



JCWC Welcomes New AmeriCorps Riparian Technician

By Sarah Eastman, JCWC Riparian Technician



Hello Community Members, I'm so excited to be working with the amazing staff and volunteers at the Council. I started an 11 month position with JCWC this September, working with the restoration team on a variety of projects that support our recently-completed Riparian Restoration Strategy. Before that, I earned my Master's of Environmental Management at Portland State University, where my focus was on water quality and policy. I've lived in Portland for almost 10 years, and I am passionate about facilitating sustainable practices, healthy environments and engaged neighbors in my community.

So far I've been working with Riparian Program Manager Noah Jenkins, planning the work on our new Creek Care sites in Clackamas County. We've met with the landowners, assessed the current plant communities on site, and come up with plans to remove invasive vegetation and plant native species. Right now, we are controlling invasive plants and putting in orders to local nurseries for native riparian plants. Starting in January, we'll be busy getting all of those plants into the ground. We have a lot of fun volunteer planting events this winter and spring, including our Watershed Wide Event on March 1st. If you don't mind getting a little dirty, it's a great way to contribute to the restoration and health of our streams.

JCWC and the City of Gresham's Natural Resources Program are partnering with 3rd grade teachers and students at Butler Creek Elementary to provide hands-on learning opportunities out in the field. I'm excited to share my love and respect for nature with the next generation of stewards to the land. I'm also working on compiling a Riparian Revegetation Guide for the Council, which will outline best practices for the work we do within the riparian program. When I need to get away from my desk, there's always work to be done outside of the office, along Johnson Creek – mostly removing blackberry (ouch!).

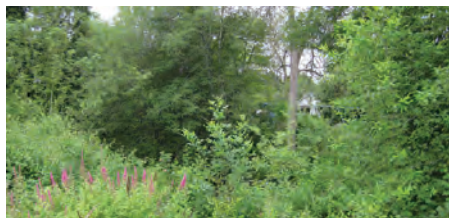
I'm looking forward to seeing how our projects develop over the course of my time here, and to working with the awesome volunteers that help make these projects thrive.

Restoration at Johnson Creek Park

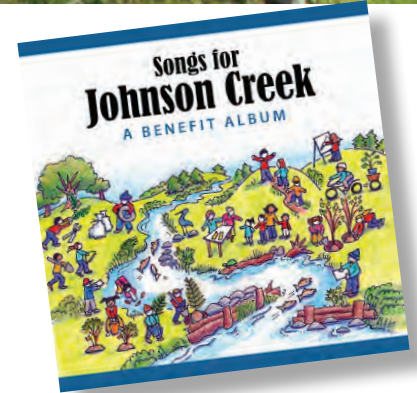
The photos below, showing the dramatic changes that take place when riparian areas are replanted, highlight the importance of Sarah's work.



In 1980, before restoration, the banks of Johnson Creek were exposed, leading to creek warming.



Thirty years later, in 2012, streamside plantings provide shade to help cool Johnson Creek.



The Perfect Gift for the Nature Lover in Your Family

"Songs for Johnson Creek," a benefit album for Johnson Creek Watershed Council, features children's songs written by twelve Portland artists, including Laura Veirs, Aaron Nigel Smith, and Mo Phillips. It also features JCWC Executive Director, Matt Clark and his six-year-old son, Rowan singing together. Most of the songs are previously unreleased. Half of them were written specifically for the album, treating such themes as the need for clean water, the importance of connecting children with the outdoors, and the joy of nature discoveries. As nationally-renowned kids' music blogger, Zoogobble writes, "The album will be especially appropriate for those in an outdoors-y mood."

Originally released as a digital-only album (johnsoncreek.bandcamp.com), we recently had physical CDs made. They are available for purchase for \$15 per CD, plus \$1 for shipping. \$14 of every CD sold directly supports JCWC's work.

