



Old school meets new school in Ghost Canyon, Meghalaya, Northeast India. Photo: Luc Mehl.

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## Packrafting Floats the Mainstream

by Brad Meiklejohn

Packrafting is the fastest growing segment of the river community across the U.S. and around the world. These small, lightweight and highly-portable boats are appearing on rivers everywhere and bringing a new perspective on access, river management and conservation.

Packrafts are an old idea that trace back to early progenitors such as coracles, parisals, gufas and inner tubes. But modern packrafts now enable wilderness travel in ways never imagined by their ancestors. These personal-sized boats, weighing as little as two pounds and packing as small as a water bottle, can literally be taken anywhere, and are. Packrafts are now central to explorations

of all wild corners of the globe. With a packraft, you can go almost anywhere on the planet.

Packrafts in their modern form evolved rapidly in Alaska where rivers can represent barriers to overland travel. The little boats moved quickly from devices to merely cross rivers to crafts competent in whitewater, and packrafts now are regularly deployed in wilderness first descents of Class IV and V rivers worldwide. Modern packrafts are not only light and portable but they are stable, durable, comfortable and able to carry loads up to 1,000 pounds.

The business of packrafts is also expanding, as eight major manufacturers

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*The mission of RMS is to support  
professionals who study, protect, and  
manage North America's rivers.*

Editorial Policy: Articles are not edited for  
content and may not reflect the position,  
endorsement, or mission of RMS. The  
purpose of this policy is to encourage the  
free exchange of ideas concerning river  
management issues in an open forum of  
communication and networking among the  
RMS membership. Unless indicated, points of  
view are those of the author and not RMS.

## Executive Director's Eddy

Boy, we sure learned many lessons, met  
new colleagues, and discovered new  
opportunities by planning and hosting  
*Managing Rivers in Changing Climes:  
Training Tomorrow's River Professionals!*

We continue to steer RMS around  
programmatic, demographic and social  
corners...both exciting and somewhat  
daunting, because we are in that awkward  
middlin' place at which we must trust  
our strategy and our gut, and incorporate  
feedback on tactics. By daring to step  
out of the traditional mold of developing  
the program and planning logistics we  
were able to take a peek at the future of  
gatherings. It's exciting!

The following examples are somewhat  
random, but may provide a brushstroke of  
some underlying dynamics that threaded  
presentations and offline discussions  
through the week:

**“Beauty is in the eye of the beholder.”**

In our case, it should be, “the relative age  
of this year’s participants was in the eye  
of a young person who had never before  
attended an RMS event.” I was planning  
to celebrate the participation by what our  
committee felt was a significant level of  
participation by students and early career  
individuals:

- Anna Johnson and Martha Brummitt  
shared the story of their Wild River  
Academy and Paddle Forward project  
to paddle a crew of eleven young adults  
down the length of the Mississippi River.

- We met four thirteen to seventeen year  
olds who, through Colorado Preserve  
America Youth Summit, have expressed  
the importance of preserving Colorado’s  
historical treasures, including rivers  
and other natural resources, to their  
US Congressional Representatives in  
Washington, DC.

- Professor Helle Sorensen and students  
from the Denver Metro University’s  
Hospitality and Tourism Program staffed  
the registration tables in exchange for  
attending a few sessions.



RMS Award winner, Risa Shimoda

In addition, an impressive cadre of  
instructors and presenters in their 20’s and  
early 30’s included:

- Lisa Eadens, Colorado Alliance of  
Environmental Education, who presented  
career options in Natural Resources fields;
- Mary Palumbo, The Greenway  
Foundation, conducted a Leave No Trace  
Awareness Training; and,
- Sean Fleming, former staff for MN  
Conservation Corps, coordinated the Chain  
Saw In/On Water field demonstration and  
member Marina Metes, who will start  
graduate school in the fall.

Just as we were basking in the glow  
of having reduced the average of our  
presenters appreciably, Martha Brummitt  
volunteered this comment about her  
experience at the training:

*“[Martha] was surprised at how few  
young people were in attendance at RMS.  
Martha thinks the RMS community and  
conference would benefit the younger  
generation of environmentalists and  
outdoor educators.”*

*(continued on page 25)*

# From the RMS Vice President

## Get on the Board!

Would like to become more involved with the professional river community? Do you feel out of touch with other river and watershed stewards and managers? Do you want to play a role in the future of the River Management Society?

If you answered “YES” to any of these questions, please consider becoming more involved with the RMS. The RMS is seeking nominations for President, Vice President, Secretary and Treasurer to serve as the National Officers.

The River Management Society Board of Directors proudly serve the membership and promote the RMS mission of Supporting professionals who study, protect and manage North America’s rivers. In addition to the National Officers, the Board is comprised of Chapter Presidents, and Ex-Officio Advisers. Recent changes to the RMS by-laws allow the Board to appoint at-large members. All board members work closely with the Executive Director and play an important role in guiding the business of the Society and serving the membership.

National Officers serve a three-year term beginning January 2015. The duty of each officer is described below and additional information can be found at: <http://www.river-management.org/board>. Interested members are encouraged to contact current and past board members to gain insight on the responsibilities and roles of the individual officers and the board as a whole.

Nominate yourself,  
nominate a fellow member.

***Nominations are due July 30.***

Apply by emailing the following to [rms@river-management.org](mailto:rms@river-management.org):

- 1) Your name, chapter and office you seek.
- 2) The reason(s) why you are running for office and why members should vote for you (100-200 words).
- 3) A photo of you in which your face is easily recognizable (we love those big brimmed hats, but...).

Voting will be announced to members and will take place via the RMS website, or by mail, from September 1 to September 30, 2014, and the new officer lineup will be announced in October.

## Questions?

Contact any board member or Linda Jalbert  
by email at: [L\\_jalbs@yahoo.com](mailto:L_jalbs@yahoo.com)

## National Officer Duties

The **President** represents the Society in external matters; coordinates and presides over Board and Executive Committee meetings; oversees or delegates supervision of paid staff; and negotiates and signs contracts and agreements on behalf of the Society.

The **Vice President** (VP) will carry out the duties of the President in the absence of the President; will serve as a primary liaison to the Chapter Presidents; and will serve as liaison between the Board and committees appointed by the Board. The VP will also serve as the Chair of the Scholarship Committee and duties include soliciting scholarships and preparing a review packet for committee members, coordinate the review process, and contacts scholarship recipients. The VP will also serve as the Chair of the Succession Committee and duties include working with the Board and staff to fill elected and appointed board positions.

The **Secretary** will keep the Society’s historical records, correspondence, and other documents related to the business of the Society. The Secretary will arrange the monthly board meeting agenda items, record minutes during monthly meetings, and present to the Board draft minutes for revision and approval. The Secretary will serve as Chair of the Awards Committee and duties include soliciting nominations, creating an award review packet for committee members, and ensuring fair consideration of nominees with a well agreed-upon and recently-revised process. The Secretary, with assistance from the Board and the executive director, will develop an annual report of the affairs of the Society for the Board and members. The Secretary will ensure advance distribution of notices of all Society and Board meetings.

The **Treasurer** will be responsible for all financial transactions of the Society, including deposits into the Society’s account, payroll transactions, and payments on behalf of the Society. The Treasurer (working with the executive director) will make payments and disbursements as directed by the approved budget or upon direction by the Board and (working with the executive director and bookkeeper) will keep accurate and up-to-date records of all receipts and disbursements of the Society. At least quarterly, the Treasurer will submit for Board review and approval a listing of payments, disbursements and transfers of funds and will present an annual financial report to the Board. The Treasurer will coordinate with the Society’s accountant for all audits and Internal Revenue Service transactions. ♦

Get involved.  
It’s fun.  
It’s important.

# RMS Honors Decades of River Dedication

## with 2014 Awards Ceremony

The River Management Society (RMS) congratulates the following individuals who have exhibited outstanding achievement and leadership among river professionals in their stewardship of our rivers.

“We hope river professionals will join us in our applause for this year’s winners of the RMS Awards,” notes Dennis Willis, President of the RMS Board of Directors. “These honors, open to both RMS members and non-members alike, represent the highest form of peer appreciation.” Nominations are submitted by individuals from the river management community, and the selections are made by a committee of RMS members led by the National Secretary.

### River Manager of the Year

Mary Crockett (Columbia, South Carolina), following her retirement from South Carolina Department of Natural Resources as River Manager, joined the staff of Congaree Land Trust, where she now serves as Land Protection Director. For thirty years, Mary has been instrumental in protecting lands adjacent to South Carolina rivers, conserving natural wetlands, and educating future generations about the importance of protecting our waterways. Mary’s many accomplishments include: multiple successful grants secured ensuring over 25,000 acres of conservation easements; over 25 miles of river corridor protected and recognized with National Recreation Trail status and/or Blue Trail designation; and well-trained staff and volunteers that monitor conservation easements. Mary has instructed children and adults in watercraft safety at multiple events across the state, offered many presentations about SC rivers and river issues, and published 8 Baseline Documentation Reports.

Her roles with RMS began as an active Southeast RMS chapter member in 2000 and since 2007, she has served as Chapter President. She has been a “mover and shaker” with chapter officers across



*RMS Award winner, Mary Crockett.*

the country to develop annual work plans and accomplishments that include: annual float trips, membership drives, promoting the RMS organization, and she has been a dependable source for RMS journal articles. Well-respected among her peers as Chapter President and National Board Member, she provides a strong voice for the Southeast chapter and organization as a whole. In addition to her passion for rivers, and planning and management skills, the board meetings benefit from her talent as a patient, open, direct and sincere contributor.

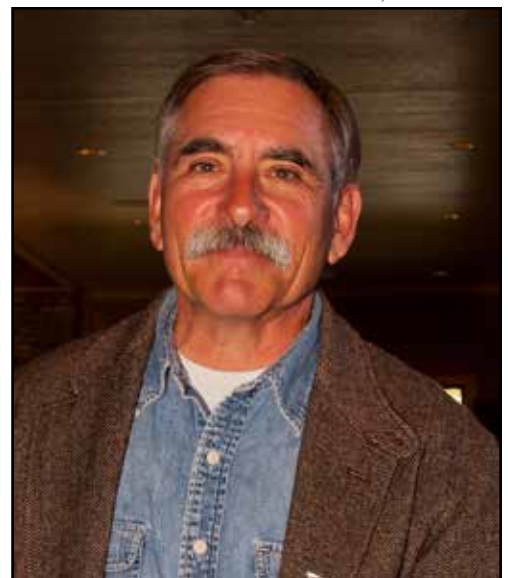
### Contribution to River Management

Bob Martini (Rhineland, Wisconsin), in the early 1970’s and subsequent to passing the Clean Water Act, Bob took on the economically powerful and politically influential paper mills that lined the banks of the Wisconsin River where they deposited their waste. He and his colleagues used the law and science to eventually work the paper industry into compliance. Bob convinced industry leaders they could actually make money by not throwing useable product into the river. Sections of river once biologically dead are now

healthy and popular recreation stretches. The mills also take pride in the part they played in saving the Wisconsin River. Later in his career, Bob helped his agency reorganize river management in a way that benefitted and highlighted rivers and citizen awareness. Long before citizen water quality data collection was mainstream, Bob advocated his agency to incorporate this to engage citizens. He also urged more forceful promotion of small dam removal projects. During his career and since retirement, he has been a staunch and consistent advocate with and for many river groups; helping to start up and later lead the River Alliance of Wisconsin, several water and land conservation organizations; and a member of his county board, where he has made water and land conservation a serious topic. At every opportunity,

Bob combines his expertise about rivers and river management with an undying passion for flowing waters. He embodies a rare package of scientific knowledge and passion for rivers, making him one of the most credible voices for rivers to the general public in the state of Wisconsin. He was described by one colleague as having a “...dedication to rivers and the public trust that is legendary.”

*RMS Award winner, Bob Martini.*



## Frank Church Wild and Scenic Rivers

Nancy Schweiger (Gold Beach, Oregon) worked in natural resources for over 30 years and served for the last seven years of her career as a River Manager on the Rogue River Siskiyou National Forest and managed four National Wild and Scenic Rivers simultaneously: the Rogue, Chetco, Illinois, and North Fork of the Smith. These rivers lie in one of the most biologically diverse areas in the nation and have over 200,000 visitors annually,

support of the non-profit organization “Trash Dogs.” Nancy coordinated with Trash Dogs to pick up cars, trailers, refrigerators and literally hundreds of debris sites. She also recognized early on that employees needed to spend more time in-the-field stewarding the lands they administered. Employee time on the water increased by fifty percent and so too did on-the-ground stewardship and compliance thanks to Nancy. She was one a founder of the Southwest Oregon

Nancy accomplished so much due to her boundless energy and passion. She has truly been an ambassador for Wild and Scenic Rivers both within the Forest Service and with the public.

Before the award nominations came rolling in this year, we welcomed two new award committee members Alan Vandiver (retired Forest Service) and Bo Shelby (Oregon State University). These new members, together with existing committee members from Washington D.C., Alaska, Colorado, and Idaho helped to round out representation across the country.

## Contribution to the RMS

Risa Shimoda (Tacoma Park, Maryland) serves as RMS Executive Director and her job performance has been rated by the Board as Excellent. However, it’s Risa’s determined commitment and how she goes above and beyond her half-time contract with a can-do attitude to continually develop and promote RMS while always expanding the scope and reach of our organization.

In just a two year period of time, she has created significant growth and positive change for the RMS organization. She has provided exceptional contributions to national policy, planning, and program development that impact how RMS protects and enhances river systems by bringing new and improved recognition to RMS as a leader among professional organizations. Her leadership within RMS has created sustainable positive change leading numerous focus groups, representing RMS at agency meetings, continuing fundraising efforts, grant writing, and cheerleading Chapter efforts. She continually donates over and above her normal paid schedule to ensure the success of RMS. She has brought new and positive private and public awareness of the RMS in academia via a new river certification and learning program with participating colleges and universities. She has increased membership substantially, developed and/or located new sources of funding or resources for the RMS. Simply put, RMS would not be where it is today without the work of Risa Shimoda.

*To individuals who submitted nominations, and to the RMS Awards Committee members who dedicated many hours of thoughtful consideration to the annual awards process: thank you! Congratulations to all honorees! ♦*



*RMS President Dennis Willis with RMS Award winner, Nancy Schweiger. Photos: Bunny Sterin*

with 80 conservation easements, and almost one hundred special use permits. Nancy did an outstanding job of resolving challenging issues and advancing awareness and stewardship of this special set of National Wild and Scenic Rivers.

Early in her tenure, on the Gold Beach Ranger District, her district was singled-out in multiple examples of “how not to steward wild and scenic rivers” and the Chetco was listed by American Rivers as one of the most endangered rivers in the Nation due to increased mining proposals. To say that her early challenges were overwhelming would be an understatement. Her leadership skills helped her to change what were adversarial partnerships into ones where both parties and ultimately, the river resource benefitted through: conservation easement enforcement; increased compliance with special use permits and private landowners, and;

and Northern California symposium on Wild and Scenic Rivers, hosted by the BLM and US Forest Service to increase understanding of the protection requirements associated with managing a designated Wild and Scenic River. She was also a key leader in developing and implementing a 2012 community river event “Cherish the Chetco” to promote local awareness and stewardship of the Wild and Scenic Chetco River. The 2-day event featured educational programs and volunteer stewardship projects involving 12 community organizations. Cherish the Chetco became the inspiration for the 2013 “Experience the Elk” which promoted stewardship of the Wild and Scenic Elk River where again, Nancy served on the steering committee. All these events started with Nancy’s initiative and follow-through to organize the 2011 WSR Symposium.

In the last seven years of her career,

# A Mystery in Labyrinth

by Miles Gurtler

In June of last year Todd Murdock and I floated Labyrinth Canyon on the Green River to conduct a baseline campsite, graffiti and weed inventory to help plan projects in the canyon for the future. We were pleasantly surprised by what we found. The canyon, overall, looks great. Sure, there were a few problems: some sites needed brushing, a few fire rings has sprouted up and there is some graffiti that needs to be dealt with, but overall it is looking great.

We did come across one intriguing bit of “graffiti” at about mile 78 on river right. It’s an inscription that reads: “HOWLAND BROS. DEALERS IN DIVIDED SKIRTS AND PANTYWEAR” — odd, to say the least. Of course, our first thought was that it was from THE Howland brothers from the 1869 Powell

Expedition, but that didn’t make sense. Oramel Howland was a printer and his brother, Seneca, was a mountain man of sorts, not skirt dealer. Our next thought was that it is a fake, but it just has that old look to it. There had been too much time spent on it and there was too much patina within it to be a modern fake. After returning from the trip I did some basic internet research only to find dead ends. I also called Steve Young, National Park Service, who has spent a lot of time in Labyrinth. He too had noticed the inscription and also had no clue as to what it means. That brings us to today...still a mystery. Maybe someone out there knows? ♦

*Miles Gurtler is a Park Ranger with the Bureau of Land Management in Moab, UT.*





## Hydropower License Summaries

by Rupak Thapaliya, National Coordinator  
Hydropower Reform Coalition

Do you know of a hydropower project that is in your backyard or on a river you love? If so, did you know if the project is not owned by the federal government (such as Bureau of Reclamation or Army Corps of Engineers), it needs a federal license (or exemptions) which dictates how the project is to be operated? Well, if not, now you do.

Hydropower licenses, which are issued by the Federal Energy Regulatory Commission (FERC), contain “license conditions” which will determine the operations of the project, including how much water should pass through the dam, how endangered species are to be protected, how fish migration is to be facilitated, or how recreational boating is to be facilitated. Hydropower licenses are often very long, technical and difficult to understand. Although they contain very important information that affects the public interest, they are difficult to find and interpret. For this reason, Hydropower Reform Coalition (HRC) and River Management Society (RMS), with the valued assistance of consultant Susan L. Taft, partnered to summarize such licenses into a short summary highlighting important resource related provisions of the license.

As continuation of the first pilot conducted in 2013, we produced eight more summaries bringing the total to fourteen.

The six new summaries were prepared for the following:

- Missouri – Madison projects (Missouri and Madison rivers, Montana)
- Mystic Lake project (West Rosebud Creek, Montana)
- Hyrum project (Blacksmith Fork River, Utah)
- Boundary Dam Project (Pend Oreille River, Washington)
- Wilkesboro project (Yadkin River, North Carolina)
- Green Island project (Hudson River, New York)
- Henry Jackson project (Sultan River, Washington)
- Badger-Rapide Croche project (Fox River, Wisconsin)

The summaries are publicly available on the HRC’s website at <http://www.hydroreform.org/hydropower-license-summaries>. The map below shows the projects for which we have produced ‘license summaries’ so far.

We thank the Arches Foundation that provided the support for this project which will be immensely helpful in understanding complex licenses. We hope that these summaries will enable the members of the public to understand the license and provide a handy tool for river managers as they manage rivers impacted by hydropower generation. ♦

*“The project summaries have been an incredibly helpful and educational tool -- individually they explain the work being done at the local level, while collectively they communicate the much bigger picture of hydropower reform. And they’re perfect for connecting with a broad range of audiences, from lay person to researcher to policymaker and everyone in between. Thanks so much for making them available.”*

—Duane Elling, Communications Officer  
Charles Steward Mott Foundation

*“Hydropower licenses are enormously complex and full of important but opaque details. These license summaries are a huge help for river stewards that want to identify the opportunities for improving river health that might be hidden in a FERC license. They do a fantastic job of simplifying complex issues, making them accessible to a broad set of stakeholders. Instead of digging through hundreds of pages of source documents, I can read one document that explains clearly what the license does and where I can go to find more information in the source documents about the issues that are most important to me and my organization.”*

—John Seebach, Senior Director  
American Rivers

# Colorado Water Plan Poses Difficult Questions

by Hannah Holm

How will Colorado share the Colorado River? How much irrigated land will be dried up to slake the thirst of growing cities? How far should the state and local governments go in requiring residents to conserve?

These are some of the questions that will be addressed in Colorado's statewide water plan, which is currently under development. In May of 2013, Gov. Hickenlooper issued an Executive Order directing the Colorado Water Conservation Board (CWCB) to develop a draft plan by December 10, 2014, which is to be finalized by December 10, 2015.

The Governor directed the CWCB to work with numerous parties to carry out this task, including "Basin Roundtables" of stakeholders in each of the state's major river basins, as well as the Denver metro area. Colorado's Basin Roundtables were formed to do bottom-up water planning by the Colorado Water for the 21st Century Act in 2005.

Why does Colorado need a water plan? Recent statewide water supply studies have indicated that the state's population is likely to double by 2050, leading to a gap between the Colorado's developed water supplies and growing urban demands that could exceed 500,000 acre-feet/year by the middle of this century. The biggest gap is anticipated in the South Platte River Basin, home to Colorado's largest cities. Climate change could exacerbate the situation. A central challenge for the water plan is to fill the gap in a way that matches Colorado's values. That's a tough nut to crack.

The easiest way for cities to fill that gap is by taking it from agriculture, which currently accounts for about 85% of the water consumed in the state. But there's a heavy price to pay for continuing to rely

on that approach. "Buying and drying" of agricultural water rights has already devastated some rural communities, and most stakeholders agree that this should be minimized in the future.

East Slope Basin Roundtables have been arguing that, in order to preserve irrigated agriculture, it's important to preserve the option to develop additional West Slope water supplies. West Slope Basin Roundtables point to environmental and economic impacts already felt from the roughly 500,000 acre-feet/year already transferred across the divide each year.

Neither drying up irrigated agriculture nor putting another straw into the Colorado Basin would be necessary if urban users reduced their consumption sufficiently.

More than 60% of the natural flows of the Upper Colorado River above Kremmling, for example, are diverted to the Front Range, impacting both Grand County building permits and gold medal trout streams.

Another concern is that increased depletions from the Colorado River and its tributaries would increase the risk of failing to meet legal obligations to downstream states. If downstream flow obligations are not met, water rights junior to the 1922 Compact between Upper Colorado River Basin states (Colorado, Utah, New Mexico and Wyoming) and Lower Colorado River Basin States (Arizona, Nevada and California) on how to share the river could be curtailed. If that means cutting off urban taps, it could set

off a mad scramble for senior agricultural water rights on the West Slope.

Neither drying up irrigated agriculture nor putting another straw into the Colorado Basin would be necessary if urban users reduced their consumption sufficiently. But achieving that isn't easy either. Updated fixtures and education campaigns are a good start, but conserving enough to eliminate the need for other water sources would likely be impossible without the broad application of land-use and landscaping restrictions that may not be politically palatable.

There are no easy answers to the state's large-scale water challenges. Creative solutions may yield some "win-win" solutions to meeting future water needs, but increasing conflict is also possible. The Basin Roundtables are required to submit plans for their own basins to the CWCB in July of 2014, and then the CWCB has the unenviable task of pulling them all together into something cohesive by December. The final shape taken by the individual basin plans, and what the CWCB then does with them, will provide a strong indicator of whether it is possible for all the regions of the state to develop a unified approach to a challenging future. ♦

*Hannah Holm is a Coordinator for the Water Center at Colorado Mesa University.*



# Reducing Water Used in Colorado to Produce Electricity

*Water Smart Power, Union of Concerned Scientists (UCS) July 2013'*

**Water is used to generate electricity primarily to cool power plants** from overheating. Water use varies across the country, and far more is withdrawn from rivers and consumed to cool plants in the wetter Midwest and Northeast than in dryer Texas and the Southwest. By 2050, the UCS report estimates that 460,000 af could be saved annually in the Southwest with energy smart practices.

The Water Smart path shows that **future demand can be met through efficient energy practices** described below, and that **80% of demand can be met by renewable sources**, primarily wind, solar, and geothermal; UCS p.4. Change is happening already, as US electricity produced from coal has dropped from 50% in 2007 to 35%, and is now matched by natural gas (30%) and wind and solar (5%); UCS p.13.

**Colorado water used to produce electricity could decrease 90%.** Water withdrawals and consumption are already slated to decrease by 2050 as coal-fired electrical plants retire or are retrofitted to burn natural gas. However, far more water

can be saved by adopting energy efficient practices and by producing electricity from solar and wind energy; see UCS Appendices C1 and C2 on pages 45-46 (see table below).

**More water is needed to cool electrical generating plants when it's hotter.** Texas was trucking water to power plants to cool them during the 2011 drought, the worst since records began; UCS p.1. Temperatures are predicted to rise 1.4 to 3.1o C by 2050, and extreme droughts like the 2011 drought in Texas are deemed 20 more times likely to occur; UCS p.12, Env't Defense Fund blog Aug 8, 2013.

