



*Vehicles loaded with pontoon boats and floats are moved up in Remagen, Germany, by Engineers of 1st Army. (Courtesy of U.S. Army)*

## SOUTHWEST FOCUS

Colorado River Basin Study .....	4
Eagle County River Access .....	5
Partnerships and Restoration .....	6
Recreational In-Channel Diversions .....	7
River Users and Tamarisk Study .....	8
Nonpoint Source Pollution in WA .....	10
Yosemite River Plans .....	12
A Journey for Clean Water, Canada ...	14
Tennessee Valley Authority .....	18
RMS Pro Deal Program .....	24
WSR Video and Photo Contest .....	27

## “The History of Inflatable Boats and How They Saved Rivers”

by Greg Trainor

When I wrote to Herm Hoops (Jensen, Utah) indicating that I wanted to do a review of his “book on rubber boats,” he was quick to respond indicating that it was a documentary on inflatable boats. I purchased a copy a year ago (\$100) and was amazed at the depth of detail, history, and photographs depicting the rise and continued development of the inflatable boat industry. He has managed to collect hundreds of photographs, drawings, illustrations, and first person interviews of the key manufacturers and principals of that industry. He has traveled thousands of miles on his own dime and spent hundreds

of hours of his own time. This dedication was what prompted me to support his effort through the purchase of one of his first editions.

The documentary is bound in a large, three-ring binder with plastic pocket holders for the narrative and photographs holding histories going back to pre-Civil War times and up through the current period. I always thought that inflatable boats started with the Second World War and the post-war era. Not so. The most fascinating part of his documentary are the photographs of the United States Army

*(continued on page 17)*

**RMS Main Office**

Risa Shimoda, Executive Director  
PO Box 5750, Takoma Park, MD 20913  
Ph / Fax (301) 585-4677  
executivedirector@river-management.org  
rms@river-management.org

**National Officers**

Dennis Willis, President  
Price, UT (435) 650-0850

Linda Jalbert, Vice President  
Grand Canyon, AZ (928) 638-7909

Jorjena Daly, Secretary  
Anchorage, AK (907) 267-1246

Helen Clough, Treasurer  
Juneau, AK (807) 790-4189

**Ex Officio Advisors**

Gary G. Marsh  
Mountain City, TN (423) 768-3621

Randy Welsh  
Washington, DC (801) 625-5250

Dave Ryan, Legal  
Missoula, MT (406) 728-4140

Ken Ransford, Financial  
Basalt, CO (970) 927-1200

**RMS Listserve**

rmsmoderator@river-management.org

**Web Page Coordinator**

Cheston Crowser (406) 273-4747  
ccrowser@mt.gov

**Pro Deal Coordinator**

Scott Springer (541) 490-5289  
sspringer@usbr.gov

**Merchandise Coordinator**

Dan Haas (509) 546-8333  
daniel\_haas@fws.gov

**RMS Journal**

Caroline Kurz (406) 549-0514  
caroline@river-management.org

RMS is a non-profit professional organization.  
All contributions and membership dues are  
tax-deductible.

*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

### Welcome to RMS 2013!

We have been busy preparing for the 2013 Interagency River Management Workshop, *River Crossings: Linking River Communities*, where we look forward to seeing familiar faces and new professional friends. We thank many members for their contribution, especially Maile Adler, Judy Culver, Dave Schade, Troy Schnurr, Mike Wight, and Dennis Willis. The loudest shout out goes to Bunny Sterin, leader of the RMS effort and liaison with our primary agency sponsor this year, the Bureau of Land Management. Bunny and the others have been willing to step into the detail, many times. We are also thrilled to have had the opportunity to get to know our Tamarisk Coalition and Colorado Mesa University's Water Center partners: they are smart and industrious, and share our interest in growing a positive future for our nation's rivers.

Recently, we supported the Interagency Wild and Scenic Rivers Coordinating Council (IAWSRCC) *Introduction to Section 7 of the Wild and Scenic Rivers Act* webinars, two times each in December and January, for a collective audience of over 100 individuals. RMS helped project leads Randy Welsh and members Mollie Chaudet and Steve Chesterton with content development as well as production. As a byproduct, becoming familiar with Section 7 I think it could be a helpful management tool for managers on all rivers.

Current projects also include a Wild and Scenic Rivers awareness campaign and improvement of membership benefits to Organizational members: you'll read about both elsewhere in this issue.