How to order:

1. Visit our website at: jwc.org/cd. You can order by credit card through the site.
2. Mail a check (\$16 per CD, shipping included) made out to JCWC. Our address is: 1900 SE Milport Road, Milwaukie, OR, 97222
3. Purchase at our office or at one of these local stores: Milagros Baby Boutique, Portland Audubon Nature Store, Portland Children's Museum, Thinker Toys, and Tidee Didee Diaper Service.
4. E-mail Matt (matt@jwc.org) about discounts for purchases of five CDs or more or if you are interested in selling the CDs at your retail outlet.

Double Down for JCWC!

Have your year end contributions doubled thanks to the generosity of our JCWC Friends. See page 5 for details.

To qualify, contributions should be sent by December 31, 2013.

Prioritizing Riparian Restoration Efforts through Effective Shade Modeling

By Brittany Sahatjian, Master's Degree Candidate at Portland State University

Elevated water temperatures, generally those higher than 18°C lasting from hours to months, are harmful to all life stages of salmonid species, causing weight loss, disease, competitive displacement by other species or death.

Enhancing the height and density of near stream, or riparian vegetation is widely accepted as one of the most effective strategies for reducing stream temperatures, while also providing numerous ancillary benefits such as erosion control and flood mitigation. In an effort to reduce stream temperatures and restore salmon runs in the Johnson Creek Watershed, numerous riparian restoration projects have taken place already. However, more efforts are needed to bring stream temperatures down to Oregon standards that fully support salmon and trout.

In June 2012, the Johnson Creek Watershed Council recruited PSU graduate student, Brittany Sahatjian, to provide critical data to inform where to prioritize their riparian restoration efforts. Her

master's thesis utilized a shade simulating model to identify riparian areas throughout the watershed that would greatly reduce the amount of incoming solar radiation to the stream surface if they were restored. In a sense, she was looking for areas that, when restored, produced the biggest bang for the buck in terms of shading and stream temperature reduction.

Priority rankings of high, medium, low, or maintain were assigned to individual taxlots; restoration efforts are often planned and implemented at this scale.

Brittany's modeling work is now complete.

To learn more about restoration efforts currently underway in the Johnson Creek Watershed, visit jcwc.conservationsregistry.org/.

