Greetings from the Board!

Welcome to the fall edition of our newsletter. We’ve been hard at work with the initial planning stages of our 2014 conference. Read below for details and additional announcements! Be sure to check out the new Restoration Highlight, the article about the Economic Value of Ecological Restoration, and find out what our student guilds have been up to.

SERNW/SER-GB Joint Conference Update

In our summer newsletter, we announced that our next conference will be held jointly with SER Great Basin at the Eagle Crest Resort in Redmond, Oregon from October 6-10th, 2014. We recently developed our conference theme to reflect the wide range of scales of projects in both regions as well as the collaborative nature of our work:

Collaborative Restoration: From Community Efforts to Landscape Scales

We have also put together a list of symposia that will be presented at the conference:

- Forest Restoration
- Shrub-Steppe and Woodland Restoration
- Prairie Restoration
- Stream Restoration
- Watershed Restoration
- Native Plant Materials
- Soil Restoration

We will be soliciting additional topics in a Call for Symposia later this fall and winter. We would love input and involvement from our members during program development. Please contact SERNW President Allison Warner here if you are interested in serving on our conference planning committee or if your organization is interested in becoming a conference sponsor. Check our website here for conference updates.

SER2013 Conference Highlights

SERNW Board member Jim Hallett provided this summary of the recent SER conference.

SER2013, the Fifth World Conference on Ecological Restoration, was held in Madison, Wisconsin from 6-11 October 2013. This was the largest SER conference to date, with over 1300 registrants congregating at the lovely Monona Conference Center, which overlooks Lake Monona and was designed by Frank Lloyd Wright. The Wisconsin venue was particularly appropriate for celebrating SER’s 25th anniversary, and many visited the Curtis Prairie and Aldo Leopold’s shack.

Prior to the start of the meeting, 80 attendees took part in Make a Difference Day, a volunteer opportunity to work on restoration projects at the University of Wisconsin Arboretum and a local nature preserve. Although the government shutdown prevented some Federal employees from
attending, there was relatively little impact on the overall proceedings. The four days of technical sessions consisted of over 700 oral papers distributed up to 13 concurrent symposia and workshops, so many difficult choices had to be made in navigating the program. Almost all aspects of ecological restoration were addressed in some way. Significant discussions resulted from sessions considering the topics of ecological resilience, the role of reference systems, and novel ecosystems.

SERNW was represented by Becky Brown presenting on the Elwha dam removal, Peggy O’Connell speaking on the Kalispel Tribe’s restoration program, and Jim Hallett discussing development of a regional monitoring program for restoration projects.

Plenary talks began each day and presented broad perspectives on restoration. Speakers included Paul Hawken, Margaret Palmer, and Paul Beier. A poster session highlighted over 200 projects, many presented by students. The closing plenary provided four young professionals (i.e., advanced graduate students and post-docs) an opportunity to present their viewpoints on the field in a question and answer format.

Social events included an opening reception and a gala awards dinner. Richard Hobbs, the outgoing editor-in-chief of Restoration Ecology, received special recognition for his work on behalf of SER. SER Pacific Northwest Representative David Polster, received the John Rieger Award to acknowledge his dedication to advancing the science and/or practice of ecological restoration through the development of SER. The meeting concluded with a day of field trips to learn about restoration and conservation activities throughout the region.

The next World Conference is scheduled for 2015 in Manchester, United Kingdom. Additionally, there will be a joint SER and NCER meeting, the Conference on Ecological and Ecosystem Restoration, to be held in New Orleans from 28 July to 1 August 2014.

An Outlook on the Economic Value of Ecological Restoration – A presentation by David Batker at the 20th Anniversary of SERNW

SERNW Board member Rolf Gersonde provided this summary of David Batker’s presentation at our 20th Anniversary Celebration in March 2013 at the Mountaineers Program Center in Seattle.

We should understand ecological restoration as an investment into natural capital. That is Dave Batker’s vision of restoration of natural ecosystems, the intersection of our economy and our natural assets. Dave Batker, founder and director of Earth Economics, a non-profit organization based in Tacoma, WA, which studies the ecological value of our natural systems, gave a presentation in February of this year, at our 20th anniversary celebration of our Chapter. The presentation, titled “An Outlook on the Economic Value of Restoration,” previewed the next twenty years for the discipline of ecological restoration.

