used in accordance with this 25b registration after November 30, 2016.

African clawed frogs (all members genus *Xenopus* and *Silvina*) are classified as "Prohibited level 3" species under RCW 77.135.030 (1)(c) and WAC 220-12-050(1)(a)(iii) for non-native aquatic animal species considered to pose a "moderate to high invasive risk" and which may require management by the department or other affected landowner. Prohibited level 3 species, under RCW 77.135.040(1), "may not be possessed, introduced on or into a water body or property, or trafficked, without department authorization, a permit, or as otherwise provided by rule."

Active Ingredients: Sodium chloride.....100%
Total.....100%

PRECAUTIONARY STATEMENTS

Skin Contact: Mild skin irritant.

Eye Contact: Moderate irritant.

Inhalation: Inhalation of dust may cause mild irritation to mucous membranes, nose and throat. Ingestion: Very large doses can cause nausea, vomiting, diarrhea, cramps, dehydration, water retention, high blood pressure and prostration. Symptoms may include coughing, dryness and sore throat. Avoid contact with skin and eyes and do not inhale or ingest. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT: Wear safety glasses or goggles and rubber or nitrile gloves when mixing or handling the product.

FIRST AID

IF ON SKIN: Wash exposed area with soap and water. Get medical advice if irritation develops.

IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call physician if irritation persists.

IF INHALED: Remove to fresh air. Get medical attention for any breathing difficulty.

IF INGESTED: Give one or two glasses of water if patient is alert and able to swallow. Get medical attention if symptoms occur. If large amounts were swallowed, get medical advice.

Environmental Hazards: Reference Non-Project Environmental Impact Statement (EIS) Aquatic Invasive Species Control, Publication no. 10-10-010 (page 64-68).

Conduct Treatment on Pond 1

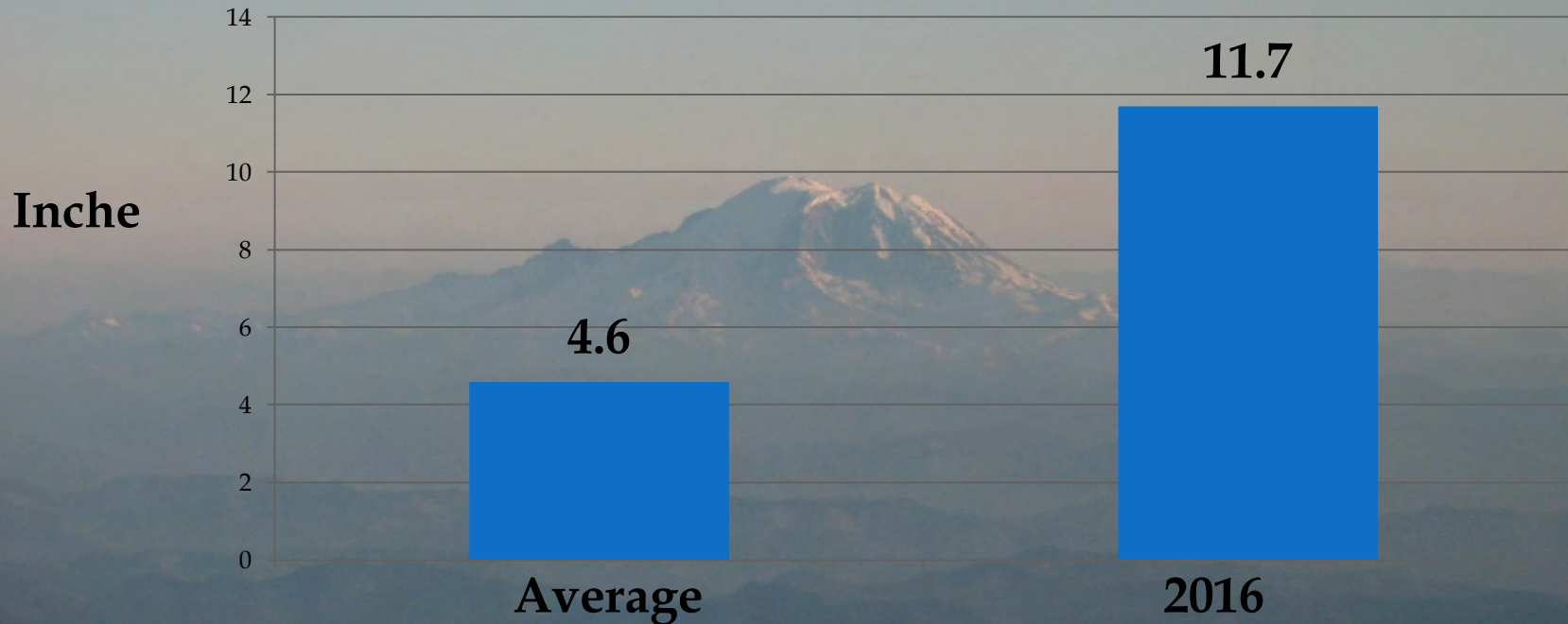
- Sodium chloride brine solution ready.
- Reduced volume of water in pond October 2016.