Modeling Results

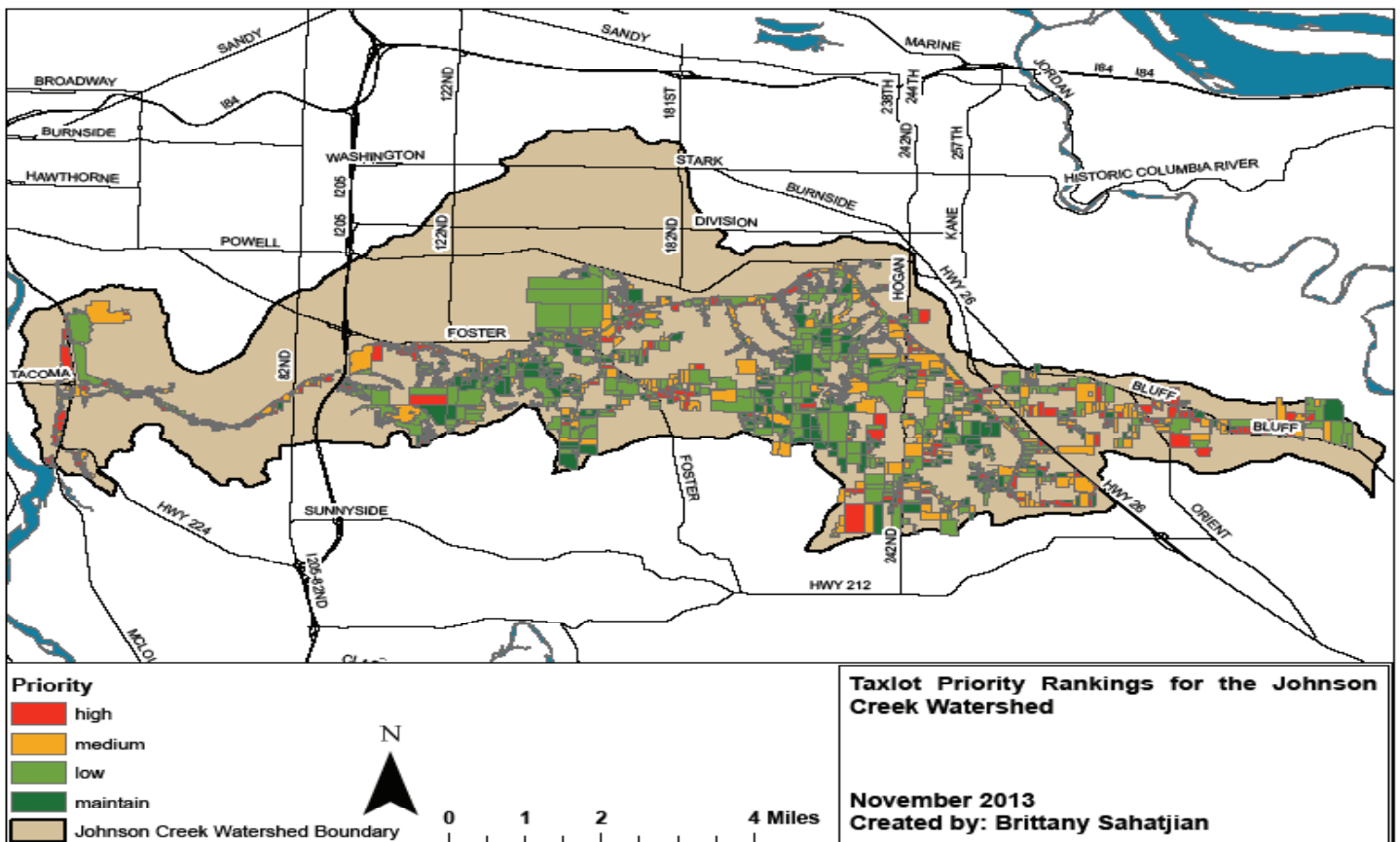
High, medium, and low priority taxlots are distributed relatively uniformly throughout the watershed, with a few exceptions.

If the entire watershed were restored with sufficient riparian vegetation, it could prevent 200,000 watts/m²/day from reaching the stream surface. This is called the solar reduction target.

Restoring only 22% of all taxlots that come within 15m of a stream could achieve 50% of the solar reduction goal.

Restoring only 38% of all taxlots could achieve 90% of the solar reduction goal.

These results show that carefully choosing where to focus restoration efforts can greatly increase the ecological returns from our investments in riparian restoration.



Taxlot Priority Rankings for the Johnson Creek Watershed. All taxlots in the watershed that come within 15m of any stream are included in this figure. These results will be used to help the Johnson Creek Watershed Council prioritize areas for riparian restoration and focus their landowner outreach efforts more efficiently.

Looking Forward: 2015-25 Watershed Restoration Plan

By Robin Jenkinson, JCWC Restoration Coordinator

This fall, the Council received funding from the Meyer Memorial Trust to kick-off the update of our 2002 Watershed Restoration Action Plan for 2015 to 2025. While the 2002 Plan has served us well (90% of the projects listed then have now been achieved, see jcw.cconservationregistry.org for project details), we've also learned a lot since then. For example, monitoring efforts by JCWC and its partners have produced new data about the health of the watershed. Major efforts have included the establishment of water quality parameters and standards (temperature, toxics and total suspended sediment, and bacteria) under DEQ's Total Maximum Daily Load (TMDL) program, a major expansion of fish distribution surveys led by Multnomah County, two USGS analyses and

reports on hydrology and suspended sediment, LIDAR-based topography and stream mapping, and a fish passage assessment by JCWC (currently underway).

Secondly, over the past decade, changes in regional politics and policy have altered the conservation landscape in this rapidly urbanizing watershed, shifting the assumptions underlying the previous action plan. Significant changes include the incorporation of the city of Damascus, the development of three comprehensive development plans (Damascus, Springwater Area, and Pleasant Valley; though Damascus' plan has not yet been adopted), and regional adoption of progressive zoning policies that protect riparian areas, trees, and water quality resource areas. In addition,

thanks to 1995 and 2006 bond measures, Metro now maintains over 1,400 acres of natural areas in the Johnson Creek watershed, which is a Metro priority conservation area.

Third, advances in watershed science and adaptive restoration studies have led to new frameworks for watershed planning that focus on restoring ecological functions and processes at multiple spatial scales and emphasize three-dimensional connectivity over in-stream habitat enhancements. And, our predictions of the effects of climate change are better refined, offering opportunities for mitigating the effects of climate change through watershed action planning.

Visit jcw.c.org/restoration/ for more details or email robin@jcw.c.org to learn more.

JCWC and TriMet Partner to Create Salmon Habitat

In July and August 2013, 23 logs and 60 boulders were installed in a 400 foot stretch of Johnson Creek next to the future Tacoma Street/Johnson Creek MAX station, opening in 2015 on the Portland – Milwaukie Light Rail Line. The logs and boulders add channel complexity and provide cover and shelter for three species of threatened salmon present in Johnson Creek as well as other native fish like lamprey. In addition to the new habitat in the main channel, a side channel was excavated in the south bank to create refuge for salmon during high winter flows. About 2,400 cubic yards of fill were removed to create the side channel. 3/5th of an acre of native streamside forest will be planted at the station site next winter.

In the summer of 2010, JCWC and TriMet co-hosted a series of community design workshops for the Tacoma MAX station. It was at those workshops, attended by an estimated 100 people, that salmon habitat enhancements were first proposed for the station site. "After three years, it's exciting to see the community vision come to fruition," said JCWC's Executive Director, Matt Clark.

The habitat work has been jointly funded by JCWC and TriMet. A portion of the habitat work was required of TriMet as mitigation for environmental impacts during light rail construction.

Funders for JCWC's cost share include: East Multnomah Soil and Water Conservation District, National Fish and Wildlife Foundation, Oregon Wildlife, PGE Habitat Fund, and Soil Solutions.

An interpretive boardwalk celebrating Johnson Creek is scheduled to be built at the project site next summer. The boardwalk project is a partnership between JCWC, TriMet, Ardenwald Johnson Creek Neighborhood, and Sellwood



Photo provided by ESA Vigil Agrimis

Re-creating channel complexity required major earthmoving equipment to install logs and boulders in-stream at the Tacoma Street / Johnson Creek MAX station, scheduled to open in 2015.

Moreland Improvement League (SMILE), with input from numerous other entities and individuals, including the SMILE History Committee and the Confederated Tribes of Grand Ronde. There will be five interpretive signs highlighting Johnson Creek's ecological recovery and the central role the creek has played in the area's development.

JCWC is still fundraising for boardwalk construction.

Donors can have their names engraved in the boardwalk's steel handrail. To support the project and order your name engraving, visit our website at: jcw.c.org/engraving.

Parking Lot Depave and Rain Garden Planting a Success!

On September 28th, more than 50 volunteers from St. Mary Ethiopian Orthodox Church, Depave, Green Lents, and Johnson Creek Watershed Council (JCWC) broke up part of the Church's parking lot near SE 92nd and Flavel. We removed 2,400 square feet of asphalt, filling four and a half ten-yard bins with an estimated 30 tons of material. Halfway through the work, volunteers ate a delicious lunch of lentils, chicken, and injera bread, cooked by Church members. Our youngest volunteer, four-year-old Quillan dragged his dad (JCWC Director Matt Clark) away from lunch, saying he wanted to "keep breaking". Such is the seduction of smashing pavement.

We removed
2,400 square feet of asphalt,
filling four and a half ten-yard bins
with 30 tons of material.

