

ATTENDEES

Dave Bastian, Utah Conservation Corps
Chris Brotherson, Utah Conservation Corps
Steve Cox, Grand Staircase-Escalante Partnership / Boulder Town Council
Rich Csenge, Grand Staircase-Escalante Partners
Terry DeLay, US Forest Service, Dixie National Forest
Jake Deslauriers, Canyon Country Youth Corps / Four Corners School
Amy Dickey, UT Division of Water Quality
Veronica Egan, Great Old Broads for Wilderness
Sue Fearon, Grand Staircase-Escalante Partners
Matt Fidler, American Conservation Experience
Mike Golden, Dixie National Forest
Kim Harding, New Escalante Irrigation Company
Shannon Hatch, Tamarisk Coalition
Grant Johnson, Escalante Canyon Outfitters
Melissa Masbruch, US Geologic Survey
Robert McElaney, Escalante resident
Phoebe McNeally, U of U/DIGIT Lab
Jeff Muse, Grand Staircase-Escalante Partners
Andrea Nelson, The Nature Conservancy
Noel Poe, Grand Staircase-Escalante Partners
Delacey Randall, Grand Staircase-Escalante Partners
Mike Putiak, Grand Staircase-Escalante Partners / Boulder Community Alliance
Marjorie Rask, Grand Staircase-Escalante Partners
Ron Rogers, ERWP (via Grand Staircase-Escalante Partners)
Mike Scott, Utah State University
Brooke Shakespeare, US Forest Service
Carolyn Z. Shelton, Grand Staircase-Escalante National Monument
Craig "Sage" Sorenson, private landowner / Grand Staircase-Escalante Partners
John Spence, National Park Service / Glen Canyon
Joel Tuhy, The Nature Conservancy
Kris Waggoner, Grand Staircase-Escalante Partners
Linda Whitham, The Nature Conservancy
Clint Wirick, US Fish & Wildlife Service

Michele Straube & Mara Elana Burstein, University of Utah (facilitators)

NEXT ERWP MEETINGS (and other meetings of interest)

- 2/10-12 – Tamarisk Coalition conference, Albuquerque NM
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- 2/11 - Beaver Webinar
 - Mary O'Brien has more information
- 2/12 – BLM-Utah sponsored Riparian GIS Data Webinar
 - Powerpoint only:
https://etal.egnyte.com/dl/XKPvihuTgJ/CPE_Riparian_Mapping_Project_Summary_Final.pptx
 - Recorded presentation (28 min video):
https://etal.egnyte.com/dl/okbLCvLc90/CPE_riparian_presentation_video_2_11_15.wmv
- 3/5 [postponed from 2/24 due to weather] -- Willow and Cottonwood transplant day
 - Call Sue Fearon, 435-691-3037
 - Lunch included
- **Wed 6/10/15 — evening community event** (in Escalante)
- **Thu 6/11/15, 10-5 — ERWP full partnership meeting** (in Escalante)
- 9/12/ - Leave It To Beavers Festival (sponsored by BCA)

COORDINATING COMMITTEE UPDATE (Chair, Linda Whitham)
(PowerPoint slides available from facilitator)

- ERWP 2014 Accomplishments
 - Draft list of accomplishments circulated for review
 - Final document will be circulated to full group
- ERWP 2014 Funding Overview
 - Including Russian olive removal, native fish work, education/outreach, capacity, etc.
 - Total projected cost of ERWP work in 2014: \$2,102,249
 - Total raised from 12 sources (not all in-kind or federal contributions have been tracked): \$1,659,083
 - Total WFF contribution: \$861,169 or 51% of tracked funding
- ERWP 2015 Budget
 - Total Cost: \$2,137,468
 - Secured: \$480,500
 - Shortfall: \$1,106,135
 - Should change in next month or two, as outstanding proposals come through

Escalante River Watershed Partnership (ERWP) Meeting 2/4/15
Interagency Visitor Center, Escalante, UT
MEETING SUMMARY P. 3 of 14

- December Coordinating Committee Retreat Overview (in Moab)
 - Confirmed 2015 budget
 - Confirmed key partners' long-term commitments to ERWP
 - Discussed Communications plan (Confirmed Goals, developed strategies for gov't outreach)
 - Discussed Tamarisk Coalition Partnership Fund Concept (Challenge Grant model)
 - Discussed Training Opportunity (Riparian 101)

- Marketing/Communications Plan
 - Goals
 - Create awareness and support for ERWP's work among geographically diverse audiences
 - Retain and procure additional financial and political support from agency decision-makers
 - Communicate the nature and importance of this work to potential and existing donors and foundations
 - Retain existing partners and engage new partners
 - Create a motivated group of local and national stewards
 - Develop clear consistent language to explain ERWP work
 - Create stories about the watershed that are regional/national in scope
 - Share successes
 - Funding action plan being developed consistent with targeted audiences assessment
 - Draft marketing/communications plan should be ready for partnership review and feedback by March

- Coordinating Committee Next Steps
 - Fundraise for 2015 and think about 2016
 - Coordinate upcoming grant applications
 - UPCD grant combines activity on NPS, GSENM and private land
 - Think about scope of WaterSMART grant
 - Continue work on Marketing/Communications Plan
 - Track in-kind contributions
 - Implement Action Plan

- ERWP Brochure distributed (available from Kris Waggoner)
 - Will be used for Outreach to Foundations, Local Business/Tourists, BLM, NPS, USFS
 - Donations received through the brochure go to Grand Staircase-Escalante Partners, but will be earmarked for ERWP

- 2015 Committee sign-up sheets were distributed (and collected at the end of the meeting)
 - Committee members are expected to be active
 - Individuals merely wishing to stay informed should review meeting summaries and attend full partnership meetings, rather than joining individual committees

WIDE HOLLOW SEDIMENT UPDATE (Kim Harding, New Escalante Irrigation Company)

- Sediment problem behind Wide Hollow Reservoir
 - Unable to dredge original reservoir after sediment started filling it up
 - Attempted, but unable to build a second reservoir
 - Reconstructed dam to increase capacity with state funding
 - Created sediment structure to improve efficiency
 - Sept. 2013 – huge storm caused sediment barriers to be knocked out, and covered ditch, new riparian area and duck ponds
 - Critical need – put up more sedimentation barriers and sedimentation traps up-drainage

- Set up Wide Hollow Sedimentation Management Team (committee to implement solutions)
 - Had couple meetings
 - Seeking funding
 - Seeking expertise from ERWP, especially engineering

- Q: What are the long-term and short-term plans?
- A: Long-term: Collaboration with federal, state and private landowners
 - Rapid water assessment plan being conducted by NRCS?
 - Short-term: Permission from Flying V to rebuild dam

- Q: Is it soil disturbance issues?
- A: Don't think so. Short fast bursts of flooding/sediment raise the challenge of how best to deal with this.

- Q: Are you identifying or implementing solutions?
- A: Both – need to implement short-term solutions; develop long-term management plan, then implement that.

- Q: Have you identified barriers to success?
- A: We need engineering expertise. Environmental assessments, “red tape”, the right working team.

- ERWP Discussion (occurred later in meeting)
- How can ERWP be helpful to the New Escalante Irrigation Company and Wide Hollow Sedimentation Management Team?
 - Brooke Shakespeare is providing data analysis and strategic advice to the group, however his time is limited and he has no specific funding
 - Interested ERWP participants will get together to develop suggestions for the New Escalante Irrigation Company before the sedimentation team's next meeting.

- After a wide-ranging discussion about how ERWP could be helpful, these four possibilities were identified:
 - Identify additional experts (if any) to join the sedimentation management team, and help make the introductions (if possible).
 - Identify additional potential solutions (if any) for the team to consider, and help make any needed introductions (if possible).
 - Provide process expertise with NRCS and other potential collaborators (e.g., help with grant writing).
 - Provide ERWP name as support in funding requests (as appropriate, dependent on ERWP review and approval).

WOODY INVASIVES COMMITTEE UPDATE (Co-chairs: Sue Fearon and Kris Waggoner)
(PowerPoint slides available from facilitator)

- Public lands – 2014 treatment areas (Kris Waggoner)
 - Total treated 378 acres, ~8 River Miles w/ Tributaries
 - Escalante River
 - Death Hollow (GSENM)-22.64 Acres, 1.03 River Miles
 - Sand Creek(GSENM)-71.78 Acres, 1.59 River Miles
 - Boulder Creek(GSENM)-23.47 Acres, 0.75 River Miles
 - Harris Wash(GLCA)-54.81Acres, 1.46 River Miles
 - Tributaries
 - Alvey Wash(GSENM)-158.64 Acres, 3.2 Miles
 - Upper Boulder Creek/Nazar Draw(DNF)- 46.53 Acres
 - About 2/3 done – still left to do
 - 6.7 miles NPS
 - rest in GSENM
 - FS mostly done
- 2014 Budget (see slides for breakdown)
 - Total: \$1,410,311
 - WFF contribution: \$529,148 (37.5%)
 - Spending by type of work:
 - RO Removal: 61%
 - In-kind (mostly Conservation Corps): 18%
 - Capacity: 13%
 - Volunteers: 5%
 - Re-vegetation: 3%
 - Burning: 1%
- 2015 Work Plan (Highlights)
 - Woody Invasive Control Plan revisions and update – due March 31, 2015
 - GIS Database Updates – Database available to public

- From monitoring feedback, make planning adjustments (adaptive management) as necessary
- Establish final new long term monitoring sites on public land
- Hire crews – planning, logistics, cooperative agreements in place for control work on public and private lands as specified in the WICP
- Conduct treatments and re-treatments on public and private lands as specified in the WICP
- Hire crews – planning, logistics, cooperative agreements in place for control work on public and private lands as specified in the WICP
- Work with volunteer organizations to have 2 new volunteer trips by 2016
- Identify opportunities to transfer maintenance of Russian olive removal to private landowners, develop and implement fee for service maintenance program

- Q: What is the status of the monitoring effort?
- A: We will establish the final long-term monitoring sites in 2015. Short-term (rapid assessment) monitoring has been done for five years. We conduct an end-of-season review each year to inform adaptive management activities.

- 2015 Projected Budget and Fundraising Requests (\$1,715,952)
 - More unknowns than previous years because:
 - WFF 2-yr grant is ending and overall WFF available funding has been reduced
 - Changing priorities for other existing funders
 - Top 2015 funding sources
 - WFF: \$421,071
 - UPCD16: \$335,800
 - In-kind: \$336,231
 - Next tier funding sources – FFSL, NFWF, WFF/GSEP

 - Q: Is NRCS a potential funding source?
 - A: Southwestern willow flycatcher (SWWFL) funding is available to private landowners in the Escalante watershed through March.

- 2015 Important Dates
 - Volunteer trips
 - 3/22, U Wisconsin Alternative Spring Break, Upper Escalante River (new relationship)
 - 4/24, Wilderness Volunteers, Glen Canyon
 - 10/4, Great Old Broads, Lower Escalante near Phipps
 - Conservation crews
 - 4/1, AZ Conservation Corps, Glen Canyon
 - 8/17, ERWP Fall Training
 - Partner with Ancestral Lands Crew (front-country, Harris Wash trailhead)

- 2015 Public Lands Planned Treatment Areas
 - Initial treatment
 - Upper Escalante, near Sand Creek
 - Lower Escalante, near Phipps Wash
 - Lower Escalante, near Harris Wash
 - Lower Escalante, near Boulder Creek
 - Retreatment
 - Coyote Gulch
 - Upper Boulder Creek
 - ER near Boulder Creek
 - Upper Escalante
 - Sand Creek
 - Death Hollow
 - Alvey Wash

- Q: What do you have planned in Alvey Wash?
- A: We are working with GSENM to do more research. Have been finding dead tamarisk.