**The UCS report is based on two models:** (1) ReEDS, the Regional Energy Deployment Systems model developed by the National Energy Renewable Laboratory, estimates power generation by fuel type in 134 regions throughout the US; and (2) WEAP, the Water Evaluation And Planning system developed by the Stockholm Environment Institute, which uses climate-driven simulations of water supply and demand to estimate basin-wide and local water use tradeoffs amid changing water conditions; p.17.

**Future electricity demand can**

**be met by more efficient practices, and renewable energy sources that essentially need no water can produce 80% of our energy needs.** The table on the following page is from Reinventing Fire, 2011, by Amory Lovins, founder of the Rocky Mountain Institute in Basalt.

**Natural gas is not problem-free.** Gas wells deplete rather quickly, so new drilling is constantly required. Industry studies indicate that 92% of the shale gas and tight oil wells are located in regions of extremely high water stress, and **water used in gas development is essentially taken from agriculture.** The Colorado and Yampa-White Roundtables are updating their 2010 Energy-Water Study because industry now estimates that 20-40 af is required per well for horizontal drilling, up from 2-4 af estimated by the earlier study. At that rate, 20-40,000 af or more is required to drill 1,000 wells, in line with annual drilling permits issued in Garfield County alone from 2005-2009.

Natural gas is essentially free of sulfur and metal emissions, and it releases little nitrogen oxide (NO2). However, it still produces carbon, continuing to heat our atmosphere, and a 2010 MIT study describes its environmental impacts as

<b>Water used for electricity production in Colorado – estimates vary widely</b>	<b>UCS estimated withdrawals</b>	<b>UCS estimated consumption</b>	<b>SWSI 2010 estimated consumption</b>
2010 – Current practices in acre feet	245,000	70,000	64,000
2050 – Business as Usual – natural gas generates 60% of electricity	214,000	40,000	143,000
2050 – Maximize energy efficiency. Use solar, wind & geothermal sources, with natural gas used for peak loads	15,000	6,000	?

<p>Make buildings more efficient. Buildings consume 42% of America's energy, more than any other sector, and 72% of its electricity and 34% of its natural gas; Reinventing Fire (RF), page 82, 86. Energy use can be reduced by (1) installing energy-smart controls that turn off lights when people leave the room; (2) using efficient technology such as LED lighting, window reglazing, efficient air conditioners, and smart thermochromic windows that reflect heat in the summer and admit more in the winter (p.87-92); (3) changing behavior by telling consumers and building managers how much energy they use (p.94, 107); and (4) getting architects, engineers, contractors and building owners to use integrative design practices to design buildings to use less energy (p.95, 107).</p>	<p>2050 building energy consumption can be 15% lower than 2010 consumption</p>
<p><b>Make industry more efficient.</b> Even though the industrial sector is projected to grow 84%, it can reduce 9-13% of total energy now consumed by 2050 (p.128) by: (1) <b>labeling light switches</b> (it saved \$30,000 at one power plant the first year; p.134); (2) <b>using more efficient motors</b> and right-sized electrical <b>wire, pipes and boilers</b> (p.135, 140); (3) <b>co-generating waste heat</b> (p.136); (4) <b>integrative design</b>, as Texas Instruments did to reduce energy use 38% at a chip-making plant (p.143); and (5) <b>more efficient manufacturing processes</b> such as 3-D printing that reduce waste products (p.155), using electron beams to dry textiles and car paint (which now use 12% of industrial energy; p.150), remanufacturing to re-use products such as refrigerators and copiers instead of throwing them away (p.154).</p>	<p>2050 industrial energy consumption can be 12% lower than 2010 consumption</p>
<p><b>Change the way we make, use and move electricity.</b> 94% of today's coal –fired electrical generating plants will retire through sheer old age (p.174). On-shore wind alone could generate 9.5 times as much electricity as the US used in 2010 (p.189, FN 564). To accomplish this, (1) <b>Produce electricity with solar, wind, geothermal, biomass, small hydro, and existing hydro-electrical generating dams</b> – they can produce 80% of US electricity in 2050 (p.187); (2) <b>reduce power shortage risk by distributing wind and solar</b> installations across the landscape rather than concentrating it as we now do in massive power plants far from population centers to minimize citizen pollution concerns (p.196); (3) <b>install smart devices</b> that let citizens and businesses purchase and use power when it is cheapest, such as from 12:00 to 5:00 AM (p.196); (4) <b>change utility billing practices</b> so they make more when less energy is delivered.</p>	<p>Overall electricity use could decline 40% from current levels by adopting efficient practices; p.211.</p>

**We can produce 80% of our energy from renewables.** Renewables using commercially viable technologies that exist today could produce over 20 times the electricity used in the US in 2010; Reinventing Fire, p.189. It's already happening in Europe—in 2010, four German states, totaling 10 million people, relied on windpower for 43-52% of their annual electricity needs. Denmark supplied 22% of its power from wind in 2010 (26% in an average wind year). The Extremadura region of Spain is getting up to 25% of its electricity from solar, while the whole country meets 16% of its demand from wind; Reinventing Fire, p.199.

**We have to make a choice** – we can't pursue all options simultaneously according to Amory Lovins; Reinventing Fire, p.216. Big central thermal plants are too inflexible to play well with renewables, since they find it difficult to accommodate the variable energy supplies produced by renewables. Across Europe and the US, central-station dependence is not compatible with efficiency-and-renewables performance, because the former crowds out the latter in finite budgets and policy spaces. We have barriers that artificially promote fossil-fuel energy production and disfavor renewables—photo-voltaic systems installed in Germany in 2010 cost about 56-67% less than comparable US systems, despite using the same technology; Reinventing Fire, p.216.

**This is a question of policy.** US energy production is characterized as a one-size-fits-all top-down approach, and changing it will require starting from the bottom up. Embracing efficiency and renewable energy sources would save water, reduce carbon, limit environmental contamination and, in the long run, cost less.◆

“manageable but challenging”; Reinventing Fire, p.233.

**The Colorado Oil and Gas Conservation Commission database has recorded 4,662 spills** since 1998, of which 1,073 have impacted either surface water or groundwater.<sup>2</sup> Elevated levels of benzene were found in Parachute Creek in April 2013 following a leak of 10,000 gallons, only 6,000 of which have been recovered. Nearby wells report benzene levels of 18,000 ppb, greatly exceeding the state health standard of 5 ppb. Parachute's irrigation diversion is only 2.7 miles downstream from the leak.

<sup>1</sup> This executive summary was prepared by Ken Ransford, Esq., CPA, and is not part of the UCS report; kenransford@comcast.net, 970-927-1200, 132 Midland #3, Basalt, CO 81621, Oct 6, 2013.

<sup>2</sup> Water Constraints on Energy Production: Altering Our Current Collision Course, Synapse Energy Economics, Inc., September 12, 2013, study prepared for the Civil Society Institute, p.49.

# 2013 Moab Daily Access Program



*Durango Adaptive Sports helped put a former Grand Canyon river guide, John Supon, back on the oars. With the use of an adapted frame, and the company of Ann Marie Meighan, John was able to row a raft for the first time since the accident that left him paralyzed.  
Photo: Adaptive Sports Association*

by Jennifer Jones

What was once a pilot program is now a permanent Access Program! In 2011 and 2012, the Bureau of Land Management's Moab Field Office partnered with the Utah Outfitters and Guides Association, Utah State Parks and Utah Sovereign Lands to implement and conduct a program aimed to increase recreational boating opportunities along the Colorado River. The pilot program was opened to adaptive sports organizations and educational institutions. They were encouraged to apply for one week periods during which the groups could conduct as many, or as few, launches as their program may require. The program was a success and, therefore, was adopted in 2013 as a permanent Access Program.

In 2013, the program was expanded and an additional 13 weeks were added to include the spring and fall shoulder seasons. In total there are 35 one-week launches available through the Access Program, May through November. Applicants are encouraged to visit our website in order to obtain the BLM, Utah State Parks and Sovereign Lands permit application forms and program specifics: <http://www.blm.gov/ut/st/en/fo/moab/recreation/accessibility/moabdailypilotprogram.html>

During the 2013 season, nine groups participated in the program. There were 127 individuals who had a chance to experience the scenic stretch known as the Moab Daily. Although many trips were one day in length, three groups conducted overnight trips in which the participants had the opportunity of camping along the banks of the mighty Colorado River. ♦



## A Simple Idea!

by Greg Trainor

I often get comments about the two green tennis balls I have tied to the port and starboard side of the bow on my raft. Years ago, I picked up this idea from a friend.

He told me they were a place to rest his oar blades when he was not rowing. Tied to the "chicken line" surrounding his boat, they were exactly at the place where his oar blades would rest if his oars were extended parallel forward from his oar locks.

Taking a stiff clothes hanger, he snipped off the hook of the hanger, straightened out the hanger, and made a small loop at the very end of the hanger. An enlarged needle. Hooking an 8-inch piece of nylon cord through the small loop, the needle was pushed into the tennis ball and through to the other side. The finished product looked like this: ---O---. Then each end of the nylon cord was tied to the "chicken line" with a couple of half-hitches, suspending the tennis balls on both sides of the bow.

Although some rest their oar blade between the spare oar and the boat, using the tennis ball method provides a convenient resting place, on both sides of the boat, to keep the blades out of the water when in camp, as well as off the rubber tubes. ♦

# National Park Service and Bureau of Land Management Complete Virgin River Comprehensive Management Plan

by Kezia Nielsen and Tracy Atkins

On March 30, 2009, passage of the Omnibus Public Land Management Act of 2009 added approximately 163 miles of rivers and streams of the Virgin River to the National Wild and Scenic Rivers System. In 2010, Zion National Park and the Bureau of Land Management (BLM) St. George Field Office began the comprehensive river management planning process for the river segments. The purpose of the Virgin River Comprehensive Management Plan (CMP) is to protect and enhance the free-flowing condition, water quality, and outstandingly remarkable ecological, scenic, recreational, and cultural values of the Virgin River and its tributaries for the benefit and enjoyment of present and future generations. The need for the plan is rooted in the Wild and Scenic Rivers Act, which requires comprehensive planning for designated rivers to provide protection

of the free-flowing character, water quality, and outstandingly remarkable values of rivers. This plan establishes overall management direction for designated wild and scenic river segments within Zion National Park and the adjacent BLM Wilderness. The CMP addresses resource protection, development of lands and facilities, user capacities, and other management strategies necessary or desirable to achieve desired resource conditions and the purpose of the Wild and Scenic Rivers Act.

The Virgin River corridor is unique in that it encompasses significant portions of a watershed, rather than just one river. It includes 41 separate river and tributary segments. These tributaries flow across National Park Service (NPS), BLM and a small portion of private lands. Since the majority of the designated river corridor is on NPS land (about 144 miles), NPS led the joint plan development. BLM retains management within their administrative

boundaries. The NPS has worked closely with the BLM to ensure the plan is consistent with the Wild and Scenic Rivers Act and the Interagency Wild and Scenic Rivers Coordinating Council.

Public involvement was an important component of the planning process. The public provided input during open house sessions and through written comment. Public comment identified issues and opportunities concerning the protection of the Virgin River and its outstandingly remarkable values and on providing recreational opportunities along the river corridor. Input received during public scoping was fundamental to developing the management strategies to protect and enhance river values and provide for appropriate visitor use and enjoyment.

