Fall WAIN Meeting Notes

Thursday, November 10, 2016
Hosted by the City of Salem at Pringle Hall

Thank you to John Kleeman and other staff at the City of Salem for hosting our fall meeting!

In attendance: (30 people)
Grey Wolf/ City of Salem, Tyler Pedersen/North & Sough Santiam WC, Alex Staunch/ Mosiac Ecology, Andrew Riggs/Multnomah Co. Drainage District, Kurt Carpenter/ USGS, Vern Holm/Western Invasives Network, Matt Mellenthin/ Integrated Resource Management, Christer LaBrecque/ McKenzie River Trust, Lauri Holtz/ City of Eugene, Brenda Grewell/ USDA Exotic and Invasive Weed Research, Michelle Emmons/ Willamette Riverkeeper, Michael Neal/ City of Albany, Marci Krass/ Willamette Riverkeeper, John Kleeman/ City of Salem, Rich Miller/ PSU, Andrewa Berkley/ OPRD, Kristen Larsen/ Luckiamute WC, Ann Kreager/ ODFW, Glenn Dolphin/ Oregon State Marine Board, Graham Evan-Peters/ US Fish and Wildlife, Joseph Deardorff/ North & South Santiam WC, Justin Cooley / Metro, Matt Paroulek/ Port of Portland, Mark Sytsma/ PSU, Mitch Bixby/ City of Portland, Glenn Miller/ ODA, Al Krapel/ Concerned citizen, Travis Williams/ Willamette Riverkeeper, Melissa Newman/ Benton SWCD, Amanda Reinholtz/ Long tom WC.

*If you attended this meeting but did not sign in and your name is not on this list please email marci@willametteriverkeeper.org. Thank you!

2016 Willamette River AIS Treatment Stats (Marci Krass, Willamette Riverkeeper)

- 1369 +treated acres reported
- 20 +sites reported
- Organizations reporting treatment sites include: Benton SWCD, Metro, Long Tom WC, City of Albany, Mosaic Ecology.
- We are still missing data from the ODA, City of Eugene, and Oregon State Parks.
- Overall treatments occurred throughout the watershed.Geographic area ranged from Upper Willamette to Portland. Some examples of sites include; Long Tom River, Amazon Slough, Fern Ridge Reservoir, Delta Ponds, Talking Water Gardens, Luckiamute State Natural Area, and Portland Area.
- Predominant chemical treatment mix for *Ludwigia* includes 2-3% glyphosate mix
- Aquatic invasive treatments were reported for species including: *Ludwigia*, Yellow Floating Heart (small EDR patches treated by hand-pulling)

Benton Soil and Water Conservation District - Aquatic Invasive Programming for 2016 & Best Practices (Melissa Newman, Benton SWCD)
Benton SWCD provides aquatic invasive treatments, landowner workshops, community outreach and education. Survey sites were mapped from Albany to Corvallis, with most treatments happening from Collins Bay to Stewart Slough (4 miles of streamside shoreline). Treatments include both chemical and hand-pulling efforts. Workshops include invasive

education and hand pulling events with professionals, NWYC and community volunteers. Also completed fish surveys with ODFS and completed restoration plantings at Collins Bay.

Water Quality Monitoring: using grab sampling parameter include:

- Specific conductivity
- pH
- Oxidation reduction potential
- Dissolved oxygen
- Temperature

Private Landowner Outreach:

- Board member initiated, key to accessing properties with other landowners.
- Personalized communication showcasing photographic progress of various projects, emphasizing benefits.
- Use a personalized outreach approach embracing education as a key element for the initial communication, focused discussion on *Ludwigia* and treatment options.
- For treatments, contractor starts at upstream end and works their way downstream. Two rounds of treatment if possible, one early in season and one later in season.
- NMFS has explained to Benton SWCD that Benton SWCD does not need ESA consultation at this time for conducting herbicide applications for treating aquatic invasive plants along the Willamette River.
- Coordinating and tracking acreage treatments to help provide overall structure and collaboration between organizations that are implementing treatment projects.
- DEQ tracks usage of chemicals during treatment periods.

