



Creeks and Communities:

A Continuing Strategy for Accelerating Cooperative Riparian Restoration and Management

Creeks and Communities Network

Annual Accomplishments FY 2014



by

THE NATIONAL RIPARIAN SERVICE TEAM

JANUARY 2014

Creeks and Communities Network

The interagency Creeks and Communities Strategy is a joint effort of the Bureau of Land Management (BLM), USDA Forest Service (FS), in cooperation with Natural Resources Conservation Service (NRCS). The strategy is implemented by the Creeks and Communities Network which includes the National Riparian Service Team (NRST), State Riparian Teams and Agency Coordinators, with personnel from federal and state agencies, universities, industry and conservation interests, and the private sector.

Operating Philosophy

- Increase the capacity of the Creeks and Communities Network to effectively implement the Creeks and Communities Strategy; to help individuals, communities, and institutions understand riparian-wetland function; and to confront and resolve complex and contentious issues regarding riparian-wetland resources.
- Bring communities of people together to create a common vision for productive and sustainable riparian-wetland conditions, and assist in the development of collaborative management and monitoring plans to achieve this vision.
- Incorporate fundamental concepts from both the biophysical and social dimensions of riparian-wetland management to achieve positive results for resources and communities.
- Ensure program effectiveness through evaluation and adaptation.

Creeks and Communities Program Goal and Objectives

Goal: To develop a critical mass of people who interact with and manage riparian-wetland resources based on shared knowledge of sustainable and productive systems.

Objective: Provide individuals and groups of diverse interests and backgrounds with the tools to develop a shared understanding of riparian-wetland function, and assist in developing solutions to management challenges stemming from issues in both the resource and human dimensions.

Objective: Create awareness and understanding of, and interest in, this strategy and invite participation across multiple scales.

Objective: Ensure consistency and effectiveness through activities focusing on program management and accountability.

National Riparian Service Team

- **Steve Smith**, Team Leader, Rangeland/Riparian Specialist, BLM
- **Carol Connolly**, Public Affairs Specialist, Budget & Contracting, BLM
- **Mark Gonzalez**, Ph.D., Ecologist/Soil Scientist, BLM
- **Janice Staats**, Hydrologist, Forest Service (retired 2014)
- **Laura Van Riper**, Ph.D., Social Scientist, BLM
- **Sandy Wyman**, Rangeland Management Specialist, BLM
- **Adjunct Team Members** with specialized skills in Ecology, Fisheries, Wildlife, Hydrology, Forestry, Rangelands, and Conflict Management

Agency Program Coordinators

- **Carol Spurrier, Steve Smith, (actings) BLM, Washington, DC**
- **BLM State Office Riparian Program Leads**
 - AK, **Matt Varner**
 - AZ, **Aaron Wilkerson**
 - CA, **Karl Stein (retired 2014)/Christina Lund**
 - CO, **Jay Thompson**
 - ID, **Bryce Bohn**
 - MT, **Mike Philbin**
 - NM, **John Sherman**
 - NV, **Sarah Peterson**
 - OR/WA, **Al Doelker/Dale Stewart**
 - UT, **Justin Jimenez**
 - WY, **Dennis Saville/Mark Goertel**
- **Barbara Schrader (acting), Alix Cleveland, and Rick Swanson, FS, Washington, DC**
- **Forest Service Regional Office Riparian Program Managers**
 - Northern Region, **Bruce Sims (retired 2014)/Mary Manning**
 - Rocky Mountain Region, **Bonnie Houghton**
 - Southwest Region, **Judith Dyess/Roy Jemison**
 - Intermountain Region, **Terry Padilla/Greg Bevenger (retired 2014)**
 - Pacific Southwest Region, **Anne Yost (retired 2014)**
 - Pacific Northwest Region, **Tom Hilken**
 - Southern Region, **Suzanne Krieger/Michael Crump**
 - Eastern Region, **Ted Geier**
 - Alaska Region, **John Lane/Barbara Schrader**
- **Sid Brantly, NRCS, Washington, DC; Bruce Newton (retired 2014), Shaun McKinney, and Gene Fults, NRCS, West National Technology Support Center**
- **NRCS State Riparian Coordinators**
 - AK, **Calvin Steele**
 - AZ, **Byron Lambeth/Stu Tuttle**
 - CA, **Steve Hill**
 - CO, **Eugene Backhaus**
 - ID, **Brendan Brazee**
 - KS, **Jon Ungerer**
 - MT, **Pete Husby (retired 2014)**
 - ND, **Craig Stange**
 - NM, **John Tunberg**
 - NV, **Patti Novak-Echenique**
 - OR, **Bob Gillaspay**
 - SD, **Stanley Boltz/Jerry Jasmer**
 - TX, **Susan Baggett (retired 2014)/Russ Castro**
 - UT, **Shane Green**
 - WA, **Tim Dring**
 - WY, **Brian Jensen**

