



South Platte River Urban Waters Partnership Accomplishments as of December 2016

The following is a list of projects that partners are working on currently, or have completed in the past since inception of the South Platte River Urban Waters Partnership (SPRUWP) in June 2011. It identifies projects with Federal involvement and funding, projects that have multiple SPRUWP members working together, projects that have been supported by the former Leadership Team, projects led by the former coordinator, workgroup-led projects, and signature projects. Additional projects pursued individually by the various members of SPRUWP are not listed in this report.

The first phase of SPRUWP (1.0) went from June 2011 to December 2012, and was co-led by EPA and the US Forest Service (USFS). The second phase of SPRUWP (2.0) went from January 2013 through June 2016 with the assistance of a coordinator (Devon Buckels), an Advisory Committee (USFS, EPA, CSFS), and a multi-stakeholder Leadership Team. SPRUWP is currently in its third phase (3.0), co-led by EPA and USFS in close collaboration with Colorado State Forest Service (CSFS) and with contract facilitation assistance from Laura Sneeringer.

Signature Projects

South Platte Watershed Natural Capital – From Mountains to Plains Resource Assessment

The South Platte Natural Capital Project is a collaborative watershed-wide green infrastructure assessment led by the CSFS with funding from the USDA Forest Service as part of the SPRUWP. The project was funded with a State and Private Forestry competitive grant. The project directors are CSFS, USFS, and EPA. A tour for the contractors and Stakeholder kickoff meeting were held on May 16-17, 2016. A presentation was given to the Colorado Stormwater Council on August 24, 2016. A second stakeholder meeting was held on October 18, 2016 to get input on the draft maps.

The purpose of the South Platte Natural Capital Project is to build on existing studies in the South Platte River corridor and watershed to:

1. Create an assessment that maps and evaluates the regional network of green infrastructure (interconnected network of critical watershed forests, riparian corridors, wetlands, streams, lakes and the river).
2. Prioritize key areas for conservation and restoration based on the economic value of the benefits people obtain from those natural systems ("ecosystem services").
3. Sustain and enhance the sharing of ideas, data, and resources across organizations and landownerships toward accomplishment of common goals.

<https://www.epa.gov/urbanwaterspartners/south-platte-natural-capital-project>

Water Quality Assessment Tool

A water quality assessment is underway that will present a cross-jurisdictional view of water quality in the Denver metro area. This is being done by the SPRUWP Water Quality workgroup, which has participation from EPA, USGS, ATSDR, USFS, Denver Water, City and County of Denver, Colorado Department of Public Health and Environment, Metro Wastewater Reclamation District, Littleton/Englewood Wastewater Treatment Plant, Colorado Watershed Assembly, Groundwork Denver, and Jefferson Conservation District. Groundwork Denver is leading the project. A survey was completed and cross-jurisdictional data have been compiled. EPA provided funding for a summer intern in 2014 to assist in compiling data for mapping. This was useful for looking at emerging contaminants and traditional pollutants, the locations, and how development patterns affect water quality. Ben Tyler, formerly with River Watch, and currently with Leonard Rice engineers created the web interface. The Water Connection/The Greenway Foundation is hosting the tool.

The interactive tool went live in January 2016 and makes existing water quality data available to professionals and the public. The tool has the capability to map and/or chart water quality data for the urban South Platte River basin. Users are able to filter maps and charts by location, pollutant, or time period. Dozens of SPRUWP partners collect water quality data from more than 160 sites throughout the basin. Results of pollutants from thousands of samples are publically available from the State of Colorado, EPA, USGS, and the Colorado Data Sharing Network. The tool currently has 5 years of E. coli data available for the Denver metro area.

A contract was awarded to Leonard Rice Engineers in August 2016, with \$30,000 from EPA to create a mobile platform and expand the contaminants from E. coli to also include Total Dissolved Solids; Nutrients; and select pesticides, pharmaceuticals, and personal care products. The Water Quality Workgroup is working on developing the storylines for the added contaminants.

http://thewaterconnection.org/wq_tool/app/#/storyline

Priority Projects

Metro Denver Nature Alliance

USFS representative, Dana Coelho, is serving on the leadership team of the Metro Denver Nature Alliance (MDNA), a network of environmental, scientific, and cultural organizations committed to making Denver a “thriving place for both people and nature”. Other organizations/individuals are part of the SPRUWP and MDNA. This partnership evolved out of work with the Trust for Public Land and The Nature Conservancy on the South Platte Natural Capital Project.

Denver Urban Field Station

A new collaborative venture of the USFS Rocky Mountain Region, Rocky Mountain Research Station, CU Denver, City of Denver, USGS, and other partners is looking to establish Denver as a center of excellence for applied urban ecological research. Several SPRUWP partners including EPA, CSFS, and Denver Water are also participating. One early project idea is mapping the metro area’s environmental stewardship organizations, which will build off of the SPRUWP’s geomapping and systems mapping efforts as well as feed into MDNA strategic planning efforts. A stakeholder meeting was held November 9-10, 2016.

Green Infrastructure Virtual Tour

EPA hired a volunteer intern, Alan Buser, to create a Google Earth green infrastructure virtual tour of sites within the SPRUWP area. Some of the project sites came from the SPRUWP green infrastructure workgroup. The project was completed in 2015. Urban Drainage and Flood Control District, City and County of Denver, and landscape architecture and engineering companies provided input. EPA is working through Agency protocols for hosting the tour on its webpage.

Green Infrastructure Case Studies

The Leadership Team was working on compiling green infrastructure case studies and exploring creative and effective means of sharing this information online. This project is on hold as SPRUWP v3.0 takes shape.