Batker, an economist with training in geology and biology at Pacific Lutheran University and Economics at Louisiana State University, seemed to be a good fit for the task. He taught at the Training Department of the World Bank and has worked for Greenpeace International, specializing in trade and international finance. He also worked with Rural Reconstruction Movement, a Philippine non-profit group dedicated to ecologically sound community development. In the Pacific Northwest he has worked with many agencies trying to understand the importance of natural ecosystems and the value of their conservation and restoration.

A key mission of the organization he leads is estimating the value of ecosystem services provided by our natural ecosystems, or natural capital, and
devising schemes to account and pay for ecosystem management. In his presentation, Batker draws on a long list of studies on ecosystem valuation conducted by Earth Economics in Washington as well as in Louisiana. Ecosystem services are goods and services, such as oxygen, timber, medicine, pollination, flood protection, and recreation which are essential to our economic and cultural well being; provided largely free of charge and non-exclusionary. The stuff we use, consume, and depend upon every day and usually do not think too much about, because they are provided by our natural environment. Usually 23 services are valued and used in valuation studies, based on studies that are collected at Earth Economics.

When it comes to dollar values, Batker was not shy, dishing up price tags for everything from carbon sequestration to esthetic values. He used data from Thurston County, Washington, at the southern end of Puget Sound as an example, where Earth Economics conducted a valuation of ecosystem services of the natural environment; from wetlands, grass land, and forests to urban green space. The benefits derived from those ecosystems range widely from $110,000 for wetlands to $13 for pasture and vary even within each category at the same margin depending on how functional each ecosystem is. The result is a staggering value of $6 billion per year, the high end of the estimate for benefits that the 700 square miles of natural capital in Thurston County provide. The low end of the estimate is still $608 million per year. Few of these values are included in the typical economic indicators of the County’s economic health or output. At this point the actual numbers seems of little importance, the magnitude is the punch line. Batker is quick to respond to the doubtful looks from the audience that the difference between the high and low end of the estimate bears a rather large uncertainty of billions of dollars. Economists, he explains, do not have difficulties dealing with enormous differences in asset values, which are driven by markets and, sometimes real people, who act within them. Remember Washington Mutual Bank, which in 2008 changed in market value from many billions to one dollar, virtually overnight? The important point is that the economic benefits of the County’s natural capital are substantial and should be incorporated into zoning, land use, and economic development. Who would not invest in capital with such social, cultural, and economic benefits?

Putting a price tag on ecosystems and the goods and services they provide is not an easy task, nor is it intuitive to understand how the values are derived. Economists have devised a number of schemes for ecosystem valuation, including avoided cost, replacement cost, travel cost, hedonic pricing, contingent valuation, and other methods. It is however unrealistic to expect that one engages in a new valuation study for every ecosystem under investigation. Results from studies of analog systems are usually transferred to a given system and the high or low end of the range is used in the value transfer depending on how similar the ecosystems are and how important a particular ecosystem service is. Most often the valuation is based on only a few of the 23 ecosystem services, so their “true” value bundle is often underestimated. Despite all that, the results can be stunning. Earth Economics has been involved in a study that looked at the values of barrier islands on the Gulf Coast of Louisiana, where Batker did his graduate training. The development of barrier islands, conversion of natural vegetation, draining of swamps and floodplains were part of the reason, Batker argues, that hurricane Katrina did not lose much strength at landfall in 2005 and devastated Louisiana’s coastal communities including New Orleans. The price tag: $200 Billion.

Batker is full of the enthusiasm of someone who has discovered a groundbreaking solution and yet still needs to explain its economic elegance in plain language. Ecological economics, he explained, is just as revolutionary as the development of macro-economics in the 1920’s, which put a number on the economic prosperity of a nation, the Gross Domestic Product. However, having moved from an era of wealth in natural resources to natural scarcity, the construction of another mile of highway or more plastic toys hardly add to our prosperity today, whereas adding another acre of flood plain or functional barrier island becomes
increasingly valuable these days. Ecological economists are putting a price tag on those goods and services that are usually not included in our Gross Domestic Product, but upon which our economic and cultural network fundamentally depend. Ecological restoration, he concludes, should be seen not as a cost to society, but as an investment in natural capital and the well-being of future generations.