- Private Lands update (Sue Fearon)
 - Russian olive salvaged wood products
 - Local land owner (Mark) developing business plan for 100% utilization of RO woody debris
 - Goal, provide good quality jobs and profit
 - Working as contractor to remove RO on private lands
 - This will entice other land owners to get involved
 - ERWP wood products
 - How should we brand our products?
 - Doesn't think ERWP logo captures watershed experience
 - Creating marketing project
 - In stores in March
 - Retreatment is an aggressive component of every private lands project
 - Reseeding included as appropriate (willow and cottonwood)
 - Landowner contributions to projects
 - Built fence, retreated, broadcast seed, piled and burned debris
 - Landowners are highly engaged

- ArcGIS Database Update (Kris Waggoner)
 - Peter Skidmore at WFF requested data in a different form
 - Rethinking acres, treatment, definitions, etc.
 - Currently redrawing buffers for accuracy, and inputing data from 2000 (creating institutional memory)
 - Expect to be done at end of February

- Vegetation Map Layer – 2011 imagery, ground-truthed, to show what's actually there / base acreage for treatment target areas
 - Stream Length (mi): 433.33
 - Riparian Vegetation Area (ac): 7344.21
 - Retreatment (ac): 4755.68
 - Proposed (ac): 3518.18
 - Primary (ac): 4490.46
 - Inventory (ac): 2493.34
 - Active (ac): 52.13
- Q: How does it compare to original estimates?
- A: Still needs to be done.

- Q: What is the definition of “restored”?
- A: We may have two definitions. One for the funder (recruitment of native woody species) and one for ERWP (semi-quantitative/qualitative conditions rated from 0-9, aquatic, substrate debris, vegetation).

- Woody Invasive Control Plan
 - A draft of the 2015 edition of the Woody Invasive Control and Restoration Plan will be out for comment soon.
 - The new edition will work hand in hand with the database.

RESTORATION METRICS (John Spence)

- Peter Skidmore at WFF wants to report on funding/restoration in 5 watersheds
 - Difficult because each watershed is different. Peter understands challenge but needs information for Board of WFF.
 - Escalante, heavily vegetative, recruitment not necessarily measure of success (as suggested by WFF)
 - ERWP metric – go back to natural hydrologic processes (needs to be ground-truthed)
Give score from 0 (“nuked”) to 9 (pre-European settlement)
 - Vegetation (native v. exotic)
 - Channel morphology and flooding
 - Aquatic habitats (pools-riffles, shading)
 - Current score: 1-3
 - Post RO crew: 3-4
 - Ultimate goal: 6-7 (can do no better under current climate conditions)

 - Q: Can we satisfy WFF and our own needs without too much extra work?
 - A: Probably, we're working on it. Rapid assessment includes an estimate of numbers. Because of narrowing, landscape is not in a condition to encourage recruitment.
 - Observation: Other WFF-funded partnerships are encountering similar challenges in complying with data requests, especially equating recruitment with restoration.

CONSERVATION TARGETS COMMITTEE UPDATE (Co-chairs: (formerly) Mary O'Brien (not present) & Mike Scott) Need new co-chair
(PowerPoint slides available from facilitator)

- Legacy tree project, 1st Year Survey Results (John Spence)
 - Definition: trees that established on surfaces when the valley was full
 - large, old, furrowed bark
 - “Holy cow, that’s big!”
 - Methods
 - Tree diameter, height distance from active channel, terrace position, health, photos
 - Largest tree found- cottonwood at 19’ circumference and ~400 yrs old
 - Intended Outcome
 - Want to map main stem of Escalante for pre-1930s incision? Define floodplain positions where cottonwood existed
 - For the sake of science, DNA diversity, nonrenewable resource
 - Can inform passive restoration, legacy trees provide seeds
 - Reflect pre-settlement Escalante
 - Compare to historic flow records
 - 2015 study area
 - Reaches IV and V, to ca. Choprock Canyon (29 miles)
 - Q: Did legacy trees establish at times when conditions were “perfect”?
 - A: Legacy cottonwoods are found on pre-flood terraces. We would not get new cottonwoods in the same places now, because the river channel has narrowed.
- Aspen forest brochure -Not discussed, to be completed in 2015
- Native Fishes of Escalante brochure (Mike Golden)
 - Completed
 - UT Div. of Wildlife Resources funded, DWR employee illustrated brochure
 - Collaborative development of text
 - Layout and production completed by Ron and Linda
 - Can be exported to other watersheds
 - Fish species: Colorado cutthroat trout, flannel-mouth sucker, bluehead sucker, speckled dace, mottled steelpin
 - Need to decide how to distribute fish brochure
- Native fish work update (Mike Golden)
 - Reintroduction of Colorado River Cutthroat Trout into Calf Creek
 - Going through environmental analysis process
 - East Fork Boulder Creek / amendments to Garkane FERC hydro license renewal
 - DWR/FS/Garkane settlement agreement is in final approval process
 - Provides for alternative mitigations for CRCT given no flow release, as well as contingency plans
 - Plan to reach out to community in small groups