**Summer 2013 RMS Journal:  
revisiting a popular break from**



**tradition.** Last summer, we devoted an issue to the topic of managing invasive species, on which we received extremely positive comments from members. You encouraged us to produce another 'topic-focused' issue, so we will:

**"Kids Today, River Professionals Tomorrow"** will take a look at opportunities we are creating to go beyond introducing a group of kids to the river, offering a first angling lesson or ride in a kayak. We as river professionals can serve young people uniquely by encouraging and mentoring their view of rivers as the backdrop for continuing studies; a platform for developing river skills; and a special place around which to build a career. Enabling even one young person's awareness of a potential professional river path contributes mightily to your organization, corporation, or agency, and will likely inspire others. If you know about programs or individuals sending kids and young adults to the river and providing avenues for them to pursue rivers as their future, submit an article or recruit a colleague to write about it! The deadline for the Summer 2013 journal is May 1st. If you have questions contact me or our journal editor, Caroline Kurz. ♦

Hope to see you downstream,

  
Risa Shimoda  
RMS Executive Director

# From the President

## Confronting a New Normal

New Normal: The term is recent, yet it is almost a cliché. It seems to be applied to everything from lying politicians to obesity. I was ready to abandon the term until a recent High Country News article slapped me with a genuine new normal affecting rivers and most everything we do as managers.

Our friends at the National Resource Conservation Service in the Department of Agriculture monitor the nation's snow cover. The agency reports the snowpack, its water content and references current conditions to a rolling thirty year average, referred to as "normal." This year, the agency presented us with a new normal. Until recently, normal was based on the years 1971 through 2000. Now normal is defined by the period 1981 through 2010. What this means for most of the west is normal is drier than it used to be.

Skiers complain about skinny snow despite snowpack that is at the new normal. The ramifications go far beyond snow sports and extend to irrigators, culinary water systems, river recreation, fisheries and wildlife. The town where I live was located in the semi desert climate zone; now it is in the desert.

The new normal makes good sense and is easily described on paper. The problem is it does not jive with the intuitive, gut sense of normal we all carry around. Take a look at the chart below from the NRCS.

The peak snow pack water equivalent is approximately 10% less under the new normal and the peak occurs earlier in the season. The story is much the same throughout the west with a new normal that is 5% to 12% drier than what we are used to.

Everyone interacting with rivers has to adapt to the new normal even though most people are unaware of it. For river managers, not only do we have to deal with lower flows, but lower flows will likely mean higher stream temperatures, affecting the fish and wildlife. Return flows to rivers from treatment plants are not likely to decline, so the concentration of ammonia and other pollutants will increase. We need to be prepared to identify and address the ultimate effects of the drier

climate in the already parched west.

One group aware of the situation and reacting to it is the consumptive water users. Already well entrenched in western law and politics, this group works overtime to assure its interests are protected above all others. There are a number of bills being considered in western legislatures that would do just that: Assure that water rights for consumptive use are recognized as an ownership property right that would trump water rights for non-consumptive uses like fish, wildlife and in stream flows. In Utah, the Director of the State's Natural Resources Division stated it would be preferable to dry up the Great Salt Lake, and its one billion dollar contribution the state's economy, and internationally significant ecological value, than to ask existing water users to give up any water. This willingness to annihilate a public resource rather than ask consumptive users to limit their use is akin to cutting down the last tree in the forest for fear of offending the timber industry by regulating their harvest.

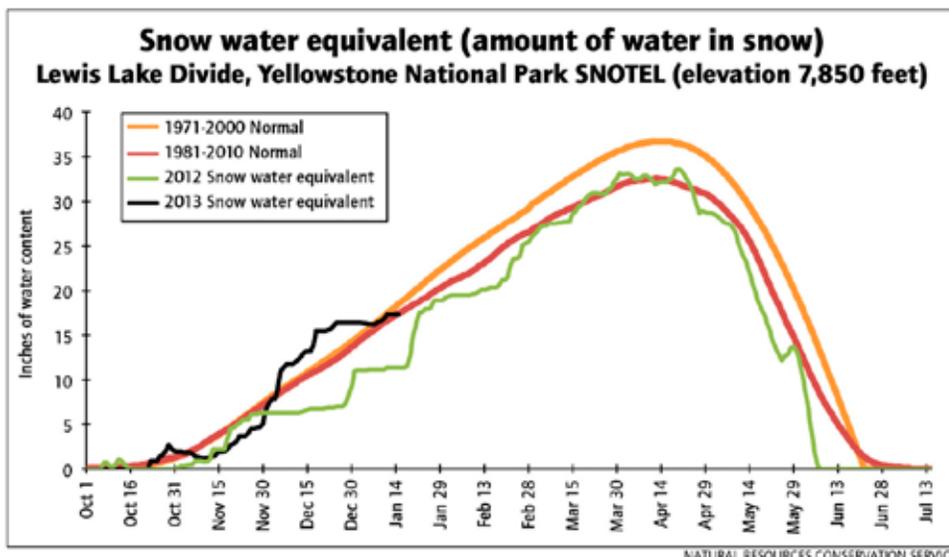
At the River Management Society, we believe rivers are public resources, best held in public trust, holistically managed for public benefit. We know rivers are not just a conduit for water and they are not to be treated like urban plumbing. Rivers are instruments of geomorphology, a sediment distribution system. They are critical habitats and migration corridors for aquatic and terrestrial wildlife. Any river has great cultural value enjoyed by ancients, