

**South Platte River Urban Waters Partnership (SPRUWP)
 Quarterly Meeting
 December 6, 2017
 9:30 AM – 12:30 PM
 1617 Cole Boulevard, Golden, CO**

ATTENDANCE

Participants: Bill Battaglin, Karl Brummert, Christina Burri, Jeff Sorkin Dana Coelho, Casey Davenport, John Duggan, Courtney Garwood, Suzy Hiskey, Peter Ismert, Mike McHugh, Andy Perri, Al Polansky, Jayla Poppleton, Chris Poulet, Gene Reetz, Donny Roush, Mike Smith, Lacy Williams, Keith Wood

Facilitation: Katie Waller, Sam Haas

ACTION ITEMS

Katie Waller	<ul style="list-style-type: none"> • Send out the presenters' PowerPoint presentations. • Send out the contact information for Pam Smith and Al Polansky. • Send out information about the water quality assessment tool. • Send out information about the Urban Waters Learning Network. • Create a survey to assess people's preferences about specific set quarterly meeting dates. • Send an e-mail to the group asking what improvements to the newsletter they would like to see.
Donny Roush	Send Katie Waller the contact information for the Earth Force educator in Albuquerque.
Pam Smith	<ul style="list-style-type: none"> • Send Katie Waller the studies about the amount of vegetation buffer needed for water protection. • Send Katie Waller the findings from the upstream portion of the dam (close to Cherry Creek State Park)
Anyone interested in sharing project updates	Send Katie Waller a few sentences about what you are working on, and Peak Facilitation will send it out to the group.
Anyone involved in other collaborative groups	Send Katie the information about the collaborative groups so that Peak Facilitation can compile and send out the list.

ADVISORY COMMITTEE AND AMBASSADOR UPDATE

Dana Coelho, US Forest Service (USFS), provided an update on the South Platte River Urban Waters Partnership (SPRUWP) Advisory Committee, and Katie Waller, new Ambassador for SPRUWP, updated participants on changes to the Ambassador position and program.

- The National Urban Waters Federal Partnership won a 2017 Samuel J. Heyman Service to America medal, otherwise known as a “Sammie.” SPRUWP will use this award to bring energy into the local partnership. The Urban Waters Federal Partnership also won a USFS Chief’s Honor Award. Dana Coelho will attend and be part of the receiving line for the award.
- Katie Waller of Peak Facilitation will be serving as the new Ambassador for SPRUWP. Peak Facilitation is a small consulting firm that focuses on the facilitation of natural resource management issues, including forest and watershed health, land planning, and public engagement with national and state forests. Katie Waller will be providing input to the Advisory Committee to help SPRUWP move in a positive direction, and is looking forward to assisting in the revitalization of the group.
- This new Ambassador position is supported by a multi-agency partnership. Environmental Protection Agency (EPA) funding comes in through an interagency agreement with the USFS, which is filtered through the Colorado State Forest Service (CSFS) via a grant then sent to Peak Facilitation as a contract. While there is no project-level funding allocated regionally, the Urban Waters Federal Partnership five-start grant program goes into the National Fish and Wildlife Foundation (NFWF) within SPRUWP.

TEACHING WATER INFRASTRUCTURE

Donny Roush, Denver Public Works, presented the current status of Denver Public Work’s Water Infrastructure program.

- Denver Public Works contracted with the non-profit Earth Force to provide education and outreach services within the city’s stormwater management program. Roush works directly for the City and County of Denver as an independent contractor who guides teachers and students (3rd through 8th grade) through watershed investigations that combine STEM content, civic skills-building, and environmental problem-solving.
- Every school should be seen as a collection of education infrastructure comprised of the buildings/grounds, utilities, HVAC systems, playground equipment, and tables/chairs/desks/boards. It is important to consider the water cycle across sectors, as this mindset helps people get out of their silos.
- Water infrastructure has four systems: drinking water, sanitary sewer, stormwater, and the natural watershed. By design, the first two are isolated and the second two are interconnected. For education purposes, the difference between the first two and second two can be seen in terms of gray versus green. The gray infrastructure is hard and angular, and the green infrastructure is soft and rounded.
- All MS4 (called an MS4), public outreach and education process is required. The MS4 Director has stated that STEM education helps to accomplish municipal objectives. One education program is called Keep It Clean - Neighborhood Environment Trios (KIC-NET). The program uses KIC-NETs (a net that catches invertebrates) to educate youth and teach them about water quality. The environmental “trio” in the name indicates the requirement

for there to be a school, waterway, and park/recreation within a short distance of each other.