The following week, Church members excavated additional materials where the pavement used to be, replacing it with high quality soil suitable for a rain garden. Then, on October 26th, 45 volunteers reconvened at the Church to plant more than 500 mostly native plants, ranging from rushes and camas to Oregon Grape and Mock Orange. The rain garden will soak up storm water from



Volunteers came out in force to remove asphalt, condition the soil, and install 500 native plants at St. Mary Ethiopian Orthodox Church this fall.

the parking lot. It should reduce flooding in the church, which has been a perennial problem in winter months. It will also collect and filter stormwater, improving water quality in nearby Johnson Creek.

The project was funded by a City of Portland

Community Watershed Stewardship Grant. Additional funds were raised at a traditional Ethiopian dinner at the Church last June. Project partners are planning to co-host an inaugural ceremony and community celebration on Saturday, May 10th.

Coho Found in Johnson Creek



Michael Cook is pictured with a coho salmon carcass that was found near Gresham in November.

On Saturday, November 30, volunteer surveyors Mike Pinker and Michael Cook found a coho salmon carcass in Johnson Creek in southeast Gresham. On December 2, a creekside landowner photographed a live coho in lower Badger Creek, a tributary of Johnson Creek. And on December 11, a suspected coho was reported swimming near Leach Botanical Garden.

Alex Neerman, an Oregon Department of Fish and Wildlife (ODFW) biologist confirmed that the 57.5 cm (22.6 inch) carcass was female. With no eggs inside and a worn tail looking like it had been used to dig a redd (a spawning nest), the fish likely had spawned. Lack of hatchery markings – i.e a clipped adipose fin or tags – suggest it was a wild fish. A scale sample sent to Corvallis for analysis will provide more information about the fish, including its age.

Pinker and Cook are two of more than 50 JCWC volunteers, trained this fall, who are walking one-mile reaches of Johnson Creek in pairs searching for evidence of spawning fish. In a two month period, an estimated 90 surveys will have been completed on six reaches of Johnson Creek and tributaries. This is the second of a four-year volunteer-based adult coho monitoring program, produced by JCWC in partnership with ODFW and funded by East Multnomah SWCD.

By surveying Johnson Creek over a four year period, JCWC will establish baseline data for all spawning cohorts. Coho typically have a four-year life cycle. More and better information on key spawning areas will increase the ability of JCWC and other watershed management entities to improve and protect spawning habitat for adult coho throughout the watershed. It will also provide important data informing the comprehensive assessment of fish passage barriers that JCWC is currently working on. These barriers are thought to prevent coho and other native salmon and trout from accessing nearly a dozen stream reaches in the watershed with suitable habitat. If you would like to know more about our assessment or have fish information to share, please don't hesitate to call our office at (503) 652-7477, or email Jan Meahaffy at jan@jcw.org.

Wells Fargo Supports Community Engagement in Johnson Creek Watershed

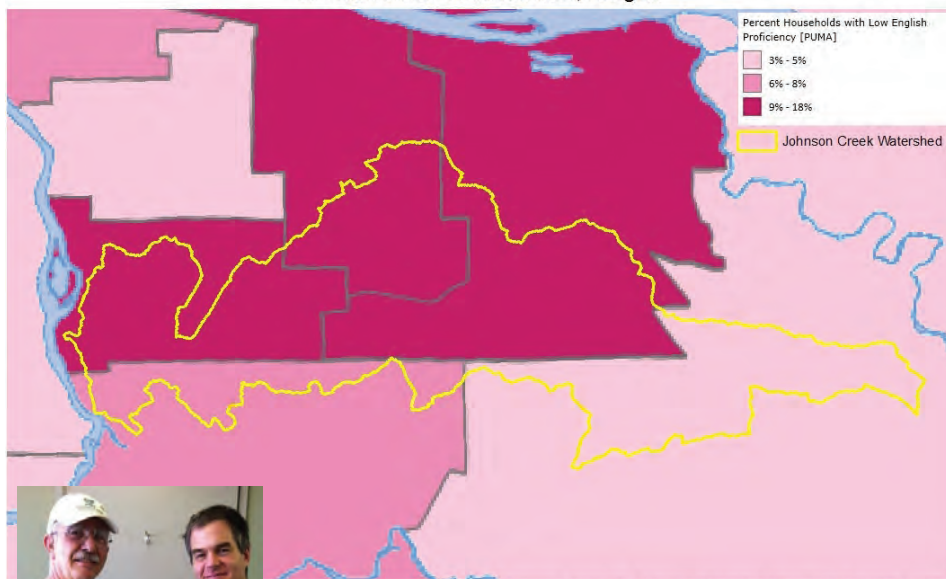
Earlier this fall, Wells Fargo donated \$8,245 to JCWC to support our volunteer program, specifically to focus on recruiting culturally, ethnically, and socio-economically diverse volunteers to participate in our stewardship events like tree planting and weed pulling. Modeling on successful projects such as the bioswale planting at Saint Mary Ethiopian Church, the council will use the Wells Fargo funds to recruit more volunteers from among minorities in the watershed, including those who don't speak English. JCWC Executive Director, Matt Clark speaks Spanish and Riparian Program Manager, Noah Jenkins speaks Russian.