Systems Thinking (Mapping)

Identified as one of top three priorities at the first full SPRUWP meeting. CDPHE and its Environment Water Quality Control Division requested development of a systems network diagram and systems thinking process, focused on partnership projects and activities. The Logistics Management Institute (LMI) and Shadowcliff Associates were contracted by CDPHE to perform the work in 2013. The work was funded with \$25,000 of expiring 604b funding from EPA. Twenty SPRUWP partners participated in the effort. The project provided opportunities for leveraging and identifying partnership priority areas. EPA Region 8's sustainability coordinator provided technical assistance for the project.

<https://www.epa.gov/urbanwaterspartners/south-platte-urban-waters-partnership-systems-thinking>

Geomapping

Identified as one of top three priorities at the first full SPRUWP meeting, EPA provided funding through a contract with SAIC to create a publicly-accessible geomapping platform to display partner activities spatially. Webinars, questionnaires, and data gathering activities have been completed. Partner addition of projects to the map is ongoing and additional partnership locations are exploring use of the platform.

<http://geoplatform1.epa.gov/urbanwaters/index.html>

Full Time Coordinator

Hiring a coordinator was identified as one of top three priorities identified at the first full SPRUWP meeting. Funding from USFS and EPA supported a Coordinator from January 2013-June 2016. See the end of this report for coordinator activities. The SPRUWP Advisory Committee (USFS, EPA, CSFS) are working on a plan for a new coordinator in 2017.

Urban Forestry

CSFS awarded a total of \$100,000 of USFS funds to four projects to restore and protect Denver area waterways, while reconnecting local populations with their water resources. Projects funded involved the removal of invasive species and planting of native trees in riparian and wetland areas. The four projects in Colorado that received funding in 2012 were: City and County of Denver Parks and Recreation (\$50,442), Institute for Environmental Solutions (\$20,000), South Suburban Parks and Recreation (\$20,000), Bluff Lake Nature Center (\$9,050). All of the projects are complete.

Urban Waters Small Grants

EPA Urban Waters Small Grants Round 3, 2016

Lower Bear Creek: Youth Leadership to Solve the Pollution Problem, South Platte River Watershed, Sheridan

\$60,000 EPA Urban Waters Small Grant to Groundwork Denver in 2016. The objective of this project is to improve the water quality in, access to, and amenities for Bear Creek in Sheridan, Colorado through youth leadership and job skills training, cutting edge water quality testing and pollutant source investigation, community education and outreach, and planning for Best Management Practices (BMPs) and other strategies to reduce contamination. The project will engage youth from Sheridan in water quality sampling and analysis, with Metropolitan State University student mentors, and engage the broader community through education, outreach, stewardship activities and recreation activities in the watershed. Outputs, including job training hours, water quality samples collected, and stakeholders reached will be tracked.

Heron Pond Regional Open Space Master Plan South Platte River, Denver

\$60,000 EPA Urban Waters Small Grant to the City and County of Denver in 2016. Building on decades of partnership between the City, the EPA, and local non-profits to restore the health of the South Platte River, a team is embarking on a visionary effort to consolidate and restore ~80 acres of land surrounding Heron Pond into a regional open space. This community-driven effort will reduce urban runoff pollution, improve wildlife habitat, and create recreation opportunities for the highly urbanized, industrial, and underserved Globeville neighborhood.

EPA Urban Waters Small Grants Round 2, 2014

Denver Department of Public Works, Wastewater Management

\$60,000 Urban Waters Small Grant from EPA in 2014. The Denver Department of Public Works, Wastewater Management, will continue and expand the Keep It Clean-Neighborhood Environmental Trios (KIC-NET) outdoor classroom model developed by environmental education nonprofit, Earth Force, in the impaired South Platte River and tributary watersheds. The program is expected to help meet pollutant source mitigation needs to protect the South Platte River and Cherry Creek watersheds while adding value to communities and schools. An additional \$25,000 was added by EPA in 2015 to extend the project to the City of Lakewood, with Lakewood providing \$20,000 in match. KIC-NET won a National Association of Counties Achievement Award in 2016.

Groundwork Denver

\$60,000 Urban Waters Small Grant from EPA in 2014. Groundwork Denver developed a Community Stewardship Network, which is expected to improve the water quality of and accessibility to the area surrounding Bear Creek. A key component of this project is the Master River Steward Job Training program, which will engage youth from Denver and Sheridan. These stewards will participate in water quality sampling and engage the broader community through education, outreach, stewardship activities, and recreation activities in the watershed. Outputs to be tracked include job training hours, water quality samples collected, households and businesses reached, volunteer hours, and stakeholders

joining a Community Stewardship Network. An additional \$25,000 was added by EPA in 2015 to purchase monitoring equipment and extend the salary for the project manager.

<http://urbanwaterslearningnetwork.org/resources/a-watershed-plan-is-born/>

EPA Urban Waters Small Grants Round 1, 2012

Barr Lake and Milton Reservoir Watershed Association

\$60,000 Urban Waters Small Grant from EPA in 2012. This award provided funding to Barr Lake and Milton Reservoir Watershed Association (BMW) to bring together the nine watershed associations in the Denver metropolitan area, along with Metropolitan State University of Denver's One World, One Water Center for Urban Water Education and Sustainability (OWOW) and Water 2012 to develop effective, unified, and comprehensive clean water messages for a coordinated public outreach campaign (including outreach to communities of color and low-income communities) that partners can implement. Partners have developed a common messaging campaign around dog waste and phosphorus fertilizer. The City of Aurora, the City and County of Denver, and the Colorado Stormwater Council will be using the messages in their public outreach activities. The grant has been completed. Work is ongoing to expand the messages state wide. Messages, logo, and a video on the grant and lessons learned can be found at <http://www.barr-milton.org/>

Earth Force Inc.

\$60,000 Urban Waters Small Grant from EPA in 2012. This award provided funding to Earth Force to work with Denver Public Works and Denver Public Schools to develop Outdoor Classrooms that reached 750 youth and resulted in stewardship of the South Platte River. The project, Keep It Clean: Neighborhood Trios (KIC-NET), included teacher training workshops and development of an educational toolkit for outdoor classrooms. The grant has been completed, however, the project is being continued and expanded in a new EPA Urban Waters Small Grant. This work was selected to receive the Colorado Alliance for Environmental Education's 2014 Environmental Education Award for Excellence in the Best New Program category. Watch the summary video: <https://www.youtube.com/watch?v=bgnx3BWWnJO>

<http://urbanwaterslearningnetwork.org/resources/watershed-plan-born/>

National Fish and Wildlife Foundation (NFWF) Grants

2016 Five Star and Urban Waters Restoration Program-Funding from Federal Agencies and NGOs

http://www.nfwf.org/fivestar/Documents/fivestar_2016grants_16-0726.pdf

http://www.nfwf.org/whoweare/mediacenter/pr/Pages/fivestar_16-0726.aspx

Urban Refuge Partnership with Denver Natural Resources at First Creek

City and County of Denver receives \$50,000 (\$1000 USFWS Refuges, \$49,000 Bank of America). The City and County of Denver will engage youth and restore 200 acres of prairie grassland habitat by managing noxious weed and seeding native grass species. Project partners will remove an eight-foot perimeter fence, build a new parking lot, and construct 6,600 feet of new trail, adding to the existing First Creek Trail. Project will revive an area of open space for the public that has been underutilized between Denver International Airport and Rocky Mountain Arsenal National Wildlife Refuge. Project partners

include Denver Parks & Recreation, Outdoor Colorado, the U.S. Fish and Wildlife Service, the Mile High Youth Corps, Environmental Learning for Kids and the Denver International Airport.

Wheat Ridge Greenbelt Restoration and Environmental Education Network

The Institute for Environmental Solutions receives \$23,320.50 (\$6060 EPA Urban Waters, \$17,260.50 USFS). Institute for Environmental Solutions and partners will restore the ecological health of the Wheat Ridge Greenbelt open area and improve stormwater runoff, erosion and water quality for Clear Creek. The project will involve 100 volunteers, provide outreach to 1,000 community members, combine two innovative in-class workshops, a tree planting day, and a 3-year stewardship program. Project partners will plant 100 native shrubs and 50 native trees in the project area. Project partners include the Wheat Ridge Parks and Recreation Department, Kullerstrand Elementary School, architectural firm Design Workshop, the Sierra Club, Wheat Ridge Girl and Boy Scout Troops and the Colorado State Forest Service.

2015 Five Star and Urban Waters Restoration Program-Funding from Federal Agencies and NGOs

http://www.nfwf.org/whoware/mediacenter/pr/Pages/five-star_pr_15-0722.aspx

http://www.nfwf.org/fivestar/Documents/2015_five-star_project-list.pdf

Denver Botanic Gardens at Chatfield Riparian Restoration

Denver Botanic Gardens will partner with Audubon Society of Denver, Jefferson County, and local officials, volunteers and landowners to restore 5.5 acres of degraded riparian habitat containing the creek channel, functional floodplain, riparian cottonwood regeneration, and forest understory along Deer Creek, which bisects the main Chatfield property. The restoration will raise the creek bed up using a series of boulder steps and will include riffle structures, composed of cobble and boulders, to create natural, stable riffle/pool sequences in the reach upstream of the boulder steps. The riffle/pool sequences dissipate energy and provide habitat for fish and macroinvertebrates. Education and outreach activities will include an interpretive trail at the restoration site to guide visitors through the restoration process, workshops in partnership with the Audubon Society of Greater Denver, and interpretation in the Gardens' Science Pyramid, which reaches an estimated 120,000 each year at the Gardens' urban location. Wildlands Restoration Volunteers will oversee the involvement of underserved youth in restoration activities.

New Stewards for Conservation at the Rocky Mountain Arsenal National Wildlife Refuge

Groundwork Denver will partner with the US Fish and Wildlife Service, Anythink Library Commerce City, Commerce City Parks and Recreation, Sand Creek Regional Greenway Partnership and the Boys and Girls Club to restore 80 acres of watershed, 3 miles of riparian area and create four acres in the South Platte River Watershed at the Rocky Mountain Arsenal National Wildlife Refuge. Project partners will engage 240 people as volunteers, 1,000 people in educational activities and 12 low-income youth employees who will serve as team leaders on volunteer days. The community engagement will focus on low-income Spanish-speaking residents of Commerce City, which is the gateway community to the Rocky Mountain Arsenal National Wildlife Refuge. The project will also develop habitat for the monarch butterfly as part of a broader effort to protect the species from extinction nationwide by planting milkweed. Partners will also restore and improve the riparian habitat near the bald eagle roosting sites.

2014 Five Star and Urban Waters Restoration Program-Funding from Federal Agencies and NGOs

<http://www.nfwf.org/whoware/mediacenter/pr/Pages/five-star-pr-14-0731.aspx>

Community Greening and Restoration Project-Environmental Learning for Kids

With \$30,000 of National Fish and Wildlife Foundation and US Fish and Wildlife Service funding, Environmental Learning for Kids will partner with Denver Parks and Recreation, Denver Public Works, and Denver Public Schools to redevelop a degraded detention pond in an underserved Denver neighborhood into a destination natural area. This project will educate the community about the sources, fate, and threats to the water their communities depend on. Project activities include removing 1 acre of invasive plants, educating 265 community members, planting 10 trees, engaging 150 volunteers, removing 30 pounds of trash, and educating 200 students.

2013 Five Star and Urban Waters Restoration Program-Funding from Federal Agencies and NGOs

<http://www.nfwf.org/whoware/mediacenter/pr/Pages/Five-Star-2014.aspx>

Youth Water Quality Monitoring Investigation-to-Restoration

Bluff Lake Nature Center received \$20,605 from the USFS and EPA through a National Fish and Wildlife Foundation 5 Star Urban Waters Grant. Bringing another \$23,771 in matching investment, Bluff Lake Nature Center partnered with Earth Force and Sand Creek Regional Greenway to monitor water quality and restore natural areas based on an initial analysis. The project partners worked with Achieve Academy of Mapleton Schools in Adams County, an underserved area.

Forestry and Source Water Protection

Hayman Burn Restoration Partnership

The USFS and National Forest Foundation (NFF) worked with many partners from 2010-2012 through NFF's Treasured Landscape Hayman Restoration Partnership to reduce erosion and sediment flows in critical headwater areas of the South Platte River watershed burned by the Hayman Fire in 2002. Over \$2 million of non-federal funds were contributed by Vail Resorts, Aurora Water, Coca-Cola, Gates Family Foundation, John and Maureen Hendricks Foundation, Anschutz Foundation, The Nature Conservancy, Lowes, Remington Outdoor Foundation, Helen K & Arthur E Johnson Foundation, Xcel Energy, and El Pomar Foundation. Other key partners included CUSP, Mile High Youth Corps, Rocky Mountain Field Institute, Volunteers for Outdoor Colorado, and Wild Connections. On-the-ground accomplishments included planting over 55,000 trees; restoring 355 acres of wetlands and riparian areas; restoring four miles of stream channels; treating 90 acres for invasive plant species; and decommissioning, relocating, or maintaining nearly 80 miles of recreation trails and roads. This work employed or engaged 1,065 youth and 2,685 total volunteers who contributed over 19,000 volunteer hours.

<https://www.nationalforests.org/who-we-are/our-impact/pike>

Rocky Mountain Watershed Protection Partnerships

The USFS Rocky Mountain Region has been working with municipal water providers and corporate partners along the Front Range of Colorado to restore and foster the resiliency of forests within key watersheds. The goals are to mitigate the effects of the pine beetle epidemic, reduce the risk of severe

impacts from wildfires, maintain water quality, and restore areas burned by past wildfires in critical watersheds on over 40,000 acres of National Forest System and private lands. For the Denver Water partnership, the Region will continue work to prepare and finalize the fifth annual collection agreement for FY2015 project implementation. This agreement is anticipated to secure \$5.5 million in additional funds from Denver Water in support of the partnership five-year operating plan, including approximately \$1.6 million that will be used for work on non-federal lands in priority watersheds in partnership with CSFS. The Region will also continue working on a project opportunity list for fiscal years 2016-2020 to inform potential renewal of the Denver Water partnership agreements in 2015 for another five years.

Source Water Planning

The Colorado Source Water Assessment and Protection (SWAP) program is designed to provide municipal water providers and public consumers with information about drinking water, as well as providing a way for water providers and community members to get involved in protecting drinking water quality. The program encourages community-based protection and preventive management strategies to ensure that all public drinking water resources are kept safe from future contamination. The Coalition for the Upper South Platte (CUSP) is serving as the facilitator for a SWAP planning project for the South Platte River watershed, which is being convened by Denver Water and funded with support from the Colorado Department of Public Health and Environment (CDPHE). EPA and USFS are participants in the process.

<http://www.uppersouthplatte.org/sourcewater.html>

Wildfire Readiness and Response Workshop – Is Your Utility Prepared?

EPA and USFS worked together with the Water Research Foundation to put together a workshop on impacts of wildfires on Water Utility Operations. EPA provided \$18,000 in funding for the workshop, which was held on April 4-5, 2013. Approximately 100 attendees came from multiple states and Canada. This meeting brought together utilities, academic researchers, regulators, NGOs and others. Key goals of the workshop included evaluating the potential for wildfire in specific source water protection areas; understanding the impacts of wildfire on water quality; identifying and characterizing strategies that are effective for preventing, mitigating, or minimizing wildfire impacts; assessing implications of land disturbance on water quality and drinking water treatability; determining the mechanisms and timeframes for watersheds to recover from wildfires; understanding challenges faced by drinking water utilities after wildfires and solutions that have been effective; improving awareness of the impacts of fire-fighting techniques on drinking source water quality; assessing strategies for managing and protecting water quality with proven restoration and management practices; and providing case studies of inter-municipal cooperation and management strategies. The workshop will result in publication of a survey of water utilities and wildfire experience, a literature review of the state of the knowledge, and a final report from the workshop with presentations and a summary of research gaps.

Green Infrastructure

Sun Valley Green Infrastructure Study

EPA provided brownfields revitalization funding of \$50,000 under a technical support contract to ICF International and Van Meter Williams and Pollack. The funding is follow up support to the South Platte River brownfields area-wide planning grant/river corridor study. A scope of work was finalized in May 2015. In order to support the goal of implementing sustainable redevelopment solutions, Denver and Denver Housing Authority have requested technical assistance from EPA to identify green stormwater management alternatives that can be incorporated into the Sun Valley Homes master plan. Maximizing the utility of green infrastructure by helping to manage on- and off-site stormwater at the Sun Valley Homes site will help to reduce contaminant flow into the South Platte River and preserve/improve water quality. The stormwater management alternatives would need to meet the local Denver Urban Drainage and Flood Control District (UDFCD) requirements, complement the overall vision for the redevelopment project and the South Platte River Greenway, and improve water quality for Weir Gulch and the South Platte River. The two primary areas of interest for the project are: 1) the Old Colfax Avenue urban center, which anchors the redevelopment and has a few historic commercial retail buildings which the new construction would emulate; and 2) the surrounding residential development. The work was completed at the end of 2015 and the report finalized in 2016.

https://www.epa.gov/sites/production/files/2016-08/documents/sunvalley_stormwateroptions_final.pdf

Green Infrastructure Technical Assistance to assist in development of Ultra-Urban GI guide

EPA provided \$50,000 in 2014 for green infrastructure technical assistance from EPA's contractor Tetra Tech to the City and County of Denver in conjunction with Urban Drainage and Flood Control District. EPA assistance supported the completion of green infrastructure practice criteria suited for ultra-urban environments and transportation projects including design elements, maintenance procedures, and schedules. Denver will be publishing a green infrastructure manual which will be incorporated by Urban Drainage and Flood Control district into an update of their Volume 3 criteria.

<https://www.denvergov.org/content/denvergov/en/wastewater-management/stormwater-quality/ultra-urban-green-infrastructure.html>

US Army Corps of Engineers Studies: Denver Ecosystem Restoration Feasibility Study

The US Army Corps of Engineers (USACE) Omaha District received \$50,000 in initial funding for a 3-year feasibility study into ecosystem restoration opportunities as well as some flood risk management on the South Platte River and its tributaries within the City and County of Denver. Federal ecosystem interest is in migratory bird habitat, wetlands, and aquatic habitat. The study is estimated to cost \$3 million and will be cost-shared between the USACE and Denver. A planning charette was held on September 23-26, 2013 with Denver and other partners. The City of Denver and USACE Omaha District signed a Feasibility Cost Sharing Agreement on May 20, 2014 initiating the study. The ecosystem evaluation will specifically assess restoration potential of riparian habitat, wetlands, and aquatic habitat. Detailed study activities were initiated in the fall of 2014. Three public meetings were held in May 2015. Five public meetings were held in 2016. The project is sponsored by the United States Army Corps of Engineers (USACE),

Urban Drainage and Flood Control District (UDFCD), City and County of Denver (CCD), and the Colorado Water Conservation Board (CWCB).

http://www.denverpost.com/denver/ci_27973627/denver-waterways-weir-gulch-harvard-gulch-s-platte-get-attention?source=infinite

<https://www.denvergov.org/content/denvergov/en/denver-waterways.html>

Green Infrastructure Design Assistance for 38th and Blake

EPA provided \$50,000 in a technical assistance contract to Tetra Tech, from EPA's green infrastructure program, to develop innovative green infrastructure options for a new affordable housing development at 38th and Blake – adjacent to the Blake and 38th light-rail station in downtown Denver. This project was done for the Urban Land Conservancy. The project was announced in July 2012, the work was incorporated into a design charette in October 2012 and completed in September 2013.

https://www.epa.gov/sites/production/files/2015-10/documents/denver_blakestreet_concept_design.pdf

River North Green Infrastructure Design

Urban Drainage and Flood Control District was awarded \$12,500 in hometown funding from EPA in 2012 which they matched with an additional \$12,500. Green infrastructure design options were drafted with public input for the River North area of the South Platte River. Work was completed in 2013. This project complemented the South Platte Area-Wide Plan.

River Vision Coordination Committee/ Green Infrastructure Design for Sun Valley and Johnson-Habitat Park: EPA worked with The Greenway Foundation, City and County of Denver, and other stakeholders to locate funding and implement the top five River Vision Implementation Plan Projects. These projects include: Grant Frontier/Overland Regional Park (Southern Platte Valley), Vanderbilt and Johnson-Habitat Parks, Sun Valley Riverfront Park, Confluence Park-Shoemaker Plaza, and Art Bridge. These projects will improve river access and water quality. EPA provided \$262,500 for contract riparian green infrastructure design work for the South Platte River at Sun Valley/Weir Gulch and Johnson-Habitat Park through a contract with DHM on behalf of the City and County of Denver. This funding was used as match for a Great Outdoors Colorado grant. \$25 million has been raised so far. Construction commenced in 2014. The funding was used for green infrastructure design for Sun Valley near Weir Gulch and the confluence with the South Platte River. Sun Valley is a Denver Housing Authority affordable housing complex. Funding was also used for a riverfront park redesign at Johnson-Habitat Park along the South Platte River. The green infrastructure design will improve habitat and water quality in a premier regional park that will allow overnight urban camping. The design includes vegetative bioswales, water quality basins, and wetland vegetation to filter stormwater runoff from roads and parking areas. \$5.25 million will be spent on construction of the park. Johnson Habitat Park won a Colorado Chapter American Public Works Project Award in 2015 for Parks and Trails in a Large Community.

http://www.denverpost.com/environment/ci_20438216/denvers-south-platte-projects-win-350-000-epa?IADID=Search-www.denverpost.com-www.denverpost.com

Westerly Creek Green Infrastructure Stream Restoration Design

EPA Region 8, utilizing \$30,000 in Office of Brownfields and Land Revitalization (OBLR) funds and \$20,000 in Environmental Justice funds in a contract with SRA and subcontracts with Wenk and Associates and Vision Land, created a stream restoration design for an already planned park in a mostly immigrant community. Region 8 partnered with Trust for Public Land, the City and County of Denver, Urban Drainage and Flood Control District, and Earth Force. The design used green infrastructure approaches to improve river access, safety, and water quality and had 2 public meetings with translators. Earth Force created a youth involvement piece for the community meetings. In 2013 Denver applied for Natural Resource Damage Claim funds from the Lowry Landfill for the implementation of the EPA funded design and was successful in receiving \$500,000 with \$500,000 match. Additional design work began in fall 2014, 2 public meetings were held in 2015, additional NRDA funding was obtained in 2015 and construction began in November 2016. This effort built upon a successful effort to create New Freedom Park.

<https://www.tpl.org/our-work/parks-for-people/creative-placemaking/new-freedom-park>

<http://www.colorincolorado.org/article/new-freedom-park-and-immigrant-families-who-designed-it>

<http://www.westword.com/news/photos-grand-opening-of-east-13th-avenue-and-xenia-street-park-and-gardens-5860584>

<http://www.goco.org/projects/new-freedom-park>

<https://www.epa.gov/urbanwaterspartners/westerly-creek-environmental-justice-south-platte-watershed>

Brownfields Grants and Support

Targeted Brownfields Assessment for Sun Valley Ecodistrict

EPA's contractor started a multiple property targeted brownfields assessment for the Sun Valley Ecodistrict in December 2016. Phase I's and II's will be performed on multiple properties to support the redevelopment of the site that will include affordable housing and transit-oriented development in an Ecodistrict.

Colorado Brownfields Revolving Loan Fund

The Cities of Commerce City, Englewood, Lakewood, Loveland, and Denver, the Colorado Housing and Finance Authority (CHFA) and the Colorado Department of Public Health and Environment (CDPHE) agreed to cooperate and to create the Colorado Brownfields Revolving Loan Fund with funding from EPA. A number of loans have been issued that benefit the cleanup of properties near the South Platte River and its tributaries.

On December 7, 2015, CPDHE used its Brownfields Revolving Loan Fund (RLF) to close on a \$567,000 loan to clean the Freight Property in the River North (RiNo) district near downtown Denver. The loan will be used to clean asbestos and landfill debris from former commercial operations. Once complete, Zeppelin Development plans to construct Freight Residences, a new 48-unit multi-family rental project.

This development is the eighth phase of the overall TAXI development, which EPA supported in 2005 with a targeted brownfields assessment for Phase II.

In November 2015, CDPHE used its Brownfields RLF to provide a \$260,000 loan increase to the Ruby Hill development in southwest Denver, bringing the total cleanup loan to \$735,000. The property was used a dump-site for many years and extensive excavation and cleanup has been needed. After cleanup, the developer will build a 114-unit housing redevelopment that will cater to disabled veterans.

CDPHE's \$500,422 brownfields loan for the Union Station cleanup was paid off in 2015, allowing the state to revolve the funds for future cleanup projects.

South Platte Brownfields Area-Wide Planning Grant-River Corridor Planning

Denver and the South Platte River watershed were awarded a \$175,000 brownfields area-wide planning grant in November 2010 as one of 23 national pilots, and \$75,000 to study more sites in 2012 to create a river corridor plan. A plan for redevelopment of five catalytic potential brownfields sites along the South Platte River in Denver was created with significant community input facilitated by The Greenway Foundation. Green infrastructure and stormwater planning were part of the plan that was completed in 2013. There has been recent development interest as a result of the plan. The City and County of Denver applied for an EPA Brownfields assessment grant in January 2014 that wasn't successful as follow-up to the plan. They applied again in December 2014 and were successful with a grant awarded for the South Platte RiverPlace Initiative. One of the catalytic sites is under construction in 2015.

www.denvergov.org/southplatte

Steam on the Platte

A Targeted Brownfields Assessment for 14th St and Zuni was performed by EPA's contractors. The 3.2 acre property is being redeveloped as a \$50 million project called Steam on the Platte.

http://www.denverpost.com/business/ci_28530315/mixed-use-development-planned-mile-high-neighborhood

South Platte RiverPlace Initiative, \$400K Brownfields Assessment grant

The City and County of Denver received a new EPA Brownfields grant in August 2015 to conduct environmental assessments along the South Platte River corridor and create new redevelopment opportunities that connect with projects underway throughout the area. Specifically, the City will conduct critical assessments at approximately 12 brownfield sites as part of the South Platte RiverPlace Initiative. These assessments will complement efforts to revitalize properties in environmental justice communities near the National Western Stock Show Complex in north Denver and at properties near the Denver Housing Authority's mixed use, transit-oriented development project in the Sun Valley neighborhood. Both areas have a history of intensive industrial and commercial activity—including rail facilities, power plants, industrial cleaners, gas stations and auto service facilities, and manufacturing plants—and contain vacant buildings in need of reinvestment, repair or demolition. The City's efforts to redevelop these areas include plans to create new housing, community jobs and public access to the South Platte River along with green infrastructure.

<http://yosemite.epa.gov/opa/admpress.nsf/20ed1dfa1751192c8525735900400c30/a5849a7d20556f5e85257e54005ece49!OpenDocument>

<https://www.denvergov.org/content/denvergov/en/brownfield-redevelopment/south-platte-riverplace-initiative.html>

Targeted Brownfields Assessment for Westerly Creek at Stapleton

Using EPA START contractor UOS, Region 8 conducted a targeted brownfields assessment of portions of Westerly Creek at Stapleton on behalf of Sand Creek Regional Greenway and Park Creek Metro District. The Region used visual surveys and soil borings to assess the site for asbestos. Data will be used to determine that no additional cleanup was needed before a portion of the creek is realigned and a regional park is constructed. Cost was approximately \$80,000.

Aurora Brownfields Area-Wide Planning Grant for Westerly Creek Village

The city of Aurora received an \$115,000 brownfields area-wide planning grant in 2010 for work encompassing part of Westerly Creek. Three public meetings were held and the plan is complete. Aurora received additional funding from FEMA for bridge replacement at Montview Blvd. The bridge reconstruction will necessitate improvements to a park, Westerly Creek, and the Westerly Greenway. Work was completed in 2012 on the plan.

<https://www.auroragov.org/cs/groups/public/documents/document/014383.pdf>

Dry Gulch Green Infrastructure Channel Restoration Design

EPA Region 8, utilizing \$30,000 in Office of Brownfields and Land Revitalization (OBLR), funded a contract with SRA International and subcontracts with HDR Engineering to create a green infrastructure channel restoration design for Dry Gulch on behalf of MetroWest Housing Solutions in Lakewood, CO. The Scope of Work was finalized in February 2014. Dry Gulch flows behind a new affordable housing complex and HeadStart near a new light rail station. Brownfield impacts and steep inclines limit accessibility for the gulch. Designs are compatible with a future greenway along Dry Gulch. Urban Drainage and Flood Control District is a partner on this project. The design was completed in March 2015.

Other Funding and Support

HUD Choice Neighborhood Grant for Denver Sun Valley

The Denver Housing Authority will receive a \$30 million grant from the U.S. Department of Housing and Urban Development to improve housing and increase business opportunities and job possibilities in Sun Valley. The decision was announced December 7, 2016.

<http://www.denverpost.com/2016/12/07/denver-sun-valley-neighborhood-hud-grant/>

South Platte River Environmental Education

\$90,000 EPA Environmental Education Grant in 2016 to The Greenway Foundation for the South Platte River Environmental Education Program.

2015 EPA Environmental Justice Small Grants

Groundwork Denver- Solutions for Climate Resiliency in North Denver EJ Communities.

Groundwork Denver will work to address climate resiliency specific to public health impacts associated with extreme heat events in North Denver and Commerce City. Groundwork Denver plans to build community capacity to address these issues and provide "co-benefits" for residents. The project will help reduce public health impacts associated with climate change and build community capacity to address climate change issues. Groundwork Denver will work collaboratively with partners to address the issue, including Denver Environmental Health (DEH), community residents, and the Adams County Sustainability Officer. At least 112 residents will be engaged in data collection, strategy development, piloting and action planning for the project. DEH and Adams County will help obtain data for a vulnerability analysis, review and develop strategies to address vulnerabilities and identify ways to integrate strategies into local planning efforts. This project will develop an action plan with residents to address the public health impacts in low-income Denver communities resulting from extreme heat events. Extreme heat events can contribute to a range of health problems and aggravate pre-existing conditions. Health impacts of extreme heat events are known to disproportionately impact vulnerable populations such as the elderly, infants and children, and people with chronic medical conditions.

Environmental Learning for Kids (ELK)- ELK Youth Naturally-Community Water Connections (ELKYN-CWC)

Environmental Learning for Kids seeks to address a lack of knowledge of water quality and environmental justice issues, a shortage of leadership capacity and an absence of community action on water quality and safe drinking water in Montbello, Green Valley Ranch, and Commerce City. This ELK youth development project seeks to increase the interest in community stewardship, increase academic and career aspirations and increase the science knowledge base and interest and devotion to environmental issues amongst youth. They will address environmental and public health issues by providing hands-on, outdoor learning labs for youths to explore all aspects of water pollution and contamination and local environmental and public health issues. ELK connects local youth with community partners to strengthen their work. ELK partners include Colorado Parks and Wildlife, US Forest Service, Denver Parks and Recreation, National Park Service and Denver Water. These organizations will share roles of providing natural resource and science professionals to assist in leading projects and trips.

US Army Corps of Engineers Studies

Chatfield Reservoir

The Chatfield Feasibility Report and Environmental Impact Statement was approved and the Record of Decision (ROD) signed by Ms. Jo-Ellen Darcy, Assistant Secretary of the Army for Civil Works, on May 29, 2014. The Chatfield Reservoir Storage Reallocation Study addresses increasing water demand in the Denver Metro area, which exceeds available supplies, by increasing the availability of water, providing an additional average year yield of up to approximately 8,539 acre-feet of municipal and industrial (M&I) water. This increase is projected to be sustainable over the 50-year period of analysis in the greater Denver Metro area so that a larger proportion of existing and future water needs can be met. The primary objective of the storage reallocation is to help enable water providers to supply water to local users, mainly for municipal, industrial, and agricultural needs, in response to rapidly increasing demand.

Bear Creek Reservoir

The USACE Omaha District received \$50,000 in Fiscal Year 2014 to initiate a reconnaissance study to evaluate the potential for water supply reallocation at Bear Creek Reservoir. The purpose of a reconnaissance study is to assess at a conceptual level the initial Federal and non-Federal interest in proceeding to a more detailed evaluation.

Youth Urban Water Collaborative Day

The Greenway Foundation and the SPRUWP education and engagement workgroup held a Youth Urban Water Collaborative Day March 31, 2014.

HUD Choice Neighborhood Planning Grant

The U.S. Department of Housing and Urban Development announced on November 22, 2013 that the Denver Housing Authority received a \$500,000 Choice Neighborhood Planning Grant. The money will allow the housing authority to draft a long-range plan to improve housing and revitalize the neighborhood. The Sun Valley project was one of nine selected from 52 applicants nationwide. The Sun Valley proposal was picked because of the work already underway in the neighborhood, including the Decatur-Federal Station Area Plan released in 2012. The grant gives the housing authority 16 months to complete a comprehensive plan. The grant was awarded and DHA has selected a contractor to start the work. http://www.denverpost.com/breakingnews/ci_24583139/500-000-grant-will-help-denver-polish-sun#ixzz2uwkGqzCy

Get Outdoors Colorado

In celebration of Earth Day 2013, the USFS and Get Outdoors Colorado launched a new website called www.GetOutdoorsColorado.org to give people thousands of opportunities to explore and experience Colorado. The new website is an online springboard to all outdoor activities and events in Colorado. The website is free for organizations sharing their information and events, and for the public to search activities and to create a customized membership for outdoor interests. The interactive website is an outcome of a years' worth of collaboration between USFS, Colorado Parks and Wildlife, GP RED, Colorado Alliance for Environmental Education, Colorado Kids Outdoors, The Denver Botanic Gardens, The Colorado Parks and Recreation Association, the U.S. Department of Health and Human Services, and many others. The website now has more than 160 partners posting activities in 25 different categories throughout 20 counties across the state. The website is also fully integrated on social media platforms (Facebook, Twitter, Instagram, and Pinterest) to allow for greater connectivity statewide.

Natural Resource Damage Settlement Funding from Lowry Landfill

The SPRUWP was used in 2013 to facilitate a funding announcement and assistance for Lowry Landfill Natural Resource Damages Settlement funding from the State of Colorado. Three projects were funded: Bear Creek water quality \$114,500, Westerly Creek Greenway \$500,000 and \$500,000 match, and Bluff Lake Nature Center \$501,481.14.

Survey and Assessment of Critical Urban Wetlands in Denver and Mountain Parks

EPA provided \$237,155 in wetlands grant funding with \$104,759 in match to the Colorado Natural Heritage Program Wetland Program of Colorado State University beginning in 2012. The funding was

provided to identify and assess the range and condition of wetlands in the City and County of Denver and Mountain Parks with high biodiversity significance, with an emphasis on identifying highly functioning urban wetlands. New National Wetlands Inventory maps were generated as well as a mobile app. The project was completed in 2015.

<http://www.cnhp.colostate.edu/download/documents/2015/Denver%20County%20Report%20FINAL%2006252015%20with%20Appendices.pdf>

http://www.cnhp.colostate.edu/download/documents/2015/Denver_Brochure_Final_Draft.pdf

http://www.cnhp.colostate.edu/download/documents/2015/Colorado_Wetland_App_Users_Guide.pdf

EPA Emergency Response

EPA's emergency response program responded to a seep of petroleum products into Sand Creek near its confluence with the South Platte River beginning in November 2011. EPA continues to provide technical support to CDPHE and the responsible party.

South Platte River Connections

NPS RTCA helped the City and County of Denver and the Greenway Foundation to identify and overcome barriers that prevent residents of neighborhoods adjacent to the South Platte River in Denver from accessing the South Platte River Greenway and its many amenities and benefits. Barriers to accessing natural resources and recreational amenities in urban areas can be complex and include things like perceptions about lack of safety, inadequate physical connections, and lack of relevant programming for communities. To ensure that residents of adjacent neighborhoods are able to access and engage in the physical and psychological benefits that come with connection to natural resources and active lifestyles, RTCA facilitated a coordinated effort with the community partners to better understand what might get in the way of access to the Greenway and then to collectively strategize on how to overcome these barriers to access. The planning effort initially focused on the river corridor south of West Bayaud Avenue to the Denver City limits.

Rocky Mountain Greenway Trails

On Monday, February 18, 2013, Interior Secretary Ken Salazar, Transportation Secretary Ray LaHood, Colorado Governor John Hickenlooper, and Kate Kramer from Sand Creek Regional Greenway made an important announcement on the Rocky Mountain Greenway and to celebrate the expansion of the Rocky Flats National Wildlife Refuge. The US Department of Transportation awarded \$1.735 million for seven miles of trails along the Rocky Mountain Greenway. The Greenway will connect the Rocky Mountain Arsenal and Rocky Flats National Wildlife Refuges with the Two Ponds Refuge and Rocky Mountain National Park. The Rocky Mountain Greenway is part of Department of Interior's America's Great Outdoors Initiative and also the Urban Waters Federal Partnership.

Urban Waters Partnership Coordination (January 2013-June 2016)

Hiring a coordinator was identified as one of top three priorities at the first full SPRUWP meeting. The following is a summary of investments in and by the SPRUWP Coordinator or supporting coordination of the partnership more broadly.

October 2016. City of Denver staff tasked with expanding partnerships for the National Western Center approached founding members of the Denver Urban Field Station with a proposal to locate offices at and engage in planning of the Western Center/CSU Water Center. This work is closely aligned with that of the SPRUWP, and both Stacey Eriksen (EPA) and Dana Coelho (USFS) were part of the dialog.

July 2016. EPA began supporting a contractor to facilitate quarterly SPRUWP meetings and distribute monthly email updates while longer-term plans for a Coordinator are being explored.

June 2016. Devon Buckels' contract as SPRUWP Coordinator ended. She continues to lead The Water Connection, the water resources and policy initiative of The Greenway Foundation.

December 2015. Devon Buckels participated in and led a breakout session on water at the Mayor's Sustainability Summit, a day-long gathering organized by the Office of Sustainability. New commitments were announced to further the city's goal of making the South Platte fishable and swimmable by 2020.

July 2015. The Greenway Foundation became the SPRUWP Coordinator host organization through a one-year contract with CSFS and funding from CSFS, USFS, and EPA.

January 2015. Dialog began regarding redevelopment of the [National Western Stock Show and creation of a CSU Water Center](#). The SPRUWP Coordinator worked with the City and County of Denver, CSU, and other partners on a new master plan for the National Western Center site. SPRUWP members continue to stay involved in the planning process.

May 2015. CSFS was awarded a USFS State and Private Forestry [Landscape Scale Restoration competitive grant](#) including funds to support the Natural Capital Project and SPRUWP coordination. The Coordinator and Leadership Team collaborated on the grant application.

February 2015. The Coordinator and Leadership Team submitted a grant application to the [Bureau of Reclamation's \(BOR\) Cooperative Watershed Management Program](#) to support continued capacity-building. Though not funded, the Leadership Team received feedback useful to future proposals.

2014. EPA and USFS provided additional funding for salary and space to extend Coordinator support to 3.5 years. USFS also provided funding for short-term Leadership Team meeting facilitation from the Keystone Center. EPA provided funding for meeting facilitation through CDR and Associates.

2013. The Coordinator and Leadership Team submitted a request for Centers for Disease Control (CDC) Foundation funding for water quality and public health efforts. Though not funded, further work with local CDC partners is pointing toward other potential sources of funding.

2013. The Coordinator facilitated writing of the SPRUWP mission statement, goals, workgroups, Leadership Team and Advisory Committee charters, marketing brochure (with EPA contractor support and funding), and design of a logo (with assistance from PJ Hasselbach). The original workgroups were: geomapping, water quality, systems mapping (work complete), education and engagement, funding and headwaters/urban connections.

January 2013. The USFS provided funding to CSFS to fund a Coordinator and Devon Buckels was hired into a two-year term position to fulfil this role. EPA provided funding for office space in the Region 8 headquarters.