- Beaver documentary – “Beaver: Engineers for Climate Adaptation”
 - Group viewed documentary
 - Primary intended audience is the Forest Service
 - Copies of the documentary are available from Mary O’Brien

- Springs and seeps update and 2015 field work (Brooke Shakespeare)
 - Also called Groundwater Dependent Ecosystems (GDEs)
 - Looked at 11 springs in 2014 (<5% of expected total)
 - 82% of GDEs assessed show disturbances due to human activity (grazing, development, etc.)
 - Plan on looking at many more springs in 2015
 - Have funding for additional crew
 - Could use volunteers
 - Added a stage recorder to measure water height (Lost Creek in Pine Creek drainage, for spring runoff)
 - Will add two more; one in Escalante basin in May

 - Q: Where have you been looking for springs and seeps?
 - A: Under the Aquarius Rim, within hiking distance from the road.
 - Q: How do you do your assessment?
 - A: We follow FS protocol, doing a Level 1 inventory (not the same as trend). We look at size, flow, type, water chemistry, depth to water table, disturbance criteria.

- 2015 Work Plan presented
 - Basin-wide GIS project has moved to Science Committee
 - Increasing knowledge about water quantity and quality in watershed project has moved to Science Committee

RUSSIAN OLIVE (RO) INVASION STUDY (Mike Scott)
(PowerPoint slides available from facilitator)

- Understanding the past can offer insights to the future.
- Understanding the RO invasion can inform questions like:
 - What should the Escalante look like?
 - What factors contributed to the RO invasion?
 - How can we prevent it from happening again?
 - How do we know our control efforts are producing desired results?

- Past channel width history
 - 1909- flood, shallow wide channel
 - 1932- flood, widened channel
 - 1985- channel narrowed, RO present
 - Arroyo cut/fill cycle- see slide for diagram

- Immediate past: RO invasion
 - RO planted in the watershed ~1950s
 - Rapid increase in RO noted in 1990s, along with channel narrowing
 - Harris Wash thought to be important source of RO to Escalante River
 - Similar invasion pattern seen in Canyon de Chelley, AZ
- Study Approach
 - GIS mapping from aerial imagery
 - Field aging of RO stems
- Interpreting the RO invasion
 - Increased water discharge / flows seem to correlate with rapid RO recruitment
 - Sustained wet periods (less intense high flows) support RO invasion
 - Temperature anomaly (positive departure from global long-term temperature average) *may* be a factor
 - Channel has narrowed ten-fold: average width in meters
 - 1952 – 36.2 m
 - 2010 – 3.6 m
 - RO seed source areas (in hectares per kilometer)
 - Above Harris Wash -- 0.29 ha/km
 - Below Harris Wash -- 0.61 ha/km
 - LV and Harris Wash likely important for restoration
- Questions for the Future
 - What are desired outcomes of RO control?
 - Little or no RO
 - More erosion/deposition, wider channel?
 - Could lead to more willow/cottonwood establishment
 - Limit reinvasion
 - Remove seed-source trees
 - Floods trigger RO establishment
 - Establishment confined to near-channel locations
 - How do we know our control efforts were successful?
 - Improve efficiency of on-going monitoring
- Q: Are there any estimates of channel width pre-1909 flood?
- A: No.
- Q: Does this confirm why the greatest stretch of RO is from Harris Wash and town down?
- A: The river will look different in different geomorphic settings. Cottonwood, willow and tamarisk have different establishment requirements from RO. RO establishes effectively in existing vegetation that is stable and moist. Natives and Tamarisk won't establish in existing vegetation.

- Q: Why did the stream banks grow 5 feet when cattle grazing ended?
- A: RO is really good at trapping debris (“debris skirts”), which creates larger levees. Cottonwood have intermediate debris skirts; willows have virtually no debris skirts.

