

# North Coast Watershed Association

## 2016 Annual Report



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## Introduction

2016 was a busy year for the North Coast Watershed Association and its associated Ecola, Skipanon, Youngs Bay, and Nicolai-Wikiup Watershed Councils. Our organization began a new volunteer monitoring effort in Youngs Bay and Skipanon watersheds, planted hundreds of native shrubs and trees in Alderbrook Natural Area, removed invasive species with 5 work parties, attempted a controlled burn with the Astoria Fire Department, and continued to meet with stakeholders and community members to develop projects, small and large, to improve the watersheds in our North Oregon Coast communities.



## Summary of Projects

In 2016 we ramped up our work parties and got lots of volunteers out in the field planting native shrubs and trees, pulling weeds, launching data loggers, creating habitat with Christmas trees, and even helping dig fire lines. Our biggest project this year was the completion of a 4-year effort in Alderbrook Natural Area on the east end of the Astoria Riverwalk. We have been working on controlling the invasive Scotch broom and Himalayan blackberry populations in this park in cooperation with Astoria Parks & Recreation and funding from Oregon Department of Environmental Quality (ODEQ) and Oregon Watershed Enhancement Board (OWEB). In addition to hand pulling and mowing scotch broom, NCWA and the city coordinated over 30 volunteers to plant hundreds of native shrubs, seed native prairie species, and conduct a controlled burn in an attempt to control the invasive Scotch broom. You will find a grant completion report for this project in the following pages. We have recently secured additional funds to continue to work in this area managing invasive species and adding native species. Our other large project that was started this year is the Youngs Bay Monitoring Network, which is a new volunteer monitoring program that monitors temperature in tributaries of Youngs Bay. I have included a description of this project, which will be completed this spring, and has sought continued funding from OWEB for expansion into Ecola Creek Watershed and Nicolai-Wikiup Watershed. Following the reports on these two larger projects, you will find photos from our many work parties and volunteer events including: Ivy Free Tree Day (Cannon Beach), Broombusters (Les Shirley & Necus Park), Tansy Pull (Ecola Creek estuary), Skipanon Paddle & Pull (Warrenton, with North Coast Land Conservancy), Cedar Release (Ecola Creek Forest Reserve). We have continued our Nature Matters educational series in collaboration with Lewis & Clark National Historical Park and the Fort George Brewery. Our individual watershed councils and Board of Directors meet on alternating months and are open to the public. Please contact us for more information.

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## Nature Matters

### *Where Science and Nature Intersect...*

The North Coast Watershed Association partners with Lewis and Clark National Historical Park and the Fort George Brewery + Public House in Astoria to present lively conversations exploring the connection between nature and culture. This series seeks not only to inform attendees about nature, but inspire them to act upon what they learn. Nature Matters takes place in the Fort George's Lovell Building next to its Tap Room at 7pm on the second Thursday of the month, October through May.

### **Presentations hosted in 2016**

January	Timing is Everything: Plant's response to Climate Change - Nancy Fernandez
February	6000 years on the Oregon Coast Trail - Bonnie Henderson
March	The Secret Life of Crabs: Behavior of Dungeness Crabs Determined by Benthic Video Imaging and Acoustic Telemetry – Curtis Roegner
April	Citizen Science Seabird Monitoring in Oregon's Marine Reserves - Amelia O'Connor
May	The Iconic Bumble Bee: The Decline of Our Native Pollinators – Rich Hatfield
October	To Astoria in 82 Days by Canoe, or Why We Love Rivers – Robin Cody ---- Cancelled due to storm advisory ----
November	Estuary Restoration and Salmon Recovery – Daniel Bottom
December	Cultural Landscape: Collaborative Conversations With The Natural World – Richard Rowland

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## Alderbrook Lagoon Riparian Restoration



### *Final Completion Summary*

This project cut back invasive Scotch broom, Himalayan blackberry, and English ivy within 10 acres, including wetlands and riparian areas, between Alder Brook and Alder Lagoon in Astoria, Oregon. This work built upon efforts started in 2013 to remove Scotch broom. After removing invasive species, volunteers planted and seeded native shrubs, trees, grasses, and wildflowers. This project was a partnership between the North Coast Watershed Association, the City of Astoria Parks & Recreation, and residents of the Alderbrook Neighborhood.