- In Colorado, there are 29 schools, 131 educators, and 2,000 students engaged in this program. In 2011, Albuquerque, NM also started a program, and the non-profit Earth Force has provided a full-time staff person.
- KIC-NET has developed an activity guide that includes sequenced learning chapters. Unlike most agency-based education programs, KIC-NET does not do one-hour, one-off programs, but instead develops working partnerships with the schools and becomes an integrated part of the curriculum throughout the school year.
- Evaluation outcomes of the program indicate that two out of three students demonstrated improved knowledge of watershed stewardship. Qualitative outcome themes include increased academic achievement, a sense of empowerment, and increased conservation behaviors. There were 84 student-led environmental action programs implemented.
- There are now a few schools in the pipeline that are dedicated to school-scale green infrastructure development. One example is the Joe Shoemaker School, which was part of a highly controversial land swap. An environmental stewardship proposal was written to devote several of the school's 9.5 acres to a regional stormwater quality facility. This facility has the largest trash vault in the city, and the water feeds into a 1.5-acre detention pond. There is also a combination outdoor amphitheater that has a settling basin. Another example is St. Rose of Lima Catholic Academy, where, over the course of two years (7th and 8th grade), students learned about water quality and designed a rain garden where the water from the roof of the gym feeds the garden. The city is now doing conceptual designs and estimating the cost.

Clarifying Questions

Participants asked clarifying questions about the KIC-NET program. Questions are indicated in italics with the responses below.

How can other educators aim to engage teachers and students at the same level as KIC-NET?

Students are always enthralled by using a KIC-NET to catch macroinvertebrates or doing water quality testing with test tubes. It is important to drill down on the issue; projects that just pick up litter do not have the same impact.

Does KIC-NET ever go to Mountain Parks?

Yes, but not enough. Organizing headwaters field trips would be great.

Does KIC-NET have a political champion (i.e., someone on Denver City Council)?

Denver has two environmental educators on City Council: Stacie Gilmore and Jolon Clark.

Who is the Earth Force counterpart based in Albuquerque? They may be interested in joining the SPRUWP e-mail list.

Donny will send Katie Waller the contact information for this person.

FRONT RANGE WETLANDS (COLORADO NATURAL HERITAGE PROGRAM)

Pam Smith, Colorado State University's Natural Heritage Program, and Al Polansky, City and County of Denver's Department of Public Health and Environment, presented the findings from a study on wetlands conducted in the City and County of Denver.

- Wetlands play every position in the water body field. They provide wildlife habitat, flood attenuation, groundwater recharge, sediment control, nutrient updates, and contaminant mitigation. They also combat climate control, offer educational opportunities, provide an outdoor escape for people who live in an urban environment, mitigate quality/quantity of storm runoff, and protect areas from downstream bank erosion.
- There are several examples of wetlands in Denver. Riverside cemetery provides wildlife habitat, human escape, educational opportunities, floodwater attenuation, and groundwater recharge. There is also a small tributary in southeast Denver called Harvard Gulch, which provides for channel stabilization, erosion control, and wildlife habitat. Barnharm Park (at 6th and Federal) takes water from street runoff and commercial properties down into the wetland basins, which then overflows into Barnham Lake.
- Many people were involved in a study that evaluated wetland condition in urban Denver. The project sought to provide current data on the condition, rarity, location, acreage, and type of wetlands in Denver County. The timeline of the project was from 2012-2014, and the researchers looked at 40 sites in urban Denver and six sites in Denver Mountain Parks. Overall, the mountain parks scored higher than the urban habitats. However, all the wetlands surveyed proved to have important functions.
- The study found that 2.5% of Denver was an urban wetland, and most were constructed reservoirs, canals, or rivers. About 714 acres (28%) were vegetated wetlands and/or small ponds. Vegetated wetlands have high levels of biodiversity, native plants, and terrestrial habitat, and they filter nutrients and sediment. It is critical to begin processes of shoreline stabilization and wetland vegetation to create healthier habitat in Denver.
- The wetlands were assessed along a spectrum of A (reference condition) to C (moderate deviation from reference condition). None of the urban wetlands scored "excellent," or A, but the areas removed from humans did. Poor quality wetlands are associated with high-density areas. Urban areas often do not provide adequate buffers around the wetlands because they are so manicured (and often use chemicals). Urban waters are also contaminated from runoff from residential landscapes.
- Water quality in Denver wetlands can increase by changing mowing patterns, reducing herbicide, allowing more shoreline vegetation to grow, protecting buffer areas from development, and adding more natural areas to the watershed.
- The Denver Metro Wetland Advisory Group was formed as part of the grant from Colorado's Natural Heritage Program. The advisory group is comprised of City/County of Denver government representatives, nonprofits, consultants, and other interested parties. The group advocates for wetlands education and is interested in expanding its membership and revitalizing the program. If anyone is interested in participating in this group, please contact Pam Smith (pamela.smith@colostate.edu) or Al Polansky (alan.polansky@denvergov.org).
- Peak Facilitation will send out the PowerPoint presentations. Peak Facilitation will include the contact information for Pam and Al in the e-mail.