City of Eugene - Delta Ponds Project (Lauri Holtz)

- Ludwigia hexapetala treatments
- Grant funding from Oregon State Weed Board
- Delta Ponds - fluctuation of water levels can be a challenge, return of natives with emerging plant communities, strong seed bank, woody edges with root fragments that are more challenging to control, drawdown situation in freshwater systems exposes plants to germinating conditions and recruitment of invasive plants; *Ludwigia* always in lower Delta Ponds, but recently a small patch was found at the mouth to the Willamette and treated
- Worked on Golden Gardens in partnership with Long Tom Watershed Council (LTWC) - deeper pond system
- Empire Park Ponds and Delta Slough with LTWC and ODOT
- Parrotsfeather and Yellow Flag Iris found in upstream areas on the mainstem
- City of Eugene is down to level of hand-pulling for control for *Ludwigia* in Delta Ponds at this point

Long Tom Watershed Council – (Amanda Reinholtz)

Large stretches of Long Tom treated in 2016, but *Ludwigia* was already breaking up when treatments were applied in late August with many fragments travelling downstream

Large patch of parrotsfeather appeared at Snag Boat Bend in 2016 after restoration took place.

Treatment Tips (multiple WAIN members)

- Use a drawdown method to enhance benefits of mechanical pulling
- Disposing of rhizomes: composting, biomass digesters to power city vehicles with methane gas, side-casting material through desiccation
- Hand-pulling piles will shoot up sprouts after a rain
- Spray is not as effective without exposed vegetation
- High pressure treatment is needed with a thicker canopy - glyphosate will bind to silt on leaves; recommended to spray off canopy prior to application
- Tremendous amount of germination in muddy areas - attention to seed bank viability (seeds can be valuable)
- Important to remove root masses of older plants
- When treating, beware of willow understories hiding plants that may look different adapted to upland areas than they do in their aquatic habitat
- Be aware of germination during drawdown - pull the heads / very little sexual reproduction with *Ludwigia hexapetala*

Weed Management Strategies (Multiple WAIN members)

- Focus on sites, rather than plant management, managing a site for a certain condition using comprehensive weed management
- Adaptive weed management - reduces impact to sites needing treatment, prevents new invasives from moving in
- Monitor chemical treatment to understand which mixes work best for weed diversity (comprehensive management)
- Caution using amazapure
- Consider yearly investment necessary for weed management - prioritizing high value sites
- Considering most economical method of treatment to ensure conveyance
- Prevention as best practice for weed management - emphasize education
- *Ludwigia* was first documented site for Willamette Basin, but Parrots Feather has also had a long incubation period
- Consider basin-wide control effort for best results

USGS Mission Lake/Windsor Slough: Field Survey Findings – (Kurt Carpenter, USGS and Rich Miller, PSU)

Ludwigia was confirmed in the Mission State Park, Mission Lake and Windsor Slough this August, 2016. Increasing flow and sediment dynamics can impact quality of habitat, plants and invertebrates can revive ecosystems and drive increased water quality. During the survey,

longitudinal transects of dissolved O2, pH, temperature, turbidity, green and blue green plant pigments and dissolved organic matter were conducted. Macrophytes were also documented.

Mission Lake findings included:

- Extensive plant growth with continuous *Ludwigia* and high level of other aquatics weeds species
- High rates of oxygen consumption, and high rates of photosynthesis
- Hypoxia (O2 deficiency) to extreme saturation
- DO was exceptionally low within plant beds, below 1-2 feet of water
- Steeper gradient in O2 at the surface where photosynthesis produced extremely high DO
- Higher nitration in the water causes algae bloom
- *Ludwigia* grazing by a diverse species of animals; caterpillars, nutria, large scale suckers, weevils and beetles
- Macrophytes were extensively colonized by epiphytic algae - high levels of nitrogen and cyanotoxin
- Filamentous blue-green algae, potentially producing a variety of toxins
- Diatom as food for invertebrates

Windsor Slough findings included:

- Diatom chains and filaments; draped with massive amounts of Egeria, Coontail, and Milfoil plants
- Melosira: high quality food resource for invertebrates
- High frequency DO - depressed to extreme saturation (as with Mission Lake)
- DO concentrations plummet within plant beds and in open water habitats

Treatment strategy questions:

- How will herbicide treatment affect dissolved O2 concentration during and after plant decomposition?
- How will other plant species respond, i.e. how will beneficial algae populations change after treatment?
- How will sediment dynamics change following removal of *Ludwigia*?
- Does *Ludwigia* increase evapotranspiration in these sloughs?
- Will open water habitat be increased?
- Will water temperatures be lowered?
- How will treatment increase native flora and fauna populations?
- How can enhanced flushing be used to create shorter residence time?
- How are other plants (aside from *Ludwigia*) increasing/affecting water quality?
- As light is able to penetrate the water's surface, what other species may move in?
- How does the amount of biomass left after treatment occurs, affect O2 levels?
- What is the objective driving methods of treatment? I.e. recreation access, habitat, water quality.

- How will increased flow affect water levels and emerging plants needing subsequent treatment?
- How does the accumulation of chemicals used in treatment affect water quality and potential aquatic habitat?
- Can stabilized water levels help prevent/control spreading of aquatic invasive?

2016 AIS Survey & Mapping Project Update (Rich Miller, PSU and Marci Krass, Willamette Riverkeeper)

- Four major priority species included *Ludwigia* (Water Primrose), Parrots Feather, Yellow Flag Iris, and Yellow Floating Heart
- Using mapping data to continue habitat analysis with ODFW for treatment considerations
- Hand-pulling on smaller sites has been effective based on year/year surveying after treatments
- Some data gaps to be addressed in 2017
- Began with field weed workshop, including weed ID and hand-pulling
- Channeled community energy into weed removal projects
- Survey included the navigable waterway
- Gathered baseline data, including EDRR weeds
- Pulled small patches of Yellow Floating Heart (YFH) found in Upper Willamette just outside Eugene
- YFH grows as a complete mat over the water, with five locations, first location grew about 150% over one year - cows are spreading through trampling and eating seeds
- Other YFH patches detected at Muddy Creek, Corvallis and Dragonfly Cove (upper Keiger Island)
- Black dog Landing - filled in back channel with *Ludwigia* (source patch)
- Gail Achterman Wildlife Area - in 2015 was a major Wapato site, but *Ludwigia* took over in 2016, and Wapato population decreased significantly
- Willamette Mission - recommended channel monitoring and treatment in connection to gravel pond as part of a geomorphic solution to increase flow and maintain open water in back channels
- Survey partnership included 11 organizations

Smith Lake & Bybee Lakes: Ludwigia Treatment Lessons Learned – (Justin Cooley, Metro and Matt Mellenthin, IRM)

Treatment began July 2014 following a treatment plan, including a survey map, initial mapping completed in spring by canoe. As water continued to drop, more of the plant was identified. The initial goal was to reduce populations in three areas (pond, backchannel, lake) by 95-100%, treating 600-800 acres total. Eradication is looking nearly impossible, due to timing of hydrologic dynamics (influxes and drawdowns) is to create an ongoing management plan and seed germination development with long term maintenance.

Treatments were implemented using glyphosate, applied by ATV and hand crews, focusing on backwater pond and backchannel shorelines. Year one was "smooth" – completing treatment between spring and late September, reducing water fowl habitat, leaving water trail open for restoration projects. Upland areas seem to be under control by year two, with Smith Lake drying out completely, as perimeter of lake began being treated. Year three began treatment in July, looping Bybee Lake. Willow has repopulated mud flats of Smith Lake by end of August with some *Ludwigia* mixed in. Bybee was completely covered by year three in *Ludwigia*.

Challenges; no 2300A permit from DEQ, which herbicide to target. Declared an emergency, and began spraying. In year three, used a boom spray over the mat of flowering, three-foot-tall *Ludwigia*. No conclusive evidence that the last boom spray over Bybee worked yet. Season efficacy may not have worked with later treatments. Vegetation does not look as dead after spray treatments late in the season, as it had with early spring treatments – additionally, seed banks have already been depleted.