### *Background*

In 1966, Columbia River dredge spoils were deposited on a previously submerged shoreline near the Alderbrook neighborhood on the east end of Astoria. In 1974, more fill was added to this area when adjacent sewage treatment ponds were dug. In the years since this beach was artificially created, vegetation has grown in and the area has been classified as a national wetland. Running adjacent to and through this area is a small anadromous fish stream called Alder Brook.

The land between Alder Lagoon and Alder Brook created by the spoils is dominated by invasive Scotch broom and Himalayan blackberry. Native plant diversity, which was already low due to the history of the site, was being choked out by these dominant species along with English ivy. In 2012,

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most of the Scotch broom was several feet tall, covering 3-4 acres of unmaintained city park land. In addition to ecological concerns about the invasive species, City of Astoria, the landowner, was concerned about safety in the park due to lack of visibility and the presence of transient camps within the dense broom coverage.

Much of the scotch broom was cut back in 2013 by NCWA with DEQ funds and the City of Astoria, but continued management of the invasive species was required to create room for greater biodiversity. Without a historical seed bank of native species, it was necessary to introduce a diversity of native plant life that can support native animal species and support a more functional wetland ecology.



*Work Done*

This project removed invasive plant species and added native shrubs, trees, grasses, and wildflowers in wetland and riparian areas between Alder Lagoon and Alder Brook, on the east end of Astoria. Alder Lagoon is an inlet of the Columbia River partially separated from the main stem Columbia by railroad dikes and trestles. Alder Brook is a quarter-mile anadromous fish stream that empties into the lagoon and subsequently the Columbia River.

The area between Alder Lagoon and Alder Brook was originally created by deposition of dredge spoils in 1966. The property is owned by the City of Astoria and managed by the Parks & Recreation Department. This area, later

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named "The Alderbrook Natural Area," by local neighbors working on this project, was connected to Astoria's Riverwalk Park in 2013 by extending a paved bike trail. The Alderbrook Natural Area includes substantial wetlands mapped by the National Wetlands Inventory. These wetlands contribute significantly to salmon and wildlife habitat. Young salmon transition to the Pacific in the relative safety and abundance of estuarine wetland habitats. Sensitive and threatened birds inhabit the wetlands. Great Blue Herons are often seen and beavers are occasionally seen in the wetlands close to the bridge over Alder Brook. With potential for providing great habitat, the NCWA partnered with the City of Astoria and Alderbrook neighbors to address the overgrowth of invasive Scotch broom, Himalayan blackberry, and English ivy in this area.

This project in the Alderbrook Natural Area was a fabulous example of watershed councils working closely with city management and local community members. The residents of the Alderbrook neighborhood organized and hosted meetings to learn about native and invasive plant species and plan the work to be done. The residents did a considerable amount of the actual labor removing invasive plants and trash, and preparing and planting the native species. The resident group even wrote a "Native Plant Introduction and Invasive Plant Control Plan" to submit to the Parks & Recreation department (see uploads) and created a website about the project: <http://alderbrookna.weebly.com/>. A considerable amount of research and labor went into their efforts and demonstrate their commitment to helping care for this project into the future.

The City of Astoria Parks & Recreation Department is also a key component of the current and future success of this project. The City of Astoria met with neighbors and NCWA staff and council members on-site multiple times to discuss planting plans, invasive removal methods, long-term visions, and needed project maintenance. The Parks Department disposed of trash and weeds collected by NCWA staff, contractors, and volunteers, they performed annual mowing to keep the invasive regrowth at bay, and they donated

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mulch, tools, staff time, and outreach for work parties.

The bulk of the large (over 3 foot) Scotch broom was removed from the site in 2013 by contractors hired by the City of Astoria and NCWA with DEQ funds. However, there was still a large patch of Scotch broom remaining in the northeast section of the project area, plus scattered old plants within blackberry patches at the edges of the property. In spring of 2014, with the beginning of this grant, the NCWA hired a contractor to manually remove the remaining "old-growth" Scotch broom. When she cleared the northeast section of the treatment area, she uncovered wetland habitat. She released native plants including cascara, sword fern, crabapple, twinberry, elderberry, red alder, indian plum, horsetail, slough sedge, and rushes. Scotch broom was cut using a saw for older plants, loppers for smaller plants, and a weed eater for lower plants. The City of Astoria mowed in spring of 2015 and 2016 to keep the stands of broom back. While Scotch broom seedlings remain prolific, continued mowing will allow other plants to compete, while neighbors continue to pull broom in focused areas.