Clarifying Questions

Participants asked clarifying questions about the Front Range Wetlands presentation. Questions are indicated in italics, with responses below.

Are the presenters aware of any studies that prove that shoreline vegetation may limit the use of Canadian geese in park settings?

The presenters have not seen any studies about Canadian geese, but know that the geese do not like shrubs. The presenters do have studies about the size of vegetation buffers needed for water protection. They will send these studies to Katie Waller.

There is a group that meets about wetland harvesting at Cherry Creek State Park, and this information would be beneficial to that group. Did this study take measurements at Cherry Creek State Park?

The study measured the upstream portion of the dam close to Cherry Creek State Park. Pam will look at this and send the information to Katie Waller.

Is the Denver Metro Wetland Advisory Group considering strategic locations for where wetlands could go or is it more focused on evaluating the current condition?

The Advisory Group's current objective is to keep wetlands on people's radar and to start getting kids into nature. However, they would be interested in weighing in on regulation that impacts wetlands.

PARTNERSHIP UPDATES

Due to time constraints, this agenda item was not discussed. Anyone who would like to provide a short project update, please send Katie Waller a few sentences about what you are working on, and Peak Facilitation will send it out to the group.

WHAT IS NEXT FOR SPRUWP?

Before this meeting, Katie Waller conducted interviews with the SPRUWP Advisory Committee members and sent out an online survey to all SPRUWP participants. Katie summarized the key themes from the pre-meeting survey. The group then participated in an activity that sought to understand people's objectives for SPRUWP moving forward.

Online Survey

- About 15 people responded to the survey sent out before this meeting. The majority of respondents indicated that they read the e-mail updates, some people attend the quarterly meetings, and a minority of people never missed a meeting. Most people indicated that they participate in SPRUWP to network, learn from experts in the field, and identify/leverage funding sources. The survey indicated that SPRUWP has great collaborative potential and offers a great avenue to share information. SPRUWP attracts a variety of diverse organizations and agencies that represent unique perspectives and resources.
- When asked how SPRUWP could better meet their needs, respondents indicated that they would like SPRUWP to provide more leadership and guidance, so the Partnership trajectory is clear and focused. They also indicated that they would like to define the goals and mission of SPRUWP concisely to guide all future work and define SPRUWP's niche so that it

adds value and does not duplicate other efforts. They also indicated that they would appreciate if SPRUWP found ways to expand/improve the use of existing tools and resources, tie into headwater/land management organizations, involve more local agencies, identify a clear geographic focus, and improve the newsletter so that it provides topical and unique information.

Group Exercise: “Headlines”

Participants responded to the following prompt question: If a newspaper were to write a story in five years about SPRUWP’s success, what would the headline say? Responses were then grouped into themes. Participants’ responses are captured below.

Water Quality

- SPRUWP is improving water quality in urban South Platte watershed by leveraging resources and using the existing successful projects and investments such as the natural capital assessment and the water quality assessment tool
- Urban waters thrive near your backyard
- Ho-hum, watershed still healthy
- Diverse group of partners has revitalized wetlands/waterways throughout the Denver metro area, involving and empowering students in solutions
- Jeff Shoemaker declares South Platte river swimmable and fishable; credits SPRUWP for progress

Wetlands Health

- High value of urban wetlands revealed
- The number of acres of high functioning wetlands in Denver metro area increased by over 30% due to the work of SPRUWP and partner organizations

Education/Outreach

- Denver residents of all ages participate in the protection of the South Platte and its wildlife
- Increased education about urban waterways in schools

Land Use and Urban Planning Policy

- Local collaborative organization (SPRUWP) helps create mandatory buffer zones around all water bodies
- Denver metro takes whole-city approach to green infrastructure

Public Health/Wellbeing

- Denver's urban renewal projects have dramatically improved to record-setting levels; happiness and lower stress across all socioeconomic classes and ages

Mission/Vision Achievement and Collaboration

- SPRUWP leads the way in improving watershed quality awareness and connectivity from the headwaters to the metro area to the plains
- SPRUWP wins multiple international awards for assisting Denver in having the cleanest and healthiest watersheds in the world

- SPRUWP keeps ideas and resource flowing toward innovative and collaborative solutions
- Collaboration between X number of organizations lead to environmental improvement throughout the South Platte watershed

NEXT STEPS FOR SPRUWP

The group brainstormed concrete and specific next steps to begin to work toward the goals articulated in the headlines.