State and Provincial Team Coordinators

- Arizona **Vacant**
- British Columbia **Cori Barraclough & Patrick Lucey**, Aqua-Tex Scientific Consulting Ltd.
- California **Vacant**
- Colorado **Jay Thompson**, BLM Colorado State Office
- Idaho **Bryce Bohn**, BLM Idaho State Office
- Montana **Mike Philbin**, BLM Montana State Office
- New Mexico **John Sherman**, BLM New Mexico State Office
- Nevada **Sherm Swanson**, University of Nevada Cooperative Extension, Reno
- Oregon **Jim Eisner**, BLM Prineville Field Office
- Texas **Russell Castro**, NRCS Texas State Office
- Utah **Justin Jimenez**, BLM Utah State Office, and **Mark Petersen**, Consultant
- Washington State **Tip Hudson**, Washington State University Extension, Ellensburg, WA
- Wyoming **Dennis Saville**, BLM Wyoming State Office



CONSULTING AND ADVISORY SERVICES

Place-Based Assistance – National Riparian Service Team

The Creeks and Communities Strategy represents an innovative and adaptive approach aimed at building capacity of land managers and stakeholders to address complex and often contentious issues inherent in managing riparian resources. Place-based assistance can include multiple phases involving training and problem solving efforts designed to address both the technical and social dimensions of riparian related issues.

Place-Based Assistance Projects

- **Klamath National Forest, Salmon/Scott River Ranger District, CA**
In July 2014, the NRST completed a riparian workshop in Fort Jones, CA with the Forest Service (FS), their regulatory partners and grazing permittees. A primary intent was to build relationships and a common understanding among the parties. Agenda topics included riparian function and assessment of current condition, grazing management strategies, monitoring protocols and opportunities for cooperative monitoring, and working with interdisciplinary teams. This was a follow-up activity to a (1) June 2013 situation assessment, and (2) September 2013 workshop when the NRST coached the FS and their regulatory partners in range and riparian related interdisciplinary project work and communication in relation to livestock grazing allotment planning and management in wilderness areas.
- **Upper Klamath Basin Comprehensive Agreement, OR**
NRST has been identified to provide professional and landowner/community training and outreach; coaching and quality control; and review and guidance related to riparian assessment, management, and monitoring as requested in this historic agreement. Initial planning and coordination was completed in preparation for initiating a number of these activities in FY 2015.
- **Central Idaho Rangelands Network (CIRN) & the Salmon-Challis National Forest, ID**
In January 2014, the NRST received a request for service from members of CIRN and their Federal and non-profit partners. The request was for NRST assistance in leveraging conservation efforts across public and private land, while also helping to increase capacity for more efficient and effective rangeland management and planning with their Federal partners. A situation assessment was conducted in April 2014 to gain a more in-depth understanding of both the issues and opportunities involved.
- **Starkey Experimental Forest and Range, Wallowa-Whitman National Forest and Pacific Northwest Research Station, OR**
The NRST received a request to evaluate a riparian restoration project on Meadow Creek within the Starkey Experimental Forest and Range. A multi-agency field tour was held in September 2014. The NRST is drafting a report of findings with recommendations for an integrated riparian management process and suggested monitoring methods to determine effectiveness of restoration actions as a component of multi-level research work on the station. A follow-up Multiple Indicator Monitoring (MM) of Stream Channels and Streamside Vegetation training course will be scheduled in FY 2015.
- **BLM Wild Horse and Burro Management**
In response to the recent National Academy of Science's Report and recommendations regarding Wild Horse and Burro management within the BLM, the NRST developed a proposal for applying their approach to collaborative problem solving to these issues across the west. The

team's approach has not only demonstrated success; it is replicable and transferable to issues beyond riparian. This proposal also supports the BLM's Collaborative Action and Dispute Resolution (CADR) program's efforts to increase the use of CADR principles and practices throughout the BLM. The Wild Horse and Burro program has partnered with NRST to implement a collaborative pilot in 2015.

National Riparian Service Team Projects/Project Support

- **Revision of TR 1737-15 Riparian Area Management - A User Guide to Assessing PFC and the Supporting Science for Lotic Areas**
This revision is led by the BLM National Operations Center (NOC). A core planning and writing team was established in 2011 that includes several members of the NRST and the Creeks and Communities Network. A widespread interagency technical review and a separate usability review were completed in 2012 and 2013. The draft revision was completed in 2014 with publication planned for FY 2015.
- **TR-1737-16 (TR 1737-16 v.2) Riparian Area Management: Proper Functioning Condition (PFC) Assessment for Lentic Areas**
The BLM NOC and the NRST initiated revision of this publication. Several NRST members will co-author this technical reference.
- **Community Proper Functioning Condition Riparian Booklet**
The Creeks and Communities Network has a long-standing need for a non-technical counterpart to the riparian PFC technical references. This booklet will be used in conjunction with community workshops on riparian function to help public, stakeholders, and others with a non-technical background to understand important riparian functions. A draft has been initiated with publication scheduled for 2015.
- **Riparian Area Management: Monitoring Lentic Areas**
The BLM NOC and the NRST initiated development of this protocol. A field meeting was held to examine the scope and content of this effort. Several NRST members are assisting with this project.
- **SRM Symposium Panel/Special Issue of Rangelands**
The NRST contributed to and co-edited a special issue of Rangelands (December 2013) devoted to a 2013 SRM symposium: "*Women as Change Agents in the World's Rangelands.*"
- **Society for Ecological Restoration (SER) Symposium**
The NRST completed planning for a half-day symposium for the October 2014 SER Regional Conference (FY 2015).
- **Creeks & Communities Virtual Meetings**
NRST led and hosted three virtual meetings with the C&C Network. Two meetings were held to discuss the new NRST Strategic Plan and how it influences C & C activities. The third was a virtual presentation on mapping variable width riparian areas using free open source geospatial data and GIS capabilities by Sinan Abood, Forest Service Spatial Analyst.
- **BLM/DOI Collaborative Action and Dispute Resolution (CADR)**
The NRST served on the oversight committee for development of the BLM-CADR strategic plan, serves as a CADR coordinator, and serves on the DOI-CADR facilitation roster. NRST also served on the core team responsible for working with BLM leadership to finalize the strategic plan document.

CADR requested NRST assistance with efforts to develop a series of short training videos highlighting the impact of conflict transformation. CADR selected the Klamath Basin as the focus for this effort. This work included project development, planning, and coordination.

- **Sagebrush Ecosystem Council and Landowner Collaborative, NV**

As a member of the DOI-CADR roster, the NRST co-led a consensus building workshop for the newly formed Sagebrush Ecosystem Council - a group of diverse representatives appointed by the Nevada Governor as part of the State's overall strategy to address concerns regarding the Greater sage grouse and focus on the health and vibrancy of this important ecosystem.

Central to NV's Sagebrush Strategy is the reliance on local, landowner-led, collaborative efforts for on-the-ground implementation. The Stewardship Alliance of Northeast Elko County (SANE), a newly formed landowner-led collaborative, has also been working with the NRST to develop activities designed to build collaborative capacity within their group and across the state.

- **Rural Voices for Conservation Coalition**

The NRST provides input to the Working Lands Group focusing on policy to facilitate sustainable rangelands, ranching, and public lands grazing. Activities include conference call participation and document review.

- **Support to BLM Riparian Program**

NRST team leader served as acting BLM riparian program lead for 6 months in 2014.

- **Society for Range Management (SRM) Symposium**

NRST assisted with the development and moderated an Ecological Site Descriptions (ESD's) Workshop: Unifying Concepts for Riparian ESD's at the SRM Annual Meeting in Orlando, FL.

- **SRM Annual Meeting**

The NRST provided materials for FS and BLM booths and provided communication, information and assistance with booth material distribution.

- **Riparian Grasses Field Guide**

The NRST and a University of Wyoming Professor Emeritus are co-authoring a Riparian Grasses Field Guide. This work entails collection, photography, taxonomy, and ecological descriptions of species for the western United States. Publishing is scheduled for 2015.