City mowing has cut back the majority of the Himalayan blackberry patches as well. Neighborhood residents asked the city to leave a small patch of blackberry for summer harvest and the city obliged, leaving a small upland patch away from the stream and lagoon for people to harvest. In focused treatment areas, volunteers dug up blackberry roots and cut back low growing runners missed by the mowers.

In 2015, meetings with neighborhood groups and city staff led to the development of a plan for focused treatment areas in the park that could be expanded upon in the future. Neighborhood concerns about losing river views, and decreasing visibility informed the type of native plants we decided to order. We ordered primarily shrubs and small trees, with the exception of Black Cottonwood, which was to go along the east side of the park near Alder Brook, outside of neighborhood viewshed. Informed by public discussions with neighbors and other community members who



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wanted the higher, drier, central area to remain open and meadow-like, we decided to focus shrub planting in areas around existing trees and along the water. We decided to plant two approximately 50' diameter circular areas around existing trees in the central "meadow" and to plant about 600' of riparian area along Alder lagoon.

Expressed interests to keep the central area "meadow-like" inspired us to work toward seeding native dune species in the open meadow-like area. Site prep for seeding several acres of meadow was beyond our budget and more dramatic than the city or citizens wanted to see in one year. Since the site is a public park, there were added concerns about aesthetics, and the need for transitions to look relatively neat and tidy. Neighbors expressed that they did not want to see the entire area cleared at once. As a response to concerns about budgeting, permitting, and access for large-scale site preparation, we opted to hand-prepare small patches of the "meadow" for seeding with native grasses and wildflowers.

For the final stage of this grant, NCWA teamed up with City of Astoria's CHIP-in program to host 2-days of work parties to plant native shrubs and wildflowers. The weather was stormy for the work parties, but they were still well attended (14 people on Friday and 30 people on Saturday). We planted over 400 native shrubs and seeded over 300 square feet of native wildflowers and grasses. Shrubs were planted with shovels, adding compost to the sandy soil and mulching around the top of the plantings. Seeds were planted in areas near the park entrance that were cleared by hand in the weeks before the work parties by NCWA staff. Additional native wildflower and grass seeds were scattered in bare patches throughout the central 'meadow' area. Soon after the work parties to plant the shrubs and wildflowers, the City of Astoria mowed upon our request, cutting back Scotch broom that was getting 2-3 feet tall in some places.

During the phase of exploring site preparation options, which were limited by a single access across a 54" wide bridge, it was noted that the areas most

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clear of noxious weeds were areas where the fire department held practice burns in recent years. This sparked a site visit with Astoria Parks & Rec Department, the Astoria Fire Chief, NCWA staff, and an Alderbrook neighborhood representative to discuss the options for a future burn of the site as a way to clear the land for seeding native wildflowers and grasses. The Fire Chief offered to burn as large an area as restoration required. Neighbors and City staff expressed that park users would prefer smaller burns since they do not like the appearance of barren sand. It was noted that some good signage could help people understand the restoration use of the fire and better communicate the intention behind it to gain more public support.