Next Steps for Water Quality

- Increase understanding and use of the water quality assessment tool. It is important to promote the tool to people and organizations in SPRUWP's network. To use this tool for educational purposes, it would need to have an accompanying instruction sheet. Katie will send the tool in her e-mail to the group.
- Develop a green infrastructure management document targeted at park managers to help them oversee their greenspaces in ways that are more protective of the wetlands. This document could include a brief explanation of best management practices (BMPs).
- E-mail, call, and visit the Mayor's office as a lobbyist advocating for water quality. The Mayor's office has indicated in the past that if they receive more than a dozen e-mails/calls, etc., about a specific issue, it warrants special attention. If SPRUWP members, as individual citizens, contact the Mayor's office to ask that water quality is treated as more than a sustainability issue, it may be treated with some urgency.
- Use the water quality assessment tool and the natural capital assessment tool to identify focus areas or areas of need in the South Platte. After identifying priority areas, apply to several competitive grants to locally fund projects in those areas of concern.

Next Steps for Policy

- Establish workgroups within SPRUWP to focus on specific policy issues (e.g., wetlands), track legislative developments, keep the partnership updated on current events related to that area, and inventory projects that are going on in the metro area.
- Schedule two presentations for each quarterly SPRUWP meeting for members to share what they do, how they do it, and what they consider to be important about their work.
- Bring a colleague to the next quarterly SPRUWP meeting.
- Renew and maintain funding through the interagency agreement with the EPA and the grant with the CSFS while exploring opportunities for additional partnership agreements or memorandums of understanding.
- Attract more federal agency representatives to SPRUWP meetings.
- Attract more people from the private sector (e.g., developers) to SPRUWP meetings. They are not aware of the net benefit to their bottom line of increasing environmental stewardship practices. The Nature Conservancy recently hired someone to focus on urban issues and have been able to funnel some of the private sector entities to leverage resources. It may be helpful to contact this new hire, Chris Hawkins, to see if he could connect SPRUWP to those entities. It is also important for SPRUWP members to attend meetings that the private sector convenes.
- Work to cultivate meaningful ties with other collaborative groups and coalitions such as the Metro Denver Nature Alliance and the Upper South Platte Partnership. Figure out what

SPRUWP's niche is and clarify that SPRUWP is not trying to compete with the other collaborative groups. There is a "collaborative of collaboratives" for fuels reduction that has one representative from each group meet twice a year to ensure that there are minimal areas of overlap. Anyone involved in other collaborative groups should send Katie the information about those groups so that Peak Facilitation can compile a list and send it out.

- Reach out to other Urban Waters Partnership Ambassadors to see what lessons they have learned. Katie will send out information about the Urban Waters Learning Network in the e-mail.

Next Steps for Education and Outreach

- Translate relevant databases and online tools into language that is useful for K-12 education. It is important to know how the tools fit into the context of learning. Perhaps at the next meeting, Ben Tyler, or someone from the workgroup, could present the assessment tools.
- Offer a seminar on the benefits of protecting urban waters and advertise it to other groups/audiences such as association groups, developers, and other private sector people.
- Describe the work of SPRUWP and partner organizations through an ARC GIS story map. Christina Burri can bring someone from Denver Water's GIS group to the next meeting. It is also possible to bring in a graduate student to start this effort as part of a school project.
- Create a shared calendar of events that have important dates and meetings.
- Update the Urban Waters Partnership website.
- Provide a platform for presentation PowerPoints to be shared with partners and people on the ground.

GENERAL NEXT STEPS

- The Advisory Committee will meet with Katie Waller and create a rough strategic plan that will be presented at the next meeting.
- Regarding meeting frequency and dates, Katie will create a survey to assess people's preferences about specific set dates for the next year.
- Katie will include questions in the e-mail to the group about what improvements to the newsletter they would like to see.