Conduct Treatment on Pond 1

- Treatment POSTPONED until summer of 2017 due to rain.

Olympia Rainfall in October



Current Activities

- 16 Water temperature loggers deployed in January 2017 and records every 6 hours.
 - All 3 ponds have 5 loggers:
 - 1 on bottom at inlet.
 - 1 on bottom at outlet.
 - 1 buried 12 inches at outlet.
 - 1 on bottom and 1 immediately below surface on a pole in center of pond .
 - 1 on bottom in wetland between Ponds 2 and 3.

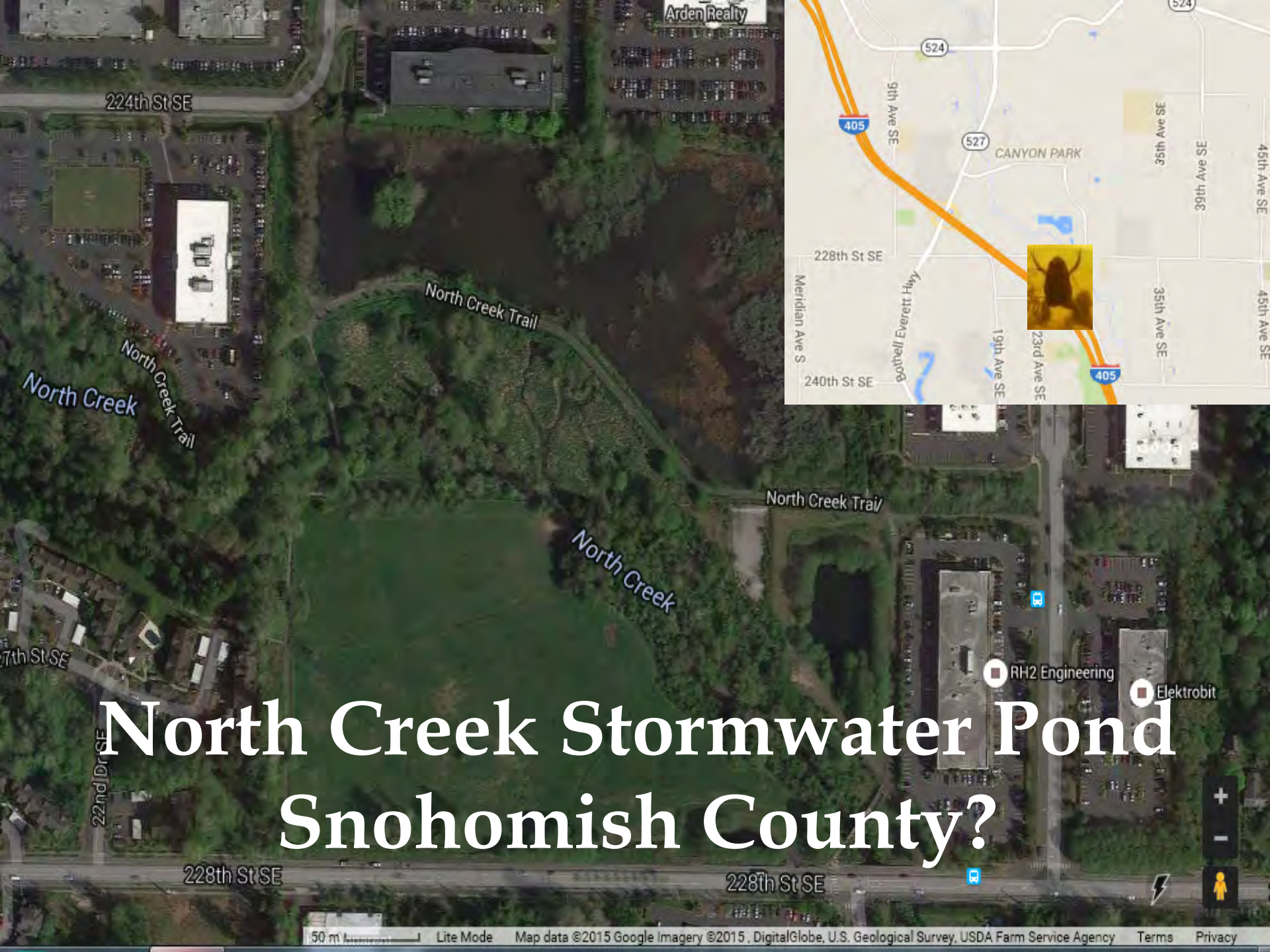


Dewatering Pond 2



Team

- ▣ **Fish Program**
 - AIS Unit lead
 - Molecular Genetics/
Fish Health Lab
- ▣ **Habitat Program**
 - Aquatic Research