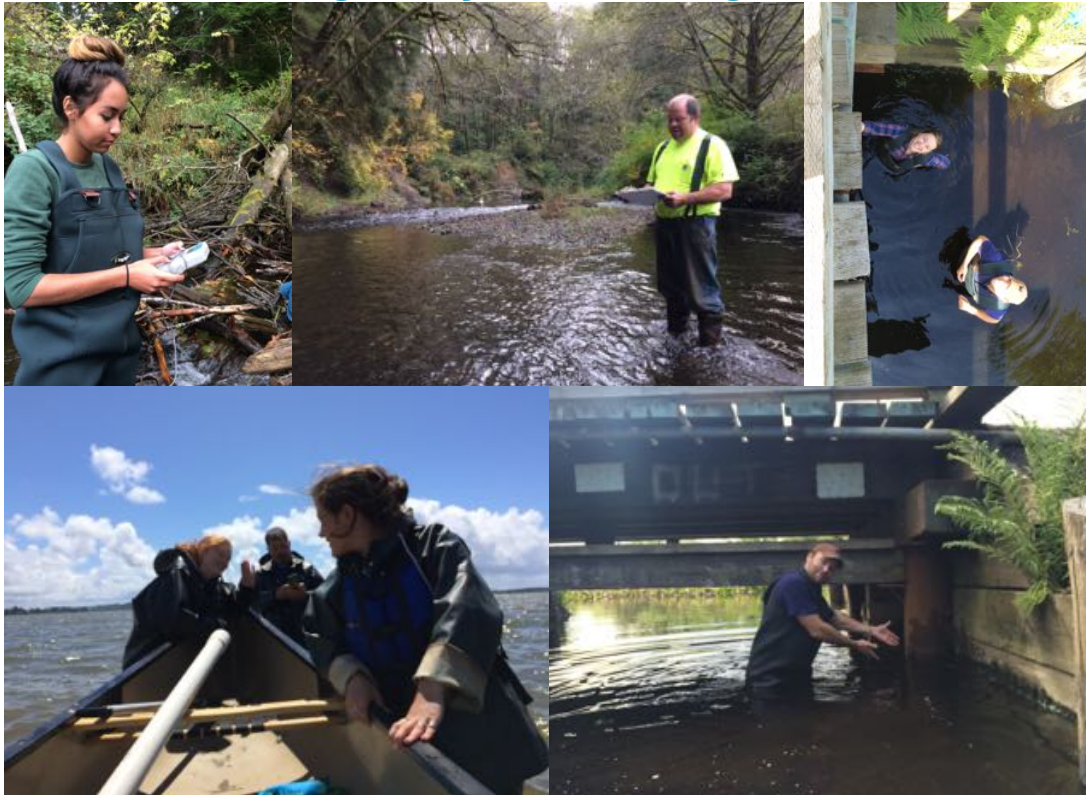
Though the first opportunity to burn would be summer 2016, which fell outside of this grant window, NCWA teamed up with the Astoria Fire Department and a few volunteers to dig fire lines and attempt at 0.65 acre burn. Unfortunately, it was a damp summer and a full burn was not achieved, though the above ground growth of the Scotch broom died from heat exposure. Though the burn was incomplete and the soil was not totally cleared, the burn was followed with seeding of native species in the fall 2016.





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## Youngs Bay Monitoring Network



Driven by a lack of temperature data in the Youngs Bay and Skipanon Watersheds and the desire of volunteers to get involved in water quality monitoring, we applied for funds from Oregon Watershed Enhancement Board (OWEB) to begin a low-cost volunteer temperature monitoring study in key reaches of the Youngs Bay and Skipanon Watersheds. Most of our sites were chosen above the head of tide to accurately capture the stream temperature. OWEB granted us the money in spring of 2016, and we began the project.

We created an "Adopt-A-Logger" program in the Youngs Bay Watershed from the ground up, which allowed volunteers to be responsible for a continuous temperature data logger. We developed a Strategic Action Plan with Oregon Department of Environmental Quality (DEQ) staff and received training from DEQ's volunteer water quality program manager, Steve Hanson. We recruited and trained 8 volunteers to "adopt" data loggers, including students from the fisheries programs at Astoria and Warrenton High Schools. We chose final data logger site locations with the Youngs Bay and Skipanon Watershed Councils in collaboration with representatives from DEQ and ODFW and using site visits to assess accessibility and safety. In June, we launched temperature data sondes in 15 different stream reaches in Youngs Bay and Skipanon Watersheds.

Through this first year of implementation, we identified the limiting factors of our plan which were: private landowner access and limited number of NIST thermometers to lend volunteers for field audits. We addressed the former by



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working with ODFW to access 2 stream reaches that were not otherwise publicly accessible, and we addressed the latter by shifting funds to purchase 2 additional NIST thermometers.

This OWEB monitoring grant is still active and we are continuing to work on it. We have a few data sondes that are not currently retrievable due to high water, but 11 have been retrieved and one is missing. This fall/winter the data will be processed, put online, and shared with our partners. We plan to re-launch the 15 sites in May/June 2017 after auditing the data loggers in our office. This fall we applied for additional OWEB funds to continue and expand this study to the Ecola Creek and Nicolai-Wikiup watersheds.

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## Photos from Volunteer Events



Astoria High School Wetland Monitoring



Cedar fence removal in Ecola Creek Forest Reserve



Tansy Pull in Ecola Creek Estuary





Ivy Pull in Cannon Beach



Broombusters in Les Shirley and Necus Parks, Cannon Beach



Cocoa & Coho (Christmas trees for salmon habitat), Lewis & Clark National Historical Park



Skipanon Float & Pull with NCLC, Warrenton (pulling Purple loosestrife and English ivy)



Tree planting at Wallooskee Headwaters culvert & large wood sites, Olney