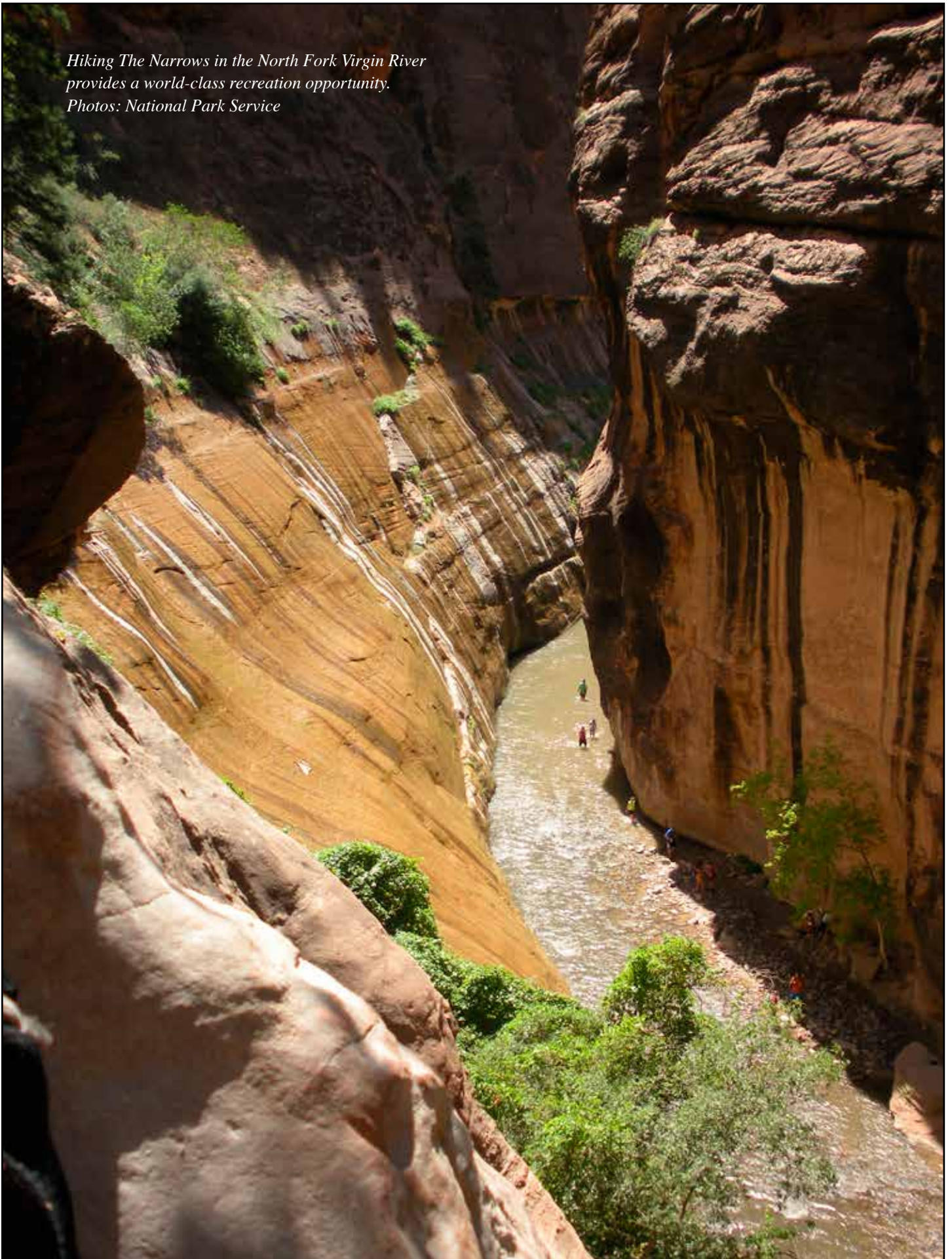
The river corridor will be managed with an emphasis on resource protection. Recreational activities that are compatible with resource protection strategies will be available throughout the park and on BLM-managed lands. The Virgin River and its tributaries will be managed to maintain or enhance recreational opportunities—public uses will continue to be allowed unless there is a clear need to limit use. Educational and interpretive opportunities will also be enhanced for both natural and cultural resources. The agency staff will develop new connections through education and would build advocacy. Relevance will be maintained through use of new technology for media and outreach. The NPS and BLM will continue to be open to new recreation experiences compatible with protection of river values and provide a diversity of experiences for a variety of abilities, interests, and cultures. The NPS and BLM will actively manage visitor areas to maintain use levels or allow a small increase in use while protecting river values. ♦

*Taylor Creek in Zion National Park*



*Contacts: Kezia Nielsen, Planning and Compliance, Zion National Park, (435) 772-0211 and Tracy Atkins, Project Manager, Denver Service Center, (303) 969-2325*

*Hiking The Narrows in the North Fork Virgin River provides a world-class recreation opportunity.  
Photos: National Park Service*



# MANAGING RIVERS in CHANGING CLIMES

TRAINING TOMORROW'S RIVER PROFESSIONALS · APRIL 15 - 17, 2014  
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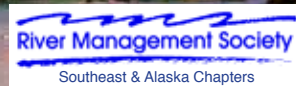
*Hermit*



*Hance*



*Granite*



*Bed Rock*



*House Rock*



# Recapturing the Best of the 2014 RMS Symposium

by Jane Polansky and Risa Shimoda

Thanks to everyone who attended the 12th biennial RMS Symposium in Denver, Colorado, April 14-18, 2014. For those who could not attend, here's a brief recap of the event. The Denver Renaissance Hotel was conveniently located near several local attractions and provided excellent service. Food was a hot topic mainly because it was so good and plentiful. Our sponsors, keynote speakers and silent auction showcased innovation and captivated audience interest. Top auction items included a raft, hydro flask, and fascinating trips to great destinations.

This year's symposium included two one-day, pre-conference workshops which successfully drew individuals from different venues to the symposium. RMS partnered with Continuing Legal Education International to provide a well-attended standalone workshop conducted by established legal experts and attorneys who provided excellent information about recreational use statutes, case law, and 404 permitting to an audience including attorneys, RMS members, consultants, engineers, and government officials. RMS also partnered with Plans & More, LLP, a Tennessee based organization certified by the national Association of Flood

Plain Managers, to provide training for local government officials and insurance providers whose responsibilities include flood plain management. Both programs provided members of their respective organizations CEC's for attending, and opened the door for additional future training opportunities.

Many of the presentations covered typical program tracks, but this year a few new tracks were added. These included a legal and legislative track and a professional development track. The latter focused on engaging youth in river management and introduced the new *River Studies and Leadership Certificate*. In addition, Wednesday night's program was a testimony to the benefits of engaging youth in river management. Four young adults in grades 7-12, enrolled in a statewide program entitled Colorado Preserve America Youth Summit, reminded us all of how the youth of today are impacting communities, the legislature, and our future.

Everything about the symposium meshed, right down to the program theme *Managing Rivers in Changing Climes: Training Tomorrows River Professionals*. Those who arrived on Sunday for the pre-conference workshops were greeted

by below average temperatures, rain, sleet, and snow. By Monday afternoon there was no evidence of a wintery mix but cool temperatures remained throughout the week providing sunny but chilly conditions for Wednesday's field sessions. Trips like the Arkansas River Whitewater Park float trip, and FERC Form 80 field session lasted all day while other shorter trips focusing on reclamation efforts provided opportunities for those who chose to cycle or paddle the South Platt River or tour the Rocky Mountain Arsenal to also engage in afternoon educational training programs including Chainsaw Safety In/On Water and a Paddle Sports Accessibility Workshop.

Thanks to everyone's support, the symposium was a success and attendance was much higher than that of 2012. Due to our outreach efforts presenters, panelists, sponsors, students and field session volunteers added to our registered attendee ranks resulting in a total of nearly 200 participants! The symposium planning committee learned a lot about the reality of introducing an innovative smart app designed to navigate attendees through the conference. Additionally, the committee found that asking presenters to provide a copy of their presentation early eliminated the expense of hiring an IT individual to download presentations on computers during the conference and allowed for every conference attendee to receive a jump drive containing the presentations in their registration packet.

In closing, the symposium provided exceptional learning and training opportunities for attendees, and more importantly, provided an environment for networking and socializing with friends. Special thanks to the many members who were unable to attend but supported the organization by donating auction items, from awesome maps and camping gear to trips to Hawaii and Idaho, and a Jack's Plastic Welding 'Culebra'.

I sincerely hope you and every member continue to support RMS by actively participating in chapter events, future symposiums, or other RMS functions. Spread the word about your experiences with the River Management Society and encourage others to become involved. Hope to see you next time! ♦

Corita Waters, Walter Opuszynski, Joe Moore, Kevin Carr at the ACA Adaptive Paddlesports field session. Confluence Park, South Platte River. Jane Polansky is the Scenic Rivers Administrator for TN State Parks.



# RMS Symposium Field Sessions



**Top:** The floating boardwalk along Lake Mary Trail is part of more than nine miles of hiking trails within the Rocky Mountain Arsenal National Wildlife Refuge designed to provide visitors with an opportunity to connect with nature in one of the largest urban wildlife refuges in the country.

Photo: Jane Polansky.

**Middle left:** Paddling on the South Platte River toward downtown, with Elitch's Gardens Theme Park ahead.

**Middle right:** Randy Thoreson, Ericka Pilcher, Cassie Thomas, Lelia Mellen at Confluence Park.

**Bottom:** Jon Novick discusses the water quality monitoring program he supervises for Denver Department of Environmental Health to Ally Conner, Bill Overbaugh and Peter Boyer. Photo: Corita Waters







**Above:** Spectacular backdrop to Class II+ section of the Arkansas River, upstream of Salida, CO. Photo: John Kreski. **Left:** As the Sand Creek Trail met the South Platte River, our bikers passed Metro Wastewater (not visible) on river left and cooling towers from Xcel Energy's Cherokee Generating Station on the right. Cherokee Station is a coal-fired, steam-electric 611 megawatt generating station. Early in-channel infrastructure at Confluence Park (five miles upstream) utilized a pre-existing ditch to send flow to this plant as a coolant.. Photo: C. Waters. **Right:** Groundwater treatment facility operator describes how groundwater, from former U.S. Army chemical weapons manufacturing facility and former Shell Chemical Company producer of agricultural chemicals, is treated to meet Federal/State standards. Photo: J. Polansky



# River Studies and Leadership Certificate



Conducting a river studies class at the Nankoweap cliff dwellings in Grand Canyon. Photo: Joel Barnes

by Gigi A. Richard, Ph.D, Joel C. Barnes, Ph.D, and Risa Shimoda

The River Management Society (RMS) is proud to be partnering with a select cohort of five universities and colleges to offer the *River Studies and Leadership Certificate* (RSLC) program. It was debuted at *Managing Rivers in Changing Climes: Training Tomorrow's River Professionals* April, 2014 in Denver, Colorado by RSLC faculty advisors Gigi A. Richard and Joel C. Barnes. RMS is the awarding body for the *River Studies and Leadership Certificate*, which is awarded to students upon the completion of approved river-focused coursework and a river-related professional project.

The *River Studies and Leadership Certificate* program was conceived with a vision that a new generation of young leaders is essential to create a brighter future for our nation's rivers. The certificate is designed for undergraduate students who have become inspired to join the next generation of river professionals with a foundation of knowledge, skills and experience in river-based science, policy, conservation, education, and recreation. The Utah State University, Colorado Mesa University, University of Utah, University of Idaho and Prescott College each offer courses that fulfill the certificate requirements. Faculty from these institutions collaborate with students to design and complete a personalized academic program that empowers them to address the real world challenges facing our nation's rivers. Each student's program is vetted by industry professionals, practitioners, and academics from both RMS and the partnered institutions.

As a part of the RSLC program, RMS offers students exciting opportunities for professional networking and collaboration. Students are encouraged to use RMS as a source for their river studies and professional networking. Each student receives a one-year RMS membership, which includes a subscription to the RMS Journal and access to national and regional chapter events (e.g. chapter floats, river field trips and workshops, swiftwater rescue courses, etc.), and are invited to

attend either the RMS Symposium or the River Management Workshop (held on alternate years). Conference registration fees are waived for RSLC students, and scholarships are available to help defer other expenses.

The coursework required by the *River Studies and Leadership Certificate* Program is focused specifically on river systems, yet it is interdisciplinary in nature; students explore and study river systems in ways that integrate the life and earth sciences, policy and conservation, sociocultural and economic factors, as well as education and recreation. Ultimately, the RSLC adds valued focus to a student's degree and presents employment advantages through networking with the River Management Society. The program is structured as follows:

**Core Courses (4 courses)**—Students must successfully complete approved courses in the following subjects:

- Geographic Information Systems (1 course)
- River Science (1 course)
- River Policy (1 course)
- Swiftwater Rescue (1 course)

**Emphasis Courses (2 courses)**—Students must take at least two approved courses from ONE of the following emphasis areas:

- River Science
- River-based Policy and Management
- River-based Recreation, Education, and Tourism

## Professional Experience Requirement

In order to enable students to become effective leaders and river professionals, one of the requirements of the River Studies and Leadership Certificate is that "learning must be applied in a professional context." This requirement may be met through a credit-earning internship, paid internship, paid professional experience, independent study or course-related professional

experience. The experience must encompass a minimum of 90 hours of work (or 2 credit-hours) and will be reviewed and approved by the River Studies and Leadership Certificate Committee to certify satisfaction of the professional experience program requirement. Students with relevant, recent professional or internship experience may request that those experiences be used to fulfill this requirement.