The Johnson Creek Watershed graph, produced by Cindy Moomaw-Nerf (using the Coalition of a Livable Future's Equity Atlas mapping tool), shows that a significant portion of residents in the Johnson Creek Watershed are non-native English speakers.

Our goal is to diversify our organization at all levels, including our volunteer base so that we reflect the demographics of the watershed, which is increasingly diverse.

Wells Fargo grants fund programs that support communities throughout Oregon and the nation. Thank you Wells Fargo for supporting JCWC's volunteer program! Stay tuned for more details.

Percent of Households with Low English Proficiency in Johnson Creek Watershed, Oregon



Source Data: Regional Equity Atlas 2.0 by Coalition for a Livable Future <https://gis.oregonmetro.gov/equityAtlas/>



Advisory Circle member and Wells Fargo employee Gary Klein personally delivered the grant funds to JCWC's headquarters

Double Down for JCWC!

Five generous donors will match all year-end contributions up to \$15,000!

Matching donors: Jim Cooke, Jameson Partners dba Freeway Land II, The Mintkeski Family Fund of the Oregon Community Foundation, Janet Roberts and Ed Clark, Mary Ann and Bob Schmidt.

Yes! I want to become a Friend of JCWC, have my gift matched, and help protect and restore the creek for generations to come!
You can also donate online at: jcwc.org/donate

Name _____
Address _____
City/State/Zip _____
Phone _____
Email _____

Enclosed is my tax deductible contribution:
\$35 \$75 \$150 \$250 \$500 \$1000 Other \$ _____
Monthly recurring donation \$ _____
 My check is enclosed
 Charge my credit card:
Card # _____
Expiration date _____
3 digit CVV2 code _____
Signature _____



Please return to JCWC
1900 SE Milport Rd
Milwaukie, OR 97222

Retirement at Last! Farewell to Outreach Associate Marty Urman



Marty with husband Perry Rikli, former JCWC Board Member.

Marty Urman spent seven years at JCWC. She was well-liked by staff and volunteers alike. Her talents in graphic design and event planning elevated the work of the Council.

Urman was the brains behind our Within Your Reach newsletter, the Annual Meeting and the Johnson Creek Art Show amongst dozens of other small projects. As an artist, Urman brought together elements of beauty and art with science and research

in unique and inspiring ways. Her daily presence in the office will be greatly missed, though we will still see her frequently. Thank you for your years of inspired work!

Thank you to Board Member Celeste Mazzacano



Celeste brought invaluable understanding of the mussel populations in Johnson Creek.

Mazzacano first crossed paths with JCWC as she was spear-heading new research on freshwater mussels in the Pacific Northwest. Thanks to her support and initiative, we now have a more comprehensive understanding of the distribution and population structure of mussels in Johnson Creek as well as what their presence means

for overall water quality and vice versa. JCWC staff has enjoyed working with her and we continue to appreciate her expertise on and passion for all creatures without a spine. Thank you for all you contributed to Johnson Creek as a Board Member with your research, expertise and passion.