- **BLM Aquatic Core Indicator Development Working Group**

The NRST is serving on the core development working group responsible for providing ongoing and extensive input for developing a National Aquatic Monitoring Strategy (NAMS). This project is part of BLM's Assessment, Inventory, and Monitoring (AIM) initiative.

- **Escalante River Riparian Grazing Workshop, UT**

The NRST provided a riparian grazing workshop in cooperation with the Utah Riparian Team, BLM Utah State Office, Kanab Field Office and the Escalante River Restoration Partnership. This workshop was a follow up session from a riparian restoration workshop held in 2012 and was requested as part of ongoing Grand Staircase Escalante grazing management planning.

- **Owyhee Initiative Science Guides, ID**

The NRST co-authored a Riparian Use Extension Bulletin (in review) as part of a series of educational reference bulletins designed to summarize scientific information relevant to land management in the Great Basin for use in decision making and evaluation. This is in partnership

with University of Idaho and University of Nevada at Reno. The article will be printed in the Journal of Rangeland Applications.

- **Oregon Dept. of Agriculture/Oregon Cattlemen’s Association Water Quality Coordination, OR**
The NRST is participating in and contributing to regional meetings and workshops addressing water quality standards and best management practices for livestock grazing. The NRST serves as a technical reviewer on proposed assessment tools for measuring progress in small watersheds and reviewed the development of surrogate monitoring parameters for water quality using streamside vegetation.
- **Creeks and Communities Agency Coordinators Desk Guide**
The completed desk guide is designed to provide new Creeks and Communities coordinators with an overview of the strategy and their expected roles and responsibilities.
- **Grazing and Riparian Monitoring Input and Coaching, Prineville District Office, OR**
The NRST provided riparian grazing management technical expertise and information in support of NEPA for permit reissuance. The NRST also provided field coaching of riparian monitoring (MIM) techniques.
- **Riparian Complex Ecological Site Descriptions (ESDs) Development**
The NRST serves on an interagency (NRCS, BLM, FS, and Extension) group for the development of unity and site concepts of riparian complex ESDs. This work included field testing of proposed concepts.
- **Riparian Electronic Bookcase**
Continued efforts to collect hard copies of technical riparian-wetland literature and related documents and to scan and/or acquire electronically for inclusion in a riparian electronic bookcase.
- **BLM Watershed Assessment Handbook**
The NRST is contributing to a Watershed Assessment Handbook that provides guidance on landscape-scale assessment programs designed to provide condition and trend information, triage and prioritize restoration projects, integrate management across resource areas, and outline a consistent approach to watershed-scale assessment projects.
- **BLM Program Coordination/Integration**
The NRST is contributing to efforts aimed at establishing roles and priorities for integrating programs that address water, riparian-wetland, aquatic resources, and collaboration.
- **Northwest Interagency Coordination Center Assistance**
The NRST provided management and staffing to the Regional Fire Management Media Desk.

Review and Advice – National Riparian Service Team

NRST provided detailed advice and/or review comments for the following projects:

- Interpreting Indicators of Rangeland Health, v.5 TR-1734-6.
- Forest Service National Riparian Vegetation Monitoring Core Protocol.
- NRCS Draft Riparian Complex ESDs for Lotic Riparian Complex Guidance.
- Highway 75 Proposal, Big Wood River, Idaho.
- Management of Riparian Areas, Texas River Systems Institute, Texas.

- BLM Draft Water Quality Management Manual.
- Jones Canyon Fish Passage Project, BLM Prineville Field Office, Oregon.
- Environmental Protection Agency Research Proposal Review - Development of Leading Indicators of Ecosystem Function for BMP Effectiveness, Water Quality Standards, Biological Criteria, and Total Maximum Daily Load's (TMDL); NRST submitted a letter of support.
- Livestock Access to Water literature review.
- Dixie National Forest Riparian Forest Plan desired conditions and riparian standards.
- Forest Service Remote Sensing Application Center Advisory Group – Provided input to development of remote sensing tools for riparian assessment and mapping.
- Beaver River Restoration Project, BLM Cedar City Field Office, Utah – Provided field review of restoration plan and offered suggestions for monitoring.
- FS WO Rangelands Management and Vegetation Ecology newsletter - submitted newsletter article for February 2014 issue.
- Peer review of manuscript submitted to the Journal of American Water Resources Association.
- Peer review of manuscript written by the USDA Forest Service Fish & Aquatic Ecology Unit and submitted to the Journal of Rangeland Ecology and Management.

TRAINING AND WORKSHOPS

Training and Workshops – National Riparian Service Team

High quality training is a foundation for successful riparian restoration and management. Training provided by the NRST and the Creeks and Communities Network has increased understanding of how riparian-wetland areas function, how to apply innovative and effective management strategies, how to monitor stream channels and streamside vegetation, and how to effectively engage people and manage conflict. This knowledge is fundamental for managing for resilient streams and wetlands and protecting water resources. *More than 230 people attended NRST-led training sessions in 2014.*

- **Proper Functioning Condition for Resource Professionals:** One four-day course was taught for 32 participants.
 - **Colorado** – Interagency participation, Colorado Riparian Team sponsor.
- **Proper Functioning Condition (Lentic Systems):** One three-day course was taught for 26 participants.
 - **Utah** – Sponsored by the Utah BLM state office and the Utah Riparian Team with assistance from the NRST; interagency participation.
- **Multiple Indicator Monitoring of Stream Channels and Streamside Vegetation:** Three training sessions and one coaching assistance trip were completed for a total of approximately 110 participants.
 - **New Mexico** – Four-day course sponsored by the New Mexico BLM state office and the New Mexico Riparian Team
 - **Nevada** – Four-day course sponsored by the University of Nevada-Reno and the Nevada Riparian Team
 - **South Dakota** – Four-day course sponsored by the Dakota Prairie Grasslands (USDA Forest Service)



- Technical support to BLM and Forest Service field units regarding data management
- **Grazing Management Processes and Strategies for Riparian-Wetland Areas:** Two sessions were held for a total of 68 participants.
 - **Washington State** – Conducted a three-day workshop sponsored by the Colville NF and the Stephens County Conservation District.
 - **Utah** – Conducted a three-day workshop sponsored by the Utah BLM State Office.
- **Consensus Institute:** Initial planning and coordination was completed by NRST for five or more training workshops and coaching for diverse groups of BLM employees and stakeholders across the west, as requested by CADR and the National Training Center.
- **Resolving Riparian Conflicts:** The NRST initiated planning for a new, virtual course. The purpose is to provide an in depth course on blending the technical and social dimensions of resource management and to teach participants how to effectively manage conflict and focus on building collaborative capacity among specialists, managers, and stakeholders.



***CREATE AWARENESS, UNDERSTANDING,
AND INTEREST***

Products for Outreach and Strategy Implementation

- NRST/Creeks and Communities Website
- Creeks and Communities Network Directory
- Full Stream Ahead (FSA) Newsletter
- Place-based Problem Solving Case Studies
- Creeks and Communities Handouts and PowerPoint Presentations
- Exploring development of a list-serv for the Creeks and Communities Network

Briefings, Meetings, Presentations, Key Contacts – National Riparian Service Team

- DOI Collaborative Action & Dispute Resolution Staff
- DOI Office of Policy Analysis Staff
- FS Deputy Chief for National Forest Systems Briefing
- Oregon Cattlemen’s Association Annual Meeting – Public Lands Roundtable
- BLM Division of Forest, Rangeland, Riparian & Plant Conservation
- FS Range and Vegetation Ecology Staff
- FS Regions 4 and 6 Range and Aquatics Staff
- BLM meeting at annual Society for Range Management Meeting
- BLM East Side OR Soil, Water, & Air Meeting – Prineville, OR.
- Presentation to the Public Land Foundation Board annual meeting in Boise, ID
- Provided a capstone case study for the Managing by Networks course
- Discussions with BLM Leadership regarding opportunities for leveraging NRST success across the Bureau
- Oregon State University Range Sciences to discuss continued partnership in riparian training and research.

Requests for Information/Referrals – National Riparian Service Team

In addition to work listed above, the *NRST responded to numerous requests for information, advice, or assistance from a variety of sources, both national and international.* Inquiries included questions about the Creeks and Communities approach as well as riparian assessment, monitoring, restoration, and adaptive management. In addition, several referrals were made to help people locate assistance and information.

PROGRAM MANAGEMENT

Work Planning, Operations and Coordination

- NRST Coordination Calls and Work Planning Meetings
- Creeks and Communities Network Coordination and Support Webinars
- BLM WO-220 and FS Rangelands Management & Vegetation Ecology Conference Calls, Work Plans, Budget and Staffing Coordination
- BLM/FS Interagency Agreement for Transfer of Funds Process
- IDIQ Contract for Creeks and Communities Professional Services
- BLM Riparian, Range and Fisheries Program Conference Calls
- BLM and FS Fish, Wildlife, Watershed, Soils Program Coordination
- BLM National Landscape Conservation System Coordination
- BLM and FS Partnership Office Program Coordination
- BLM Collaboration and ADR Program Coordination
- BLM National Operations Center Planning and Coordination
- BLM National Training Center Planning and Coordination
- DOI Office of Collaborative Action and Dispute Resolution Coordination
- BLM Socioeconomic Coordination
- NRCS WO Rangelands and West National Technical Support Center Coordination

Strategic Planning

In 2012, the NRST received the final report from an OBM approved program evaluation of Creeks and Communities activities covering 2003-2010 conducted by Oregon State University. Evaluation findings and the team's experience served to inform the revision of the Creeks and Communities strategic plan. With participation and input of the Creeks and Communities Network, a final strategy was completed in 2014 and is awaiting publication in 2015.

Leveraging Resources

Over half of the team's activities were accomplished through leveraging the NRST operating budget with additional funding and in-kind contributions.

Reporting

- FY2013 Creeks & Communities Network Accomplishment Report.
- FY2014 Periodic NRST Updates.

STATE RIPARIAN TEAM ACTIVITIES

Arizona

- No activities in 2014.

California

- Completed PFC training in Bishop with assistance from the NV Riparian Team.

Canada

- Completed a PFC assessment report for 15 kilometers of streams in the Shawnigan Watershed (Vancouver Island) that were assessed in 2013.
- Submitted a grant application for funding to conduct a PFC assessment on a second major tributary in the Shawnigan Watershed.
- Held a two-day Creeks and Communities workshop for Comox Valley Regional District staff and watershed stakeholders as part of the development of a watershed protection plan (20 participants).
- Led a field trip for participants of the Canadian Urban Forestry Conference that explored the application of PFC in the design of urban rainwater management facilities and stream restoration projects (October, 15 participants).
- Provided an introductory PFC lecture as part of a British Columbia Wildlife Federation wetland institute workshop (September, 30 participants).
- Began designing a stream/wetland restoration project using PFC as design criteria.
- Continued efforts to foster interest in the Creeks and Communities Network concepts and model in British Columbia, working with Provincial government, regional governments, non-governmental organizations, and youth education.

Colorado

- Conducted 2 PFC workshops in Boulder and Durango (59 participants).
- Sponsored a PFC for Professionals workshop in Delta (36 participants).

Idaho

- Conducted 2 PFC lotic calibration trainings in Marsing and Pocatello.
- Conducted 3 PFC lentic calibration trainings in Boise, Pocatello, and Marsing.
- Conducted MIM calibration training in Twin Falls for the Jarbidge field office.
- Conducted Riparian program and integration review in BLM Coeur d' Alene field office

Montana

No activities in 2014.

Nevada

Place based assistance projects:

- Collaborated with local land owners, EPA, NRCS, NDF, NDOW, Nevada State Parks, the Jiggs Conservation District, and tribal representatives of the South Fork (of the Humboldt River) Band to use PFC assessments on the South Fork where riparian issues have led to substantial water quality and riparian impairments.
- Developed a proposal to assess Humboldt River physical function with the Humboldt River Basin Water Authority, Big Meadow Conservation District Board, the NRCS State Technical Advisory Committee, and the Lamoile Conservation District.
- Continued to work extensively with the Shoesole Holistic Management Team to incorporate riparian PFC concepts into their ranch, rangeland and riparian/watershed management.

Research, Review and advice:

- Field assessment/training for NRCS in Elko County.
- Collaborated with EPA scientists from the Las Vegas Office of Research and Development about the use of riparian PFC to address water quality concerns. A PFC class was hosted by EPA in Las Vegas for tribes in Arizona, California, and Nevada.
- A book has been outlined and some chapters written. A chapter was published in 2014, "An Ecological Function and Services Approach to Total Maximum Daily Load (TMDL) Prioritization."
- An article that details the literature based rationale for the PFC connections to water quality is in review for submission to J. Environmental Management.
- Ongoing research addresses Riparian Multiple Indicator Monitoring (MIM) to study the response of riparian areas after wildfire. A research proposal to study this was implemented with the first of four field seasons.
- Met with the Division of State Lands regarding their role and the role of PFC concepts in management of Nevada's navigable rivers which resulted in the removal of a permit action proposal to issue a General Permit for Working in Waters of the State (GNSWW2014) from the Nevada Division of Environmental Protection.