- ▣ **Wildlife**
 - Diversity
- ▣ **Region 4 & 6**
 - District Wildlife
Biologists
- ▣ **Director's Office**
 - Public Affairs
- ▣ **City of Lacey (Landowner)**
- ▣ **Lacey Stakeholders**
 - St. Martins University
 - USFWS
 - Dept of Ecology
- ▣ **Jackson Gross Smith-
Root, Inc.**
 - Control/eradication
research



North Creek Stormwater Pond Snohomish County?

Recreation Conservation Office Boating Facility Grant



Designed for Trailered Boats



- ▣ Easy to use
- ▣ Entrance and Exit ramps
- ▣ Self contained hydro-blaster

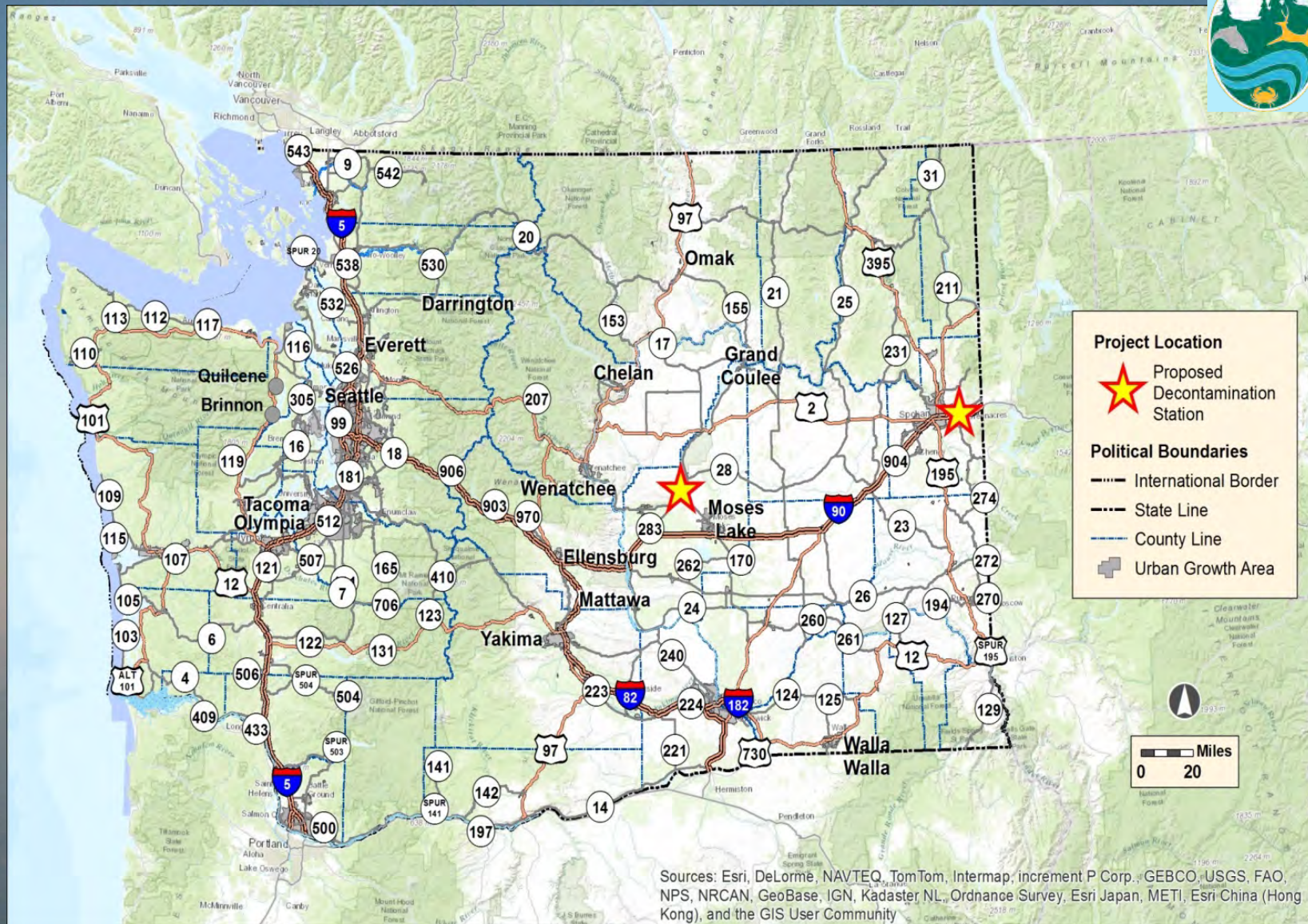
- Temps up to 140 degrees
- Water filter in pad
- Recycles water