Honoring our 2013 Volunteer Leaders

Special thanks to our Presidential Service Award winners. These individuals invested at least 100 hours in 2013:



*Lucy Carr
Jack Halsey
Emily Matson
Brittany Sahatjian*

*Michael DuCharme
Anna Leitschuh
Melanie McCandless
Scott Turner*

These individuals served at least 25 hours in 2013:

*Nicole Alexander
Rachel Aronson
Brian Art
Michael Babbitt
Quintin Bauer
Jessica Beutler
Sergey Bezhinets
Courtney Blinkhorn
Taylor Bortz
Julia Chapman
Paul Ciri
Curtis Cooksey
Caitlin Dobson
Paul Edison-Lahm
Thom Epps*

*Raquel Granados
Horvard Guerrier
Kevin Hay
Ross Hiatt
Helen Hunter
Phoebe Johnson
Gary Klein
Toby Kubler
Virgil Llewellyn
Norbert and Lisa Loske
Bruce MacGregor
Lora Martin
Garth Massey
Jan Mehaffy
Mary Meier*

*Alivia Mickelson
Cindy Moomaw-Nerf
Priscilla Nelson
Benjamin Proztman
Bailey Reinmiller
Nancy Robrecht
Jennifer Rosenberg
The Schaeffer Family
Ashley Smithers
Katie Sombat
Lee Spiker
Russ Stoll
Jeff Taylor
Tony Vingiello
Bryan Volk*

Thank you to our 2013 Johnson Creek Charity Golf Classic sponsors



Northwest Youth Corps Makes an Impact

This past summer, JCWC was lucky to host a crew from Northwest Youth Corps for three weeks. The ten-person crew, consisting of high school seniors and recent graduates and led by two college graduates, provided plenty of muscle in the field. They removed invasive species, such as English ivy and blackberry, picked up trash, and removed protective netting from old plantings at sites throughout the watershed, supporting the Council's riparian program. They were also an integral part of the annual Johnson Creek Clean-Up in August, helping to organize, advertise, and lead crews for the event. Their efforts even attracted the attention of several state officials, including Oregon Senate Majority Leader Diane Rosenbaum, Oregon Senator Jackie Dingfelder (now a policy director for Portland Mayor, Charlie Hales), and Labor Commissioner Brad Avakian, all of whom visited the crew on site to discuss their work and its importance to Oregon's environment. Thanks, NYC!

Calendar of Events

For details visit our website: jcw.org or call 503-652-7477. Please RSVP to Amy (amy@jcw.org).

Green Streets Stewards Orientation

Thursday, January 16
JCWC Headquarters
5:30pm-7:30pm

Martin Luther King Jr. Day

Monday, January 20
Eastmoreland Golf Course
Streamside planting event
10am-12pm

Park Stewards Orientation

Thursday, January 23
JCWC headquarters
5:30 - 7:30 pm

Tideman Johnson Park Neighbors Planting event

Saturday, February 8
Tideman Johnson Park
10am-1pm

Volunteer Restoration Event

Saturday, February 15
Location to be determined
10am-1pm

Watershed Wide Event

Saturday, March 1
11 locations
9am-12noon

Volunteer Restoration Event

Friday, March 7
Location to be determined
10am - 1pm

**Did you know that JCWC's
newsletter is also available
online and sent via email?**

Text your subscription preferences
to 541-968-3530 or call 503-652-7477.



SAVE the DATE!

16th Annual WATERSHED WIDE EVENT

Saturday, March 1, 2014
9am-12noon
Lunch to follow restoration

11 locations throughout
the Watershed
Watch for more information
Register now at jcw.org



Johnson Creek Watershed Council

1900 SE Milport Rd., Suite B
Milwaukie, OR 97222
503-652-7477

JCWC Staff

Matt Clark, Executive Director
Sarah Eastman, Riparian Technician /
Americorps member
Cathy Geiger, Finance and Office Coordinator
Noah Jenkins, Riparian Program Manager
Robin Jenkinson, Restoration Coordinator
Amy Lodholz, Volunteer and Outreach
Coordinator
Jan Mehaffy, Restoration Technician

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