Yellow Floating Heart – BMP's? (Melissa Newman, Benton SWCD)
Benton SWCD is working with ODA to treat Horseshoe Lake with glyphosate - unfortunately, there is a top burn, but the roots are unaffected, with the root system growing larger patches of surface vegetation over time. Other herbicides under consideration include endothall, imazamox, and penoxsulam. Benton SWCD, ODA and other WAIN partners are seeking recommendations for BMP's and herbicide treatments to address yellow floating heart. Please share your thoughts and ideas with Melissa at MNewman@bentonswcd.org.

AIS Prioritization Planning Update – (Andrea Berkley, OPRD**)**

- AIS Summary Impacts
- BMPs for AIS Treatment
- Willamette Sites Prioritization on a Reach Scale
- Funding Strategies
- Outreach Tools
    - Play, Clean, Go
    - Clean - Drain - Dry education campaigns
    - How to report target plants?
    - Weed identification and stages of plant development, i.e. vegetation vs. flowering vs. seeding
- Plan to develop 'Reach Scale' Maps
- Other Best Practices or Tools to consider including in the plan:
    - Templates for contractors or invasive species management plan
    - Chemical treatment template with a map of reaches that have been treated and what the results were so that subsequent treatments plans could be developed based on lessons learned from previous treatments
    - Success Stories
    - Glossary of Terminology

AIS Prioritization Plan Timeline:

- Data synthesis and clean-up (WR & PSU)
- Prioritization GIS analysis now through January (OPRD)
- Action plan subcommittee meeting in January (WAIN)
- Work on 1st draft of plan due December 2016-April 2017 (WAIN)
- Work with a consultant to finalize plan and reach-scale maps (May 2017-August 2017)
- Final plan complete by September 2017

AIS Prioritization GIS Analysis
Survey Data on AIS location ---> GIS Hotspot Analysis --->Defining AIS large sites + satellite or isolated patches

WAIN criteria for determining priorities:

- Are high quality habitats present?
- Are important species present?
- Which geomorphic reach?
- In or newer conserved or restored lands?
- In or near restoration investments? ---> DELIVERABLES

Increasing outreach efforts for the Willamette / Oregon on AIS – Glenn Dolphin, Oregon State Marine Board

- CLEAN DRAIN DAY / PLAY CLEAN GO (Snake River Association – screen film short, "Where the West Begins"). Watch here!
- Community-based social marketing - using outreach to attain behavior change.
- Sharing appreciation of our resources through "ambassadors" who help educate recreationalists about invasives and the effects on those resources. (It's good for the gear, too!)
- Develop a new WAIN subcommittee to work on formulating a plan for public messaging effort to prevent spread of invasive species around CLEAN, DRAIN, DRY.
- Emphasize why it's important, and how inspections are only one way to help keep invasive species out of fresh water systems in Oregon.
- There is some interest in developing a local version of a film short for the Willamette. (2 min in length would be more ideal than 4 min) Consider multiple version to address different river user groups. ie. SUP, kayak/canoe, drift boaters, fishing community.
- If you would like to join this subcommittee, please email Glenn Dolphin at glenn.dolphin@state.or.us.

Messaging suggestions:

- Focus on a cultural shift - not just printed educational materials
- Target boating and fishing groups as well as other user groups on the river
- Social media materials for peer to peer messaging
- Using best practices in messaging
- Film festival showcasing a short video during this film festival

- Contact LNT and have them incorporate as part of greater LNT education curriculum
- Produce stickers
- Incorporate clean, drain, dry into water safety messaging - ACA
- Media contest for printed and video submissions about the messaging

Announcements:

- WAIN action planning subcommittee will meet in January. We welcome your ideas and input!! Please fill out the Doodle poll if you are interested in joining us for this meeting!
- Next full WAIN meeting will be in early March- Stayed tuned for a Doodle Poll to save a date for this meeting.
- Thank you to all of our wonderful speakers!

Meeting adjourned!