### Oral/Written Presentation Requirement

Students are required to either present aspects of their work at an RMS Symposium or sponsored conference, or write an article for the RMS Journal about their experiences.

### Learning Outcomes

- 1) Students will have a working knowledge of Geographical Information Systems with potential application to river systems.
- 2) Students will have a working knowledge of the basic physical and biological environment and processes of river systems.
- 3) Students will have a working knowledge of river safety and rescue, and basic river navigation and travel, including river-based Leave No Trace.
- 4) Students will choose an emphasis within river studies and take courses that support that specialization.
- 5) Students will acquire hands-on experience with river-related project(s) via an internship, professional employment or independent study.

### RSLC Standing Committee Membership

River Management Society: Risa Shimoda

Colorado Mesa University: Gigi Richard

Prescott College: Joel Barnes

University of Idaho: Tammi Laninga

University of Utah: Daniel McCool

Utah State University: Robyn Ceurvorst

The RSLC Committee encourages other institutions to participate in the certificate program. Requirements involve a review of their course offering, membership in RMS and the advisor's enthusiasm for providing students an opportunity for academic breadth in pursuit of a professional path serving our nation's rivers. Learn more about the *River Studies and Leadership Certificate*, the participating institutions, and specific courses offered to fulfill the certificate requirements at [www.river-management.org/river-studies-and-leadership-certificate](http://www.river-management.org/river-studies-and-leadership-certificate). Please contact RMS with any questions, feedback and suggestions that can help us grow awareness of the program and participation by additional colleges and universities. ♦

*Dr. Richard is a Geology professor and Faculty Director of the Water Center at Colorado Mesa University in Grand Junction, CO. Dr. Barnes is the Graduate Assistant Teaching Program Director and faculty member for Advanced Education and Environmental Studies at Prescott College in Prescott, AZ. They have been instrumental in developing the River Studies and Leadership Certificate, and are the academic advisors for RSLC students at their respective institutions.*

*The knowledge and skills that make river travel safe and environmentally low-impact is fundamental to the RSLC. Photo: Joel Barnes*



# RMS Symposium — Evaluation Feedback

by Helen Clough

*Excellent training! Great work on it! Worth my time, effort and money! See you in two years!* These were among many favorable comments received in a survey of attendees after the event. *Engage a more diverse crowd, and younger river professionals.* This was a suggestion for the future. *The requirement that presentations be submitted one month prior was strange and onerous.* This was among the few complaints.

This article summarizes surveys completed by people who attended the 2014 Denver training symposium. Over 150 people registered for all or part of the event, and 48 of those responded to the follow-up survey.

Most people reported they were very satisfied with the symposium; only three people said they were not satisfied. On the positive side, participants said the content was excellent, the presenters and instructors were good. One individual said, *“I will join RMS based on the quality of presentations I saw, and the backgrounds of folks represented in the membership.”* Some felt the number of concurrent sessions was too many for the size of the group, while others liked the diversity of subjects covered and the small group sizes in breakout sessions. The formal training programs (continuing legal education, floodplain management, wild and scenic rivers, national environmental policy act, FERC Form 80, and hands-on river training) generally received high praise from participants. Lack of moderators for some sessions and the short amount of time for some presentations were criticized.

The decision to go green and eliminate a paper program (instead, using an “app” that worked on mobile devices and laptops) was not popular with many attendees. About a third of the respondents *“loved the app,”* about a third used it *“some,”* and the rest didn’t use it or didn’t care for it. Many people commented that they needed more information about how to access and

use the app. Most participants liked the complimentary flash drive with most presentations and said they would use it in the future.

Seventy-one percent felt the registration cost was *“just right”* and 29 percent felt the cost was *“too high.”* Most respondents felt the length of the symposium was *“just right.”* Of those surveyed who attended field trips, most rated them highly and several recommended RMS continue field sessions as part of future symposia. A typical comment was, *“Excellent on the ground learning and experience. Keep the field sessions, best learning tool to see and experience first-hand.”*

Some thought the hotel was too expensive. Some commented that the location was remote from other Denver attractions. Others liked the location and liked the hotel. All comments about the food were positive; though some were confused as to what meals were included with the registration fee.

A sample of answers to three key questions in the survey follows.

## ***What aspects of the training were the most useful or interesting?***

- Access to and input directly from FERC staff on Form 80 regulations
- Depth in specific topics, like NEPA
- Field trips
- Safety “Close Encounters” training
- A “tool box” on best practices
- National River Recreation Database was very interesting and holds great potential for RMS and partners
- Wild & Scenic Rivers track
- The side discussions I had with presenters and other attendees, as well as the networking
- Keynote speakers were excellent

## ***What aspects of the training were most unproductive?***

- Too little time, presenters were cut short – some didn’t have time to talk
- Some parts of the field visits were chaotic; could have been better organized and focused

- Too many large presentations, not good for interaction
- Too many sessions at one time, more time to network
- Having chapter meetings at lunch time – too rushed
- Low attendance
- Evening activities not well advertised
- FERC Form 80 disappointing

## ***Do you have recommendations for future planning committees?***

- More time for presentations, questions and answers
- Reach out to more consultants that do work for federal and state agencies to increase membership and participation
- Pair up with other organization(s) for conferences
- Maybe have one or two more general sessions for everyone to attend—something that applies to and will benefit all
- Engage college/grad students
- Provide a live feed or webinar for both participants and panelists who can’t make it

## ***Recommendations for topics for future symposia/training/workshops***

- Sessions on FERC hydropower relicensing spanning overall process, study implementation, management plan development, expectations and case studies
- Wild and Scenic River case studies
- Visitor capacity training
- Developing monitoring programs
- Restoration projects
- Leveraging funding
- Throughout the conference the prevailing view was that of the recreational boater — there should be more dialogue with and not just talking about other users
- Offer required training for FS, BLM along with the typical breakout sessions
- Training tracks were right on, keep getting certifications for chainsaw, personal safety, NEPA, Form 80, legal, etc.
- Invasive species

- Technology, planning
- Anything hands on
- A few sessions dedicated to pique the interest of agency line officers [managers]
- Partnerships, putting together a complete river package (i.e., folding in management techniques with use involvement)

What comes next? The Board of Directors will be taking the results of the survey, recommendations from Denver 2014 committee members and others, and on-going dialogue and be making a decision at the June board meeting on what our next steps will be regarding future workshops/symposia/and other in-person activities. Concurrent with decisions related to future events will be a discussion of how to continue to fund RMS. In the past, the biennial symposia were the primary source of funding to support RMS. If you have suggestions about future activities or how to fund RMS, please provide these to Executive Director, Risa Shimoda, or any board member. Contact information for National and Chapter officers can be found on the inside front and back Journal pages. ♦

**Information on Survey Respondents**

RMS Member	Yes - 55%	No - 45%
Length in attendance	All 3 days - 73%	Less than all 3 days - 27%
Employment	Federal	46%
	State	17%
	Regional/Local	7%
	Non-profit	11%
	Private Sector	15%
	College/university	4%
	Student	0%
	Retired	0%



**Notes from RMS Presentation**

Corita Waters and Lelia Mellen led a short (30 minute) session during the RMS Training in Denver on the newly produced “*Prepare to Launch!*” that was created jointly with NPS Rivers, Trails and Conservation Assistance Program and RMS.

With our limited time, we quickly moved through who the publication is geared towards, the general layout of the document: the topics covered in each chapter and how it is organized, and what *Prepare to Launch!* includes which the earlier version (*Lasting, Logical Launches*) did not (mostly more pictures, more examples, more designs and a different organization).

A number of the participants in this session had seen the document, so we quickly went into how river managers envision using the document and if it seems like it will meet their needs.

The participants basically were very pleased with the new format, number of pictures and examples. They were excited to begin using the publication with the public.

We did get feedback suggesting more information, which included:

- Add case examples and pictures that are the highest need, for example, urban and accessible
- Address staging areas (capacity/sustainability, and examples/discussion about large events (300+), especially for special events rather than daily use)
- Show pictures of the good, bad, and ugly launches — to help form a complete picture
- Show different types of accessible launches — how the sites are used, and more examples
- Universal design for waterway launches (potential model and description of the access)

While we are going to let *Prepare to Launch!* continue ‘as is’ for the moment, we do welcome input into how the document is working for managers.

If someone wants to help develop a moderated forum or sharing site, please contact us to collaborate. We could add more images from partners and managers, and share more stories of designs, installations, longevity, etc. ♦

# Wild River Academy

Wild River Academy (WRA) was honored to speak at the RMS Denver training about their Mississippi River Expedition: *Paddle Forward* and to connect with RMS members. Meeting people at RMS was like meeting people along the Mississippi River: people shared similar work efforts and common goals of improving the state, raising awareness, and increasing accessibility of fresh bodies of water.

One of the WRA presenters, Martha Brummitt, was surprised at how few young people were in attendance. Martha thinks that the RMS community and conference would benefit the younger generation of environmentalists and outdoor educators. Likewise, bringing in a younger generation to RMS will strengthen the longevity of projects that RMS members are involved in. She believes that just like on the Mississippi River, communities of people doing parallel work ought to know about and collaborate with other agencies in order to improve outcomes. At RMS, Martha attended a session on map-making which focused on using ArcGIS, an expensive software with a performance high level. She hopes to take advantage of this technology and also learn more about using common softwares such as Google Maps or Google Earth. At another talk, Martha enjoyed learning about the collaboration happening among the five federal agencies to enhance the experiences for public lands visitors.

Anna attended a number of sessions, including how to submit an alternative in the NEPA process, a session about water use in energy production, and how to write an environmental impact statement. On the surface, these sessions do not seem as though they are directly related to leading educational canoe trips, which is what she does at Wild River Academy. However, in each session, she gleaned relevant facts and insights. On WRA's canoe trips, groups paddle right past power plants, and to be able to talk about what these facilities do and how they utilize the river will be something she can share with participants on trail. The session about writing an EIS statement was a great reminder of the power of NEPA, and the dire importance of protecting it.

The greatest lesson from the weekend is one that Anna never tires of hearing, and that is the need of people and entities with seemingly little in common, to come together to find a shared solution. The leader of the session about how to submit an alternative in the NEPA process, emphasized that every decision is made by a person. Therefore, working together to find inclusive solutions can be much more effective, inexpensive, and better for a community than litigation. Whether it is breaking down silos amongst Federal agencies, or ranchers and environmentalists sitting down and talking to each other, collaboration has proven over and over to be highly effectual.

Along the Mississippi River we connected with an organization called *I Mississippi* which aims to connect land trusts, conservations groups, environmental clubs, paddlers, and anyone else protecting the Mississippi River and watershed, uniting these common efforts and promoting collaboration. Martha and Anna felt energized at RMS as they met members from all parts of the U.S. who shared common goals of improving and protecting fresh bodies of water. They felt supported by other people's interest in their Mississippi River expedition and look forward to more collaboration in the future. ♦



Martha Brummitt (left) and Anna Johnson at the RMS training in Denver, CO. Photo: Bunny Sterin



Paddle Forward crew on their last morning at mile 149 (from the Gulf) in Paulina, LA, at the home of the Poché family, who gave them a warm, hospitable welcome. Left to right: Winnie the dog, Erika Gotcher, Anna Johnson, John Hartzheim, Lee Vue, Nick Ryan, Liz Just, Eric Immler, Natalie Warren, Martha Brummitt, Sarah Schaefer, and Sami Pfeffer. Photo: Poché family



Paddling south to Grand Rapids, MN, where we approached our first industrial plant along the marshy banks of the narrow river. Photo: Martha Brummitt

To listen to podcasts produced during the trip, visit:  
<http://www.wuwm.com/paddle>

# Letter to FERC Management

“ Thank you for enabling the Form 80 Training in Denver last month, in conjunction with the River Management Society training event. As you know, the National Park Service (NPS) has wanted to participate in the licensee workshops since their inception.

Most of the NPS Hydropower Assistance staff were able to attend the session in Denver. We found it extremely beneficial to better understand the approach FERC is taking to improve the quality of Form 80 submissions by having licensees explain the methodologies they use to estimate recreation use and facility capacities.