Trainings and workshops:

- Two-day PFC courses were held in Las Vegas, Fallon, Elko, and South Fork Reservation, Nevada and Bishop, California
- PFC class was a part of the Stream Assessment T-FERST class in Nashville, Tennessee that was hosted by United South and Eastern Tribes (USET).

- Assisted NRST with Riparian MIM course in Reno.
- Riparian PFC Concepts were incorporated into the curriculum for Nevada Youth Range Camp.
- Riparian PFC assessment and riparian vegetation monitoring were taught to the UNR Principles of Range Management and Natural Resources Classes. Creeks and Communities concepts were taught to UNR Range and Forest Policy and Administration.

Presentations:

- Riparian Functions Support Base Flows of the Humboldt River. Invited presentation at The Humboldt River Basin Water Authority and the Nevada Mining Association Humboldt River Base Flow Workshop. Winnemucca
- National Tribal Water Council, Workshop, "Proper Functioning Condition - Connecting Ecosystem Functions to Water Quality," USEPA.
- Discussion of land and water management in Nevada with Ukraine delegation, Roundtable at the Nevada section Society for Range Management. It included discussions of rangeland management in Nevada with a delegation led by Andrii Martyn of the National University of Life and Environmental Sciences of Ukraine. The delegation was composed of Government and NGO representatives and they were most interested in water, water quality, and riparian management.
- Black Rock Rendezvous, Workshop, "Nevada Creeks and Communities Team and the importance of riparian area management;" invited Friends of Black Rock High Rock and the BLM.
- NV riparian team leader is an appointed member of the Sagebrush Ecosystem Council (SEC). The SEC adopted the Nevada Greater Sage Grouse Conservation Plan, Conservation Credit System, and it's Habitat Quantification Tool.

New Mexico

- Sponsored and coordinated a Multiple Indicator Monitoring (MIM) for Stream Channels and Streamside Vegetation training course in Taos.

Oregon

- Completed a riparian grazing management presentation Oregon Association of Conservation Districts Conference, Welches.
- Reviewed Oregon Department of Agriculture's ("ODA") streamside vegetation assessment tool.
- Oregon Resources Monitoring Guide development and review.
- Assisted NRST with Riparian Grazing Course in Omak, WA.
- Provided technical review of PFC TR 1737 – 15, Ver. 2.
- Provided riparian mentorship for FS Fish Biologist.

Texas

- Conducted 18 one-day riparian function workshops in coordination with TX Water Resources Institute, TX Parks and Wildlife Dept., TX Nature Conservancy, TX Master Naturalist state convention, the Nueces River Authority and others.
- Provided 8 Riparian Function Presentations.
- Provided on-site riparian assessment and consultation assistance on 16 different streams.

Utah

Meetings and presentations:

- Held annual meeting and had several presentations, including one discussing Riparian Complex Ecological Site Descriptions.

- Attended the 2014 Utah Watershed Coordinators Counsel and presented a program on the Utah Creeks and Communities effort.
- Attended the 2014 Northern, South East, and Southern Region Utah Partners for Conservation and Development, Watershed Restoration Initiative meeting and presented a program on the Utah Creeks and Communities activities.
- Participated in the 2014 Creeks and Communities virtual meetings.

Service trips, training sessions, and workshops:

- Participated with NRST in the “Principles and Practices of Riparian Compatible Livestock Grazing: Opportunities and Problem Solving” workshop in Escalante, UT (57 participants).
- Conducted a 3-day PFC training session with NRST on the Process for Assessing Proper Functioning Condition (PFC) for Lentic Areas (26 participants).
- Conducted a field implementation training on the Multiple Indicator Monitoring protocol in Cedar City, UT (25 participants).
- Participated in an interagency group (NRCS, BLM, FS, academia, and extension) working on the development of Riparian Complex ESDs
- Participated with the BLM Salt Lake FO in a Lentic PFC training and site assessments in the Deseret Land and Livestock allotments.

Washington

- Completed Kreps Report for Underwood Conservation District on Rattlesnake Creek.
- Developed Water Quality Risk Assessment Checklist for Grazing Areas for the state of WA.
- Assisted NRST with Riparian Grazing Management Course, Omak.

Wyoming

No activities in 2014.