SCIENCE COMMITTEE UPDATE (Co-chairs: John Spence and Linda Whitham)
(PowerPoint slides available from facilitator)

- Watershed resource database update (Phoebe McNeally)
 - Data coming in: WICR, monitoring, wells, springs, hydrology, photo points
 - Photo points are being used to create “story maps” to share out with public
 - “Story maps use geography as a means of organizing and presenting information. They tell the story of a place, event, issue, trend, or pattern in a geographic context. They combine interactive maps with other rich content—text, photos, video, and audio—within user experiences that are basic and intuitive.”(Esri)
- Q: Can the public submit photos?
 - A: Yes. Volunteer geographic information is easy to set up, e.g. with touchscreens at the visitor center.
- Q: How do we share GIS points?
 - A: Google map, or ArcGIS submission
- Q: How can we get more accurate photos, especially before-and-after photos?
 - A: Photos need to be taken in the same location, same time of year and time of day. Use a visual or landmarks for accuracy, not necessarily GPS.
- Water information update (Joel Tuhy)
 - Committee has been exploring a process to gather bits of information in one place, so that all can have access to the same information re: reliable source of water
 - Tim Bardsley has been gathering info at the Division of Water Resources within DNR
- Reference areas (Joel Tuhy)
 - Identified major vegetation areas to be included in reference areas
 - Developed list of potential sites
 - Developed criteria for working with reference areas
- 2015 Work Plan presented
 - Living lab- Planning to move process forward by developing mock reference area in more detail and setting it up on the ground.
 - Science symposium- Shooting for 2016
 - Climate change workshop- Moving slowly
 - Provide relevant information to agencies- On-going
 - Develop database- On-going

EDUCATION / OUTREACH COMMITTEE UPDATE (Co-chairs: Linda Whitham and (formerly) Peg Smith)

- Need new co-chair
- 2015 Work Plan presented
 - Land owner communications- Ongoing
 - Work with willing landowners- Ongoing
 - Work with schools- Priority for 2015
 - Develop plant guide- Priority for 2015
 - Consistent education/communications- Ongoing
 - Marketing plan
 - Working on spring newsletter
 - Looking for info for good stories, share ideas with Kris
 - RO salvage wood?
 - Newsletter is great because can be put in mail boxes, but not widely read
 - Trying to expand communications
 - Considering RadioWest show
 - Possible feature story in April TNC (back page)
 - Other NGO newsletters?
 - Considering hiring Outreach Watershed Coordinator, pending funding
- Discussion:
 - We should continue to work on partnership diversity by following up with potential new partners.
 - Can we do more or better publicity about ERWP community events? Several local residents were unaware of the previous evening's Hydrology 101 presentation.

**Escalante River Watershed Partnership
February 4, 2015
Escalante, UT**

AGENDA

Meeting Schedule

Tuesday, February 3

- 7 pm – “Where does the water live? Sources, sinks, and flow paths in the Escalante Watershed”
- Speaker: Melissa Masbruch from USGS (*Interagency Visitor Center auditorium*)
- The talk covers the general water cycle, aquifers in the Escalante Watershed, groundwater and surface water sources, how the water moves through the watershed, and where the water discharges within the watershed. A little about where the USGS has in the past collected data and where we currently are collecting data.
- Dinner not provided

Wednesday, February 4

- 8-9 am – Breakfast available (*Interagency Office*)
- **9-4 – full partnership meeting** (*Interagency Office*)
 - Lunch \$12
 - During lunch – combined Conservation Targets / Science Committees meeting (15 min)

Thursday, February 5

- 8-10 am – Woody Invasives Committee meeting (*Interagency Office*)

February 4 Full Partnership Meeting – Agenda

Introductions
Housekeeping

Coordinating Committee

Woody Invasives Control and Restoration Committee

Conservation Targets Committee

Legacy Trees Update

Beaver documentary

Science Committee

Russian Olive invasion study

Education / Outreach Committee

Other Partnership Updates

Upcoming Events

Additional Agenda Items (if any)

Schedule Next ERWP Meeting (June 2015)

Group Photo (outside, during a break)