Readiness:



- ▣ Fully designed, stand alone package
- ▣ Installed in a week
- No permitting required
- Sites already approved

Two Sites: Ephrata and Spokane



Proposed Timeline

August 2017
Receive RCO funding

February 2018
Submit Equipment
Order

July 2018
Install Boat Wash

November 2018
Project Complete

2017

2018

2019

NOTE:

Dates are approximate. If equipment delivery is delayed, project may continue to 2019

**ANNUAL MONITORING PLAN FOR UPPER AND LOWER
LEAD KING LAKES, PEND OREILLE COUNTY,
WASHINGTON**



Aquatic Invasive Species Management General Permit

**National Pollutant Discharge Elimination System and State Waste Discharge General
Permit (WAG 993002)**

William P. Baker

and

Brian M. Walker

Washington Department of Fish and Wildlife

Fish Program/Fish Management/Region 1

755 S. Main St.

Cohville, WA 99114

(509) 684-2362

Zebra/Quagga Mussel Early Detection Monitoring Methodology

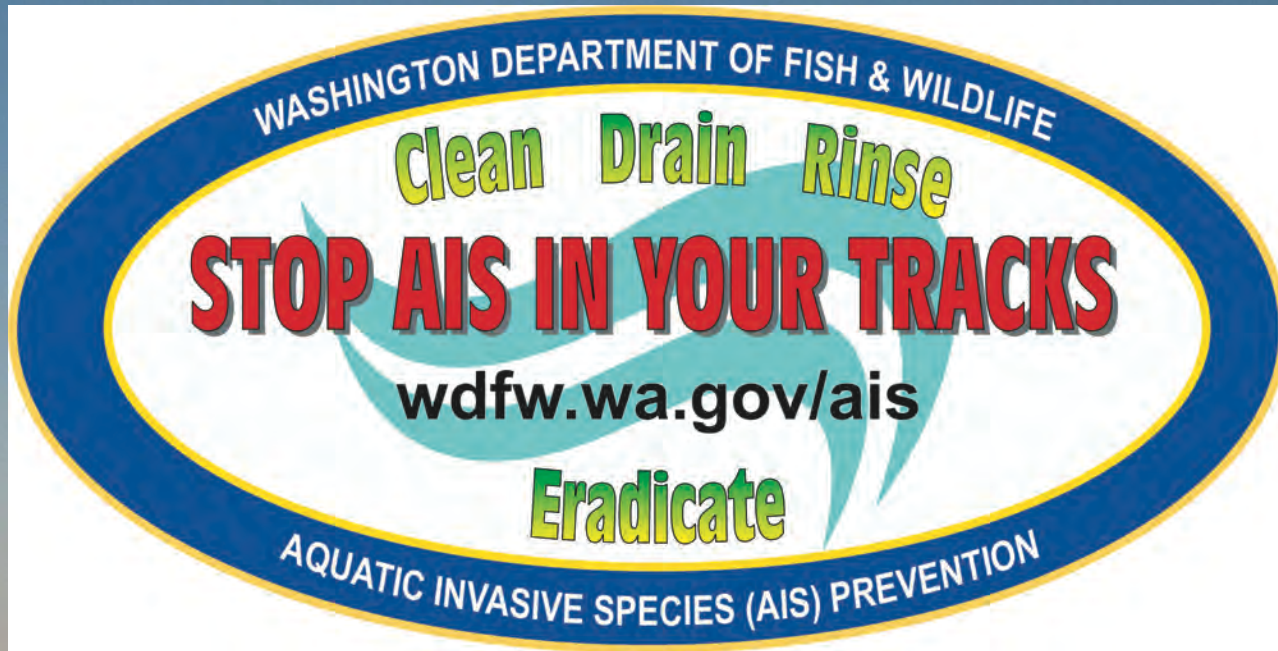
- Horizontal and vertical plankton tow.
- Artificial substrate.
- Surface visual shoreline (new).
- Water quality including calcium (new). Analysis will be conducted by Eastern Washington University.



570 Tows
283 Substrates



Thanks



WDFW AIS Biologist

Jesse Schultz- (360) 480-2105

Jesse.Schultz@dfw.wa.gov