At times, Batker’s interpretation of economic concepts is refreshing for an audience that is more comfortable with Net Primary Productivity than Gross Domestic Product, his presentation a bit like an economics lecture for biology majors. Some people in the audience get a little nervous when an economist dives into discount rates and net present values. But Batker’s conclusion should be music in the ears of people who argue for flood plain restoration instead of constructing higher levies. Discount rates, he argues, are introduced to put greater values on short term returns, discounting uncertain future returns, and should be applied to build capital like roads, cars, and levies alone. As soon as you build or buy such built capital, they deteriorate and lose value, and need to be repaired or replaced. Natural ecosystems however improve in function over time and increase in both value and potential return. They should be valued without applying any discount rate at all, accounting their full future returns in the net present value. Such accounting might tip the balance when we decide between building higher levies along the river or restoring its flood plains.

Whether or not ecosystem valuation will be used in the planning and decision making of restoration projects obviously depends on the scope and scale of the project. The fact that ecosystem values are increasingly included in land management plans and stakeholder discussions is a positive development and should encourage restoration practitioners. Batker’s outlook on the future of ecological restoration is certainly positive, considering the contribution that natural ecosystems make to our social and economic well-being, and how great the need is for their restoration. Whether or not this need transfers into actual restoration of natural ecosystems depends upon how well we communicate the realized value of our natural capital to decision makers and society at large.

Soil Bioengineering and Natural Processes: Restoration of Drastically Disturbed Sites

SERNW President Allison Warner provided this summary of the Soil Bioengineering Workshop held October 18-20, 2013 in Olympic National Park.

Despite a government shutdown until two days before the scheduled date, SERNW hosted a well-acclaimed workshop in collaboration with Olympic National Park. Twenty attendees from around the region (as far away as Eugene, OR) were treated to auspicious fall weather for a weekend class with Dave Polster, Botanist and SER NW Regional Representative. The class consisted of two field days on the Elwha River and one day of classroom instruction at the beautiful grounds of NatureBridge Conference Center on Lake Crescent.

Day one featured a field tour led by Joshua Chenoweth, SERNW Board member and Olympic National Park Restoration Botanist. The tour included visits to the former Elwha Dam site and two sites in the former Lake Aldwell reservoir to look at natural and managed revegetation. Joshua was charged with developing and implementing the revegetation plan for the two former reservoirs, which inundated floodplains, valley walls, and terraces, during and after dam removal. At the first stop, at the lower portion of Lake Aldwell, Joshua
explained the 3 goals of the restoration plan: 1) Minimize exotic species invasions; 2) Restore ecosystem processes; 3) Accelerate forest succession. Joshua’s efforts include a number of study plots and even testing of lake sediments to determine appropriate species palettes to use. Revegetation methods include seeding with forbs and grasses, planting with native shrubs and trees, and treating invasive species with EPA approved herbicides. Ultimately, the introduction of native trees and shrubs will shade out invasive species while simultaneously repairing ecosystem processes by reducing erosion, creating salmon habitat and reducing excessive run-off during heavy rain events. All seeds and plants are propagated from seed collected locally to ensure proper genetics. Revegetation challenges include deep layers of silts and clays that cover former valley walls up to 5 feet in thickness. The vastness of the area prevents the removal of this material, and it is easily erodible and particularly bad for siltation. After two growing seasons, the site was well-vegetated and showed good colonization and survival by native tree species due to the abundant water available in the sediments left behind by the reservoirs.

Farther up the canyon, in the former Lake Aldwell, the almost opposite problem is the elevated plateaus of river gravels in some cases thirty feet above the former river channel. Although still moist for a couple of seasons after the lake subsided, the expanse of the area lacking in shade and the well-drained matrix lacking in organic material is a challenge for revegetation. Our field day also included an added bonus of a trip to the mouth of the Elwha, lead by one of the workshop participants, Kassandra Grimm, a student at Western who has been volunteering with near shore fish sampling at the rapidly changing mouth of the Elwha. The river has newly added 200 feet of sandy beach and estuary ponds to its formerly rocky shore that are full of chum, coho and Chinook, and host a wide diversity of shorebirds, and fish such as stickleback and sculpin.

Dave Polster’s class was a highly educational tour of his 25+ years of experience revegetating and restoring drastically disturbed sites, primarily former mines and landslides. Dave has done a notable job of documenting and monitoring his work, and used various examples to describe ecological concepts. Dave is a keen observer of the environment and how ecosystems are put together. He uses his observations to guide his restoration treatments, which work with successional stages, landforms, biological factors, and natural disturbance regimes, and incorporate the basics of erosion, plant assemblage rules, and ecosystem degradation processes. He describes what he calls “filters” to recovery, from biotic to abiotic, and natural solutions to those filters. The techniques he has developed are simple and easy to implement, using plants and appropriate soil preparation as his primary tools.