The major highlight was the interaction among licensees, consultants, FERC, NPS and other resource agency staff. There was rich discussion of robust methodologies for addressing capacity issues, much of which goes beyond the Form 80 requirement, but is sometimes integrated into Recreation Management Plans that include desired conditions, indicators and standards to protect biophysical and social conditions, and monitoring.

As a result of the training, NPS staff has been able to work with some licensees and help to explain the significance of the information requirements.

Please consider including NPS in future FERC initiatives and training to improve the quality of recreation information and management at hydropower facilities.” ♦

— Joan Harn, River Programs Manager  
NPS/Conservation and Outdoor Recreation Programs



*Above: The Standley Lake management staff provided an overview of park facilities and management objectives. It is important to understand how a site was designed, and how a site is managed, when determining capacity and creating a strategy to quantify use.*

*Below: Confluence Park in Denver (located where Cherry Creek joins the South Platte River) was selected so that participants could compare a high use park space in a densely populated urban area to the suburban environment of Standley Lake. Estimating recreation capacity at a paddling facility is more difficult than estimating capacity at a boat launch or a campground.*

*Photos: Randy Thoreson*



# Using Chainsaws In Water

by Sean Fleming

I grew up in the heart of Minnesota where people spend almost as much time on lakes as they do on land, whether through fishing and watersports in the summer or snowmobiling, cross country skiing, or hiding in ice fishing houses in the winter. Other than the Minnesota River and the Mississippi, rivers were rarely talked about or sought as recreational destinations. But in 2013, I had the blessing of working for the Conservation Corps of Minnesota on their Water Trails Crew, a roving, four-person crew dedicated to clearing logjams, snag trees and campsite maintenance. Each week, our crew traveled to a different region of the state and worked on a new river. I became immersed in the great veins of water that fed the lakes, watered the farms and fed the forests.

Over my summer of service, it was easy to see how rivers could evade much attention. They're good at hiding—concealed in the shade of towering trees, sliding under interstate bridges where commuters glimpse only a fragment of their beauty, always changing to follow the easiest course. A river's fickle nature presents obstacles to pleasurable recreation—campsites flood in the spring, trees topple and span entire river ways, and logjams and debris can plug an entire channel. This is where our crew specializes. We make sure channels are navigable for canoes, kayaks and jon-boats, while building lasting campsites and maintaining launch sites and portages.

After my year of conservation service, I had the pleasure of being invited to Denver to attend the River Management

Society's biennial symposium. Along with Minnesota DNR employee Erik Wrede, I demonstrated techniques to safely use chainsaws in water to remove river obstructions without sacrificing wildlife habitat. Local arborist company, Arborforce, assisted us by staging a snagged Siberian elm on Cherry Creek, a tributary of the South Platte River just outside of urban Denver.

I hope I was able to share valuable information with other river managers. In return, what I took away was the blessing of witnessing the broader scope of recreationists, conservationists, politicians and public works employees who face the threat of flooding, droughts, pollution, and ecological devastation. Forums such as the River Management Society's symposium are crucial to swapping information and connecting river enthusiasts regardless of what region we hail from.

Although it's in a river's nature to humbly hide in the landscape, meander through valleys, tuck beneath trees, and in some areas disappear beneath the ground entirely before emerging again, we certainly don't want our rivers to disappear entirely, either physically, or from our consciousness and consciences. Water issues are more visible than ever before, and will increase as our populations increase and our climate changes. Humans and rivers face an uncertain, but hopeful future, making it even more important now for natural resource agencies and advocacy groups to focus on promoting recreational use of river ways. The more people enjoy sustainably using a resource, the more they care for that resource's future. ♦

*Arborforce, a specialty arborist service working with Denver's Urban Drainage and Flood Control District, demonstrated tips and techniques applied to cutting submerged wood. Photo: Eric Wrede*





*(Executive Director, continued from page 2)*

Should we be crestfallen by admitting a myopic perception? Heck no: we clearly have a ways to go and appreciate Martha's candor and perspective.

**Providing a networking forum across agencies, non-profits and industry.** While our program has become more prescribed so we can respond to specific training needs, the networking opportunity is still an important reason to attend the biennial training symposiums. You'll see in the survey summary contributed by Helen Clough that the feedback was very positive, and reinforces the value of in-person networking. The following from Jon Novick, Environmental Public Health Analyst for the Denver Department of Environmental Health who was a presenter and led the bike tour of the South Platte River, offers what we always hope to hear from attendees:

*The Symposium was really a different take on things when compared to how I typically think about the river. It's nice to get a feel for what other communities have to deal with. I thought the mix between presentation and field sessions was pretty cool – spend a day in class, a day looking at what you heard about, and a day back in class – and worked really well. I really wasn't that familiar with the River Management Society and so was surprised at the mix of Federal, State, and local agencies, consulting companies, and non-profits / watershed groups. It's always nice to see collaborative efforts like that.*

**Managing urban rivers.** As rural rivers are drained to support urban development, aquatic invasives and hydropower prospects demand more awareness, and other issues shrink the landscape, collaborative management of urban rivers are reaching farther into policy and practice. Some of our programs and most of the field sessions offered best practices and examples of impressive restoration and improvement on rivers and lakes in and adjacent to the City of Denver. Jon also helped put the challenges and opportunities into context:

*Since we are in an urban area, there are many issues that we have to deal with that smaller communities don't need to be concerned with - water quality in the context of recreation, flooding issues – both in neighborhoods and in terms of maintaining the channel to prevent flooding, and protection of infrastructure within and adjacent to water bodies. Likewise, we don't have Wild and Scenic Rivers and do not deal with NEPA, for we own much of the stream bed and adjacent land and don't rely on Federal funding to get work done. On the flip side, water rights are a huge issue in Colorado. So how do I see river management defined when it works well in an urban setting like Denver's? Here's my ideal – I haven't seen it yet, but we're slowly getting there:*

- *Collaboration between local, state, and federal agencies, non-profits, citizens, and local businesses to address problems in and to maintain area water bodies*
- *Sufficient (good) water quality and enough instream flows to sustain a viable fishery, aquatic and riparian habitat, and recreational amenities, and;*
- *Regional rules and regulations which prevent encroachment on the flood plain / floodway and which require treatment or removal of pollutants, including trash, before they reach the river.*

This is just one person's take, but it reflects a scenario of holistic management that because of its complexity might serve as a model for rivers whose banks are owned by a dozen instead of thousands of landowners and whose flow comes from rain or snow instead of effluent. Tackling water quality, quantity and 'who controls the valves' are important for river planning of any sort and scale. We welcome incorporating them into the 'regular' course of discussion, as complex and daunting as it seems. Your comments are always welcome! ♦

## A Boater's Right to Float

by Lori Potter

**True or false?** When a boater puts in on public land, floats through a stretch of private property without touching the bed or getting out of the boat, and takes out on public land, there is no violation of the law.

In most states, this is unconditionally *true*. But, the exceptions keep boaters and their advocates busy.

Currently, the legal rights of boaters to float through private property are perhaps most unsettled in Colorado and Utah. In 2010, Utah's legislature overturned the legal right to float, but the situation remains in flux with both pending litigation and renewed proposals for new laws. Colorado has had a controversial history on this issue, but its legislature also rejected protections for the right to float during the 2010 session.

The majority of states recognize a right to float through private property on one of any number of legal grounds, however. Some have state law-based definitions and protections for navigable waterways, and treat them like public highways. Some states regard access to rivers as a public trust resource, permanently available to all boaters, or protect access under their state constitutions. And, some states uphold federal navigability standards. Boaters should use local resources to check the latest status in any area they plan to float. ♦

*Lori Potter was the program chair for the RMS continuing legal education day-long seminar on River Management Law (April 15, 2014) in Denver. In addition, she presented on the law applicable to floating through private land. Ms. Potter is a partner at Kaplan Kirsch & Rockwell LLP in Denver, Colorado. Contact: lpotter@kaplankirsch.com.*

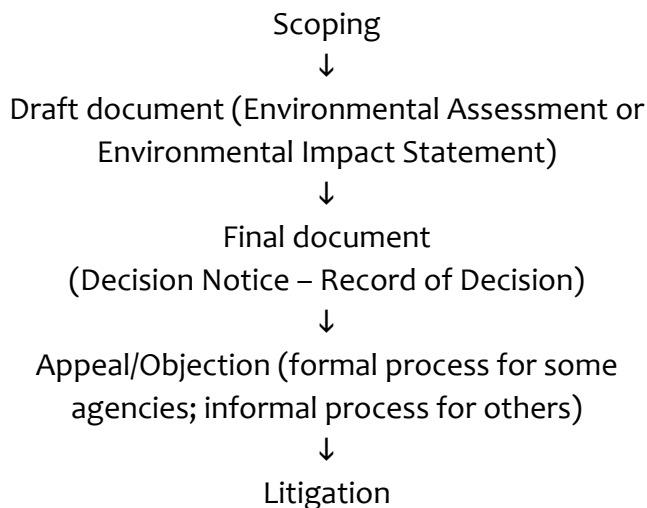
# Alternatives — The Heart of the National Environmental Policy Act Process

by Mary O'Brien

The National Environmental Policy Act (NEPA) became law on January 1, 1970. Among other things, it requires that agencies “study, develop and describe appropriate alternatives” as part of considering the effects of proposed actions on the quality of the human environment. NEPA regulations (40 Code of Federal Regulations 1501.7) provide that the agency invite “interested persons (including those who might not be in accord with the action on environmental grounds)” to participate in the process. The concept described in this article is that there is an alternative to every “bad” project or project feature and you (interested and informed individuals and organizations) can write and submit that alternative. You can show the agency a way to a better idea. While not every good idea has a chance, an environmentally, psychologically, and socially attractive proposal can change or greatly improve on an initial proposal.

Scoping, usually the beginning of the public involvement process for a plan or project under NEPA is your moment. It’s the beginning of the process and is the best point at which to provide your comprehensive, reasonable alternative, rather than near the end of the process when a draft environmental assessment or environmental impact statement has been released for public review.

**Figure 1. Public Input Steps in the National Environmental Policy Act Process**



As soon as you decide to prepare an alternative, let the agency know you will be sending an alternative. Get the information you need fast – collect relevant data, visit the project site, and provide your alternative using the agency’s outline or format. Assemble your own interdisciplinary team. Decide on criteria to use for developing your alternative. Recommended criteria might be the following: reasonable (legally required), feasible, science based/technologically sound, cost effective, will result in “lesser harm” to environmental health, and psychologically attractive – in essence, your alternative should be all-around better than the one being proposed.

As you develop your alternative, run segments past agency personnel. Provide supporting documentation. List the significant issues and issues your alternative addresses vs. other alternatives. Ask for a meeting with the agency to discuss your alternative. Think about who might encourage the agency to analyze your alternative in their document and mobilize those individuals/organizations to assist.

When the agency releases its draft document, determine what happened to your alternative: Did the agency analyze your alternative? Was it analyzed well? Was your alternative eliminated from consideration in detail? If so, why? Was your scientific and technical information used? Before and during the public review process, mobilize support for your alternative. Supporters can include people influential with the agency. Use the media. The agency itself may support your alternative or key elements of it.

If parts of your alternative are adopted, don’t just go away. Make sure they are implemented and monitored. If possible, move your ideas into other relevant applications and agency policy.

What do you do if your alternative is ignored or changed? At the draft stage, remind them they should consider it because it is a reasonable alternative. Once a decision has been made, you can object or appeal if the agency has a formal process. Converse with the agency. As a last resort, if your alternative has been ignored or inaccurately analyzed, you might consider litigating. Also, be sure to bring up another good alternative in the next relevant EA or EIS.

Prior to an upcoming NEPA process, you might want to work to convene or co-convene a working group and invite the agency to attend meetings.. A working group may allow for solutions beyond current agency processes, or address the issues in a broader context. A working group that represents differing interests may be able to resolve conflicts so the agency’s eventual proposed action will be broadly accepted. Federal agencies are able to attend working groups convened by diverse interests. While agencies are barred by law from making decisions in meetings with such groups, they are not barred from listening to proposals, or responding to questions with maps or other data. Good, informed ideas are good ideas, no matter what the source. Even if the working group has a defined set of regular members, the meetings should be open to interested members of the public to observe.

There are good examples of non-government interests having their alternatives considered. The Pacific Northwest Region (Washington and Oregon) of the Forest Service adopted nearly all of a least herbicide alternative developed by a citizen group. The Hells Canyon National Recreation Area Comprehensive Management Plan adopted major features of a Native Ecosystem Alternative developed by 12 conservation partners, including two tribes that saw reductions in grazing and roads.. In a recent decision on oil and gas development on the Roan Plateau, a court indicated the BLM must consider an alternative for extended

reach directional drilling that would avoid surface disturbance and had been submitted by a citizen group, Rock the Earth. A proposal to build a four-lane highway through wetlands near Eugene Oregon was dropped after a group of business, environmental, and local government agencies developed alternative traffic proposals.

The photographs below show one of the changes made in a federal agency grazing program after a two-year consensus collaboration which included the grazing permittees, followed up by three years of monitoring. Not only were major changes made in the grazing program; but significant recovery of native vegetation is being recorded.



Photos: Wetlands below Dipping Vat Springs, Fishlake NF, 2006 (above) and 2010 (below). The meadow was fenced in 2009.

In conclusion: NEPA gives you the rare opportunity to propose just how a project in which a federal agency is involved should be developed.. Use this opportunity, and the chances are the project will be improved, and the environment will be treated with greater care. ♦

Mary O'Brien is the Utah Forests Program Director for the Grand Canyon Trust. She presented this material at the recent "Managing Rivers in Changing Climes" RMS Workshop in Denver, Colorado.

## Your Alternative:

### The Law, Regulations, and Concept

#### The Law: National Environmental Policy Act

Section 102(2)(C)(iii), 42 USC 4332(C)(iii)

The "detailed statement" (i.e., now called an environmental impact statement (EIS)) for proposals for legislation and other major Federal actions significantly affecting the quality of the human environment must include, *inter alia*, "alternatives to the proposed action." [Emphasis added.]

Section 102(2) (E), 42 USC 4332(E)

Agencies shall, "study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources."

#### The Regulations: The Council on Environmental Quality Regulations implementing NEPA; ([www.nepa.gov](http://www.nepa.gov)) Part 40 Code of Federal Regulations Sections 1500-1508

Sec. 1502.14 Alternatives including the proposed action

"This section is the heart of the environmental impact statement. . . . it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public. In this section agencies shall: . . . Rigorously explore and objectively evaluate all reasonable alternatives . . ."

Section 1507.2(d)

"Study, develop, and describe alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources. This requirement of [NEPA] section 102(2)(E) extends to all such proposals, not just the more limited scope of [NEPA] section 102(2)(C)(iii) where the discussion of alternatives is confined to impact statements."

#### The Concept: Potential criteria for your alternative:

1. Reasonable
2. Feasible
3. Science-based
4. Cost-effective
5. "Does no harm" to environmental health
6. Psychologically attractive
7. Better

**Essential: Work with the agency.**

# Kyoto Protocol

by Mick Krussow

Recently on a shift change night at Sandwash Ranger Station my peers and I were talking shop around a fire. As river rangers we regularly chat with boaters and try our skills during teachable moments. Sometimes the results of such talks have a beleaguering uncertainty. We speculated whether or not those talks ever

did have an impact on folks. I said that I thought those moments did have an impact on folks even if it didn't seem apparent at the time. I used the true story below to elaborate.

On a routine Desolation Canyon patrol I stopped to visit with a trip just upstream of Nefertiti, about 8 miles from the end of a week long rafting trip. The trip consisted of about 20 people and 8 or 10 boats. One of the boats had an elk antler they'd picked up near Three Canyon. Since collection of these objects was a violation of the trip stipulations, I wanted to chat with them.

I was rowing our BLM patrol boat we named *Maggie* after a wilderness specialist in the Utah State Office who helped to obtain the money to purchase the gear hauler. After I was done quizzing the trip participants about their trip, the trip leader, from SLC, said he had a friend that had a problem with the BLM and that he wanted to ask me a question.

I was fairly new to BLM, in my first few years of rangership. I was nervous about what the question would be, but naïve enough to be stoic and confident as Eli paddled up to the patrol boat in his inflatable kayak. I was standing up on the ridged floor and my 6'2" immediately felt uncomfortable as I stood above Eli. I sat on the tube so as to not tower over Eli. Eli looked at me out of the side of his eyes and asked me in a heavy Eastern European accent the following:

*"I would like for you: US Government to tell me how you: US Government can tell me to shit in groover, and put fire in firepan, but you: US Government will not sign Kyoto Protocol?"*

It was a good thing I sat down because my heart about stopped! When I started working for BLM it never occurred to me that someday I'd have to represent the entire government, even the parts I disagreed with. The day was quiet and still, the boats squeaked together as they spun in the eddy. My mind raced and 20 people waited for an answer. I began babbling something; I think I was empathizing with Eli. After spitting out a few words the answer came to me and I spoke with the conviction that only belief in my subject could have delivered.

I told Eli that despite much of the terrible reality of the world, that he was finishing a week passing through a river corridor where he'd seen nary a telephone pole worth of civilization. I told Eli that his trip through Desolation Canyon was



**"I would like for you: US Government to tell me how you: US Government can tell me to shit in groover, and put fire in firepan, but you: US Government will not sign Kyoto Protocol?"**

and to be encouraged that such places still exist where one can float for a week through the wilderness. Eli was still looking at me out the side of his eyes in a skeptical way. I smiled at Eli, thinking I'd given him a pretty good answer, but he was more stoic than I, glaring at me, as he turned his IK and paddled away. His trip followed and I sat by myself in the eddy wondering if I said the right thing. I felt like a big nerd and was embarrassed to continue downstream until they were way out of sight. I tied the *Maggie* boat and swam in the tepid eddy water of mid-summer. I went over the interaction in my mind and determined that I was unabashed about being a nerd. After all, rangers are supposed to be nerds.

The months turned to seasons and I forgot about my interaction with Eli until several years later. I was on duty at Sandwash Ranger Station when a boater knocked on the door. I went to the door and vaguely remembered the face, but couldn't place from where. He said "hello" like we were old friends, and asked me to come down to the river to say hello to some people. I grabbed the satchel and wandered down to the river where the SLC trip leader reintroduced me to his friend Eli, from Bulgaria. Eli approached me saying he was very glad to see me, and that he remembered what I said, as he held his two hands cupped like he was holding water. He said he thought about what I said, and that he agreed, so he brought his sons to see this, holding his cupped hands up again. One at a time, with his head held high, Eli proudly introduced me to his three sons from Bulgaria who he escorted here to see Desolation Canyon.

After Eli finished his introduction he left me speechless again. I told him the pleasure was all mine, but secretly my pleasure was standing witness to the full circle of change that this wild river canyon had just performed on one person. Through thick and thin, I have always known that my chosen work is for a good cause, but up until this point I hadn't witnessed the potential it could have first hand. After Eli's group floated away from Sandwash I went for a long walk to one of my favorite places to sit and think. I contemplated what I had just experienced. I was encouraged to know that even during times of beleaguering uncertainty that my work as a river ranger was good, in perhaps, more ways than I knew. ♦

indeed no substitute for an environmental statement like our government not signing the Kyoto Protocol, but that he must hold the experience of his trip in both hands. I held up my two hands like I was trying to hold water. I told Eli that he must hold his experience close so that none of it slipped away,

# Go Peacefully, and Hope it will be Quick

by Greg Trainor

I hesitate to write about fear. No one likes to be afraid. Few will even admit it. Admitting to something like fear shows that you might not be the person that you want others to believe you are. A “secret life” perhaps? But we all find ourselves in circumstances, at one time or another, when we have to face our fear. How we face that danger can be a learning experience, both for ourselves and for the people we find ourselves leading. Last summer, I was a volunteer on a seven-day river patrol in Desolation Canyon with rangers from the Price, BLM office. Desolation Canyon confines the Green River in north central Utah as it cuts through the Tavaputs Plateau on its way south to its confluence with the Colorado River.

It was a late summer season of constant rain and lightning storms. One evening, like the many evenings prior, black clouds rolled up the canyon, bringing with it severe lightning. Our camp was in the thick of it. It began as a barrage of lightning and the instantaneous thunder sounded like canon fire. We retreated. I lay in my tent, terrified. I knew that “this was it” - that it was only a moment before I would be struck by lightning.

I did the “counting” trick: “One thousand one, one thousand two”... No. There was no interval between the flash of lightning and bang of thunder. It was like being inside of a light bulb with someone constantly flicking the light switch off and on. I thought about how I would be found in the morning: tent smoldering, poles melted, a corpse curled up in a fetal position? Or, perhaps on my knees?

I rejected the “on-my-knees” position because I did not want my profile to be any higher than necessary. I settled on an “on-my-back” pose, hands folded over my chest, glasses and watch off. I had heard that when lightning strikes, anything metal gets burned into your skin. I could do nothing but lay there, totally helpless. I was unable to have any effect on the outcome of the night. I was a bug. I knew now what an ant felt like. As a kid, my cousins and I would take a magnifying glass and burn ants on the sidewalk. In the tent, I resolved NEVER to burn ants again.

As I lay in desperate contemplation, I knew my only response could be: “How would I face this fear?” What were my last thoughts going to be? Did I want the “Book of Life” to record “that he died overwhelmed, desperate?”

My thoughts moved back to a time one summer past. On a roller coaster, in an amusement park, as the cars slowly ascended up the first hill (you know the hill I’m writing about...), my daughter Molly, looking at my white-knuckled grip on the bar and my eyes tightly shut, leaned over and said “Face your danger, Dad!” I figured if a ten-year-old could manage this wooden, wobbling roller coaster, I could too.

Thus, I came to my resolve in Desolation, in the midst of my fear. A thought formed in my mind: **Go peacefully, and hope it will be quick.**

We alone control our thoughts.

We alone can resolve to go peacefully.

We can hope that it is quick.

Oh, and face your danger! ♦

*Lightning strikes over the lower Platte River between Lincoln and Omaha, Nebraska. Photo: Michael Forsberg*



# RMS Chapters

## Southeast by Mary Crockett

Every September in the Southeast, other regions of the United States, and in Canada, there are five person teams of high school students preparing for a unique competition called the Envirothon. This is a competition where teams of students compete against each other for a top score or points at six testing stations located in some very scenic settings as opposed to a classroom. The goal of Envirothon is to promote a desire within students to learn more about our natural world, so that succeeding generations will be more environmentally literate, and will possess the skills and knowledge to make informed decisions regarding the environment. This is achieved by teaching principles of resource management and general ecology to develop critical thinking and problem solving skills to students for a six station timed competition. Students are tested in their knowledge of forestry, soil science/agriculture, water/aquatics, wildlife, current topic and an oral presentation highlighting their skills concerning a topic that would involve a multidisciplinary approach. Each year, working professionals in the natural resource fields are asked to help judge the individual stations at our state level competition. South Carolina typically has 18-22 teams make it to the state competition in May. Yesterday (May 2nd), I helped judge the oral presentation station at the state competition, giving me a chance to hear the teams put all the disciplines to use convincing us to act on a particular subject

The SE Chapter will be electing new officers this year!

or topic. The topic this year had teams presenting their RFP (request for proposal or better known to many of us as a grant application) for funding to start an agricultural small business or 501(c)(3) nonprofit to address the food deserts of South Carolina in a sustainable manner. Students tried to convince us, a fictitious board of directors, to grant them four million dollars toward their effort. The presentations were original and some quite impressive. One memorable presentation revolved around reclaiming an abandoned golf course as a community farm with a local farmer's market store offering reduced retail (low price point) pricing for the produce.

What a great subject as we all have to find funds to complete our many projects during our natural resource careers. I am so humbled that a natural resource colleague sent in an award nomination knowing that I, along with a the team of lawyers, landowners, foresters, appraisers, and the Congaree Land Trust staff managed to win twelve grants for approximately eight million dollars to conserve twenty-one thousand acres of riparian land along many of the rivers in South Carolina. Thank you RMS for the recent award, *River Manager of the Year*.

The SE Chapter will be electing new officers this year and scheduling a late summer river trip. If you are interested in serving as an officer or hosting a trip, please get in touch. ♦

*Spartanburg Day School, first place winners in 2014.*



# RMS Chapters

## Southwest by Greg Trainor

Members of the SW Chapter were heavily involved in the biannual River Management Society Conference held in Denver in mid-April. They get credit from the Chapter for their interest and support of the Conference. Chapter officers Greg Trainor (President), Jason Carey (Vice-President), and Jennifer Jones (Secretary Treasurer) have been scattered across the southwest thus past quarter. Jennifer on many temporary assignments for the Bureau of Land Management, Jason on several water/kayak park projects that his firm is designing, and Greg Trainor, coming to grips with his recent retirement from the City of Grand Junction.

This City of Grand Junction has been a member of the SW Chapter of RMS for many years. Some have questioned “why?” The answer comes like this: First, was Greg’s interest in the mission of the River Management Society and his association with members of RMS: managers, rangers, recreational and fisheries specialists, hydrologists, and cultural resource personnel. Second, and most important, the City of Grand Junction recognized it’s impact and connection to the Colorado and Gunnison Rivers which run through the middle of this southwest community. The City has drinking water diversions from not only these two rivers but also from tributaries that feed these rivers. The City has wastewater discharges into the Colorado River. The City maintains water transmission lines that cross the Colorado and the Gunnison, bridges with abutments in the river, as well a recreational trails along the river corridors. The City also supports the efforts of the Tamarisk Coalition in their work to control invasive species along the river. Connected to these facilities are City public works, utility, and parks staffs that manage these facilities and functions.

These facts are duplicated across the country in any community that finds itself along one of our Nation’s rivers. These local government institutions and their staffs are fertile ground for RMS membership and, though unconventional, would have much to contribute to RMS.

The SW Chapter is in the middle of planning their Chapter float for June 17-June 24 on the Green River in Desolation Canyon in Southwest Utah. This will be a combined trip with the Utah BLM. Slots are still open, but the time is quickly running out. If interested, contact Greg Trainor, ptrainor7@msn.com. ♦

## Welcome New Members!

### Professional

Darren Beck, Project Hydrologist  
Leonard Rice Engineers, Denver, CO

Nancy Berlin Jones, River Ranger  
US Forest Service, Jackson, WY

Katherine Byrd, River Ranger  
Bureau of Land Management, Price, UT

Kirstin Heins, Outdoor Recreation Planner  
Bureau of Land Management, Bishop, CA

Andrew Irvine, Attorney  
Andrew A. Irvine, P.C., Jackson, WY

Nate Kluz, Lead River Ranger  
MT State Parks, Great Falls, MT

Christine Oschell, River Recreation Manager  
Montana Fish, Wildlife and Parks, Missoula, MT

Matthew Paquette, Senior Recreation Planner  
HDR Engineering, Inc., Truckee, CA

Chuck Tomkiewicz, Facility and Wilderness Manager  
National Park Service, Mosca, CO

Caroline Bradford, Fundraising Coordinator  
Understanding Water Resources, Eagle, CO

### Associate

Tami Fikstad, Planner  
US Forest Service, Joseph, OR

Tim Kramer, Environmental Planner  
URS Corp, Anchorage, AK

Marci Nielsen-Gerhardt, Hydrologist (retired)  
US Forest Service, Kooskia, ID

### Organizational

Jamie Mireau, Director – River Protection  
American Rivers, Washington, DC

# RMS Chapters

## Northwest Chapter

by Lynette Ripley

### Your 2014 River Trips

Here is your river trip lineup for 2014, so start planning to gather at the river and bring some new members along to introduce them to great river peers and the River Management Society! I would say a very attractive line-up!

A HUGE thank you to the Bureau of Land Management and Jim Mueller, Robin Fehlau, Ryan Turner and Lisa Byers for coordinating these spectacular trips for us!

### **Payette River** (Boise, ID)

July, 2014 (stay tuned for exact date)  
Day Trip on a Saturday.

Cost is your gas to get to the river.  
Hosted by Bureau of Land Management.  
Contact: Robin Fehlau, BLM Idaho State Office, 208-373-3825

### **Lower Salmon River** (Cottonwood, ID)

Four Day River Trip  
73 river miles (53 miles on the Lower Salmon and 20 miles on the Snake River).  
September 19-22, 2014.  
Cost is \$50 for food per person and cost of shuttle.  
Hosted by Bureau of Land Management.  
Contact: Ryan Turner, BLM River Ranger, 208-962-3687

### **Upper Klamath River** (Happy Camp, CA)

Three Day River Trip  
October 11-13, 2014.  
Cost about \$75 per person.  
Hosted by US Forest Service.  
Contact: Lisa Byers, BLM Ranger, 301-514-3124

## Calling All Interested Members To Become A Chapter Officer!

This year we will be holding our Northwest Chapter Officer's Election. This is an official election where all chapter members vote on the next set of officers in 2015-2017. If you are interested in running for a position or would like to nominate someone who you think would be perfect for an office, please contact me or one of your current officers. Any one of us officers will be happy to share the duties of our positions. All officer positions will be open for the next three year term, and we will be taking nominations and having elections this Fall.

We currently have four chapter officer positions which are:

President: Lynette Ripley  
Vice President: Jim Beaupre  
Secretary: Ryan Turner  
Chapter Events Coordinator: Molly Wainwright

Stay tuned for Northwest Chapter Officer position descriptions in the next journal or online!

Your Northwest Chapter Prez,  
Lynette Ripley (Bend, Oregon)  
541-389-6541 x233



*Lower Salmon River, Idaho*





## Alert! Log Jam on Lolo Creek

by Chris Goetz, Clearwater County Sheriff (May 2, 2014)

In August of 2013 the Incendiary Creek Fire burned approximately 1100 acres in the Lolo Creek drainage in Clearwater County, Idaho. Lolo Creek is the boundary line between Idaho and Clearwater counties and runs into the Clearwater River. In the spring of each year, Lolo Creek becomes a popular area for kayakers with most starting at the Lolo Creek Bridge near Weippe and ending at the Clearwater River.

During the fire last summer, several large trees fell across the creek completely blocking it. There were at least six trees completely across Lolo Creek and concern that more would fall across over the winter. There was also concern about rock and mudslides along the creek due to loss of vegetation from the fire.

Pictures and video were taken on September 12, 2013, and again on April 21, 2014, of the Lolo Creek drainage. Those pictures and videos can be seen at the following links:

Clearwater County Lolo Creek Video: <https://www.youtube.com/watch?v=-i1QpWioGg>

Clearwater County Lolo Creek Photos: [http://71.6.170.26/revize/clearwatercounty/visitors/lolo\\_creek.html](http://71.6.170.26/revize/clearwatercounty/visitors/lolo_creek.html)

The April flight over Lolo Creek found only a couple of problem areas where trees have fallen into the creek. The first area is approximately half a mile down from the bridge near Weippe. There is a complete blockage of the creek from trees. It is not possible for a kayak to go over or under this blockage. This blockage is on a fairly calm part of the creek and should be easily seen from up stream. The bank would allow portage around this blockage. The next blockage is from a single tree and appears that you could navigate around it. There are also several other trees that are currently sticking out over the creek and could become a problem during higher water or if they break off.

This information is being sent out so that those that want to kayak in Lolo Creek this spring are aware of these new potential dangers. One of the challenges of Lolo Creek for kayakers is the inability to scout ahead before starting down the creek. In the past this has caused difficult Search and Rescue Operations for Clearwater County when kayakers have gotten in trouble. Hopefully this information will help those wanting to kayak Lolo Creek this year make informed decisions with the new risk. ♦

*(Pack Raft, continued from page 1)*

are now producing a range of crafts from barely-more-than-pool toy rafts to expeditionary crafts and two person canoe-style boats, all generally under ten pounds. The compact size and light weight of these products is increasing the popularity of packrafts with families who don't want to load a kayak or canoe on their car rooftop and instead can have a fleet in their backseat.

### **Packraft Safety and the Advent of the APA**

With their ease of use and rising popularity, packrafts are potentially a great way to get in trouble on rivers. The stability of packrafts can allow first-timers to unwittingly enter Class III whitewater before they have the knowledge to handle the situation. While there have been surprisingly few serious packraft accidents the laws of physics are not repealed for packrafts.

A number of modifications have increased the relative safety of packrafts, including spray decks to keep water out of the boat, thigh straps to increase control and multi-chambered boats that allow interior loading. Skilled boaters now find packrafts, even loaded ones, easy to right in an Eskimo roll, reducing the hazards of swimming after a flip. Swiftwater rescue classes specific to packrafts are available at several venues across the U.S. and in other countries. These classes focus on elements common to all river travel, such as reading river features, understanding fluid hydraulics, knots and anchors as well as skills and techniques unique to packrafts.

In response to the rising popularity of packrafting, a core group of wilderness travelers and conservationists formed the American Packrafting Association in November 2012. The mission of the APA is to represent the packrafting community to promote conservation, safety, education and access. The organization now has 800

members in 30 countries and is managed by a board of directors and executive council of accomplished wilderness travelers and conservation leaders. The APA released a comprehensive Safety Code for packrafting and regularly hosts events to promote river safety and wildlands conservation.

In 2013 the APA was invited to the tribal regions of Meghalaya and Arunachal Pradesh in Northeast India to teach packrafting, swiftwater safety, and river stewardship. In this two-month expedition APA was able to expose thousands of people to packrafts, create opportunities for ecotourism and complete first descents of a dozen remote rivers. This highly-successful international outreach program is one that APA intends to expand to other countries.

### **Packrafts and River Management**

Packrafts seem to present river managers with new challenges. These little boats look like nothing more than colorful inner tubes. How can they possibly be safe for multi-day trips in remote areas on technical whitewater? The early reaction from some river managers was to ban packrafts or create complex rules that effectively banned them.

River rangers, though, soon discovered the effectiveness of packrafts as a management tool, allowing them to quickly access river segments on foot that might take days to reach by water. Steadily, most river managers are coming to see that packrafters are essentially backpackers with boats. Packrafters don't need (or want) hardened infrastructure such as boat launches, developed campsites or even trails. With interior stowage, packrafts are able to transport human waste and required items such as fire pans, medical kits and safety gear.

The point of packrafting is to travel light, fast and far. We like to believe that we are among the lowest impact forms of travel possible. We take our commitment to wildlands conservation seriously because vast wildlands are the birthplace of packrafts. Packrafts are a bit like wolverines, emblematic of big wild places.

One of the challenges for packrafters is the lack of



*The magical realism of packrafting comes to the Rio Zapotitlan in Veracruz, Mexico. Photo: Mike Curiak*

uniformity we encounter in river regulations pertaining to packrafts. Each river manager seems to be making up their own rules and regulations for packrafts, many of which are impractical or downright silly. We presume that some of this stems from the lack of familiarity with packrafts.

The American Packrafting Association is actively reaching out to river managers to help them understand packrafts and packrafters. We also are working the other way to share the concerns of river managers with the packrafting community. If you are interested in learning more about packrafts we can send our packraft ambassadors to you!

To learn more about packrafts, packrafting and the American Packrafting Association, please visit our website: [www.packraft.org](http://www.packraft.org). There you will find our trip forum, gear reviews, safety code, membership information, and information about our current projects. ♦

Brad Meiklejohn, President  
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# To Join RMS

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State \_\_\_\_\_ Zip \_\_\_\_\_

Home Phone \_\_\_\_\_

Organization \_\_\_\_\_

Office \_\_\_\_\_

Work Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Work Phone \_\_\_\_\_

Fax \_\_\_\_\_

Email \_\_\_\_\_

Job Title \_\_\_\_\_

Duties/interests \_\_\_\_\_

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Rivers you manage \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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- Professional \$50/yr (\$200 for 5 years)
- Associate \$30/yr
- Organization \$120/yr (government/corporate)
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- Student \$25/yr
- Lifetime \$500 (for individuals only)

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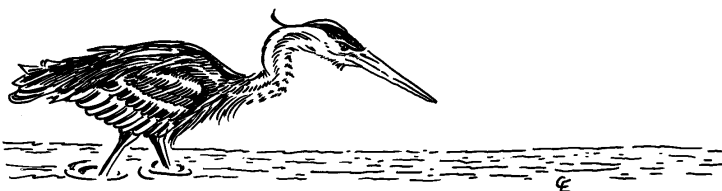
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Next Journal Deadline - Alaska Chapter Focus - Submissions due August 1, 2014

## Congratulations 2014 RMS Award Winners!

*L to R: Nancy Schweiger, Mary Crockett, RMS President Dennis Willis, Risa Shimoda, Angie Tornes accepting for Bob Martini (details inside). Photo: Bunny Sterin*