One of the treatments used by Dave with remarkable success is the use of living plant materials to perform an engineering function (i.e. soil bioengineering). Dave uses these simple treatments to recover what would otherwise seem irreversible damage. The course manual provided is a great take home reference guide.

Workshop attendees gained additional insight by a day spent in the field implementing the bio-engineering techniques taught in the class. The participants collected live cuttings to learn the appropriate sizes to collect and proper tools for and methods of cutting and transporting the live materials. Dormant branches of willows and red-osier dogwood were collected and used to build wattle fences and install live stakes on an eroded
river bank of a side channel of the Elwha River, where the heavy bedload of silt carried by the river has begun to migrate the channel toward a residential structure. The class made short work of the installation, working in teams. All involved will be eager to see the results in this very dynamic situation of the large bedload being moved by the river. The Elwha was certainly the right fit for a course titled Natural Processes: Restoration of Drastically Disturbed Sites!

Restoration Walks Initiative

SERNW wrapped up Restoration Walks for 2013 with walks in September and October at the Olympic Sculpture Park and the Auburn Mitigation Wetlands. Restoration Walks promote dialogue between practitioners and introduce the public to notable restoration efforts occurring in their backyard. If you would be interested in leading a restoration walk in your town, nominating a restoration site to be showcased in 2014, or helping to organize and promote restoration walks, please contact Betsy to get involved.

Auburn Mitigation Wetlands Restoration Walk led by Chipper Maney on October 12th 2013.

Student Chapters Update

University of Montana Student Guild (UMSER)

UM-SER is back at it here at the University of Montana, where they’ve been maintaining a Native Plant Garden and working on restoring prairie along the “M-trail” – Montana’s most hiked trail. In the coming weeks, they will be spreading native wildflower, forb, and grass seeds to help restore Palouse prairie above the M-trail on Mt. Sentinel and will be receiving a visit from a local restoration professional who now works with endangered species. As winter approaches, UM-SER will be busy in the greenhouse growing plants for their native plant sale in the spring. They are also preparing to connect the local community with nature at their
annual “Restore the M-trail” Earthday workday in April. With the new school year in full swing, UM-SER is looking forward to another productive year restoring natural areas around western Montana.

**University of Washington Student Association**

The start of a new academic year at the University of Washington has reinvigorated restoration efforts. Fifteen SER-UW volunteers recently participated in a very successful Fall Kick-Off work party at the group’s north campus restoration site located near McCarty Hall. Activities included removing invasive English Ivy, mulching paths, and transplanting native species from a nearby location soon to be developed. A more relaxed event brought UW Landscape Architecture and Restoration Ecology students together for an enjoyable evening of interdepartmental collaboration concerning involvement opportunities with SER-UW. An upcoming King County Native Plant Salvage in Fall City, WA is next on the agenda for SER-UW. Plants from the salvage will be transplanted at work parties and constitute a potential plant sale come springtime.

![Volunteers transplanting salvaged sword ferns along a newly constructed path through SER-UW’s main restoration site near McCarty Hall.](image)

**Upcoming Conferences**

**Sixth Annual Western Native Plant Conference**
December 9 – 11, 2013 | Vancouver, WA

**2014 Science, Practice & Art of Restoring Ecosystems Conference**
January 17-18, 2014 | East Lansing, MI

**Planning and Preparing an Ecological Risk Assessment**
January 29-30, 2014 | Austin, TX

**Soil’s Role in Restoring Ecosystem Services**
March 6-9, 2014 | Sacramento, CA

**2014 National Mitigation and Ecosystem Banking Conference**
May 6-9, 2014 | Denver, CO

**Conference on Ecological and Ecosystem Restoration**
July 28-August 1, 2014 | New Orleans, LA

**ESA 2014: From Mountains to Oceans**
August 10-15, 2014 | Sacramento, CA

**SERNW/SER-GB Joint Conference- Collaborative Restoration: From Community Efforts to Landscape Scales**
October 6-10, 2014 | Redmond, OR

**Job Opportunities**
Check out current listing here on our website.

**Keep up with our latest happenings on SERNW’s Facebook page!** Like us at **SERNW**! Any member can share items of interest on the Facebook page or you can also submit topics to SERNW20@gmail.com.

**Your Strategic Communication Team,**
Allison Warner, Adrien Elseroad, and Jim Hallett

P.S. Don’t forget to renew your membership on the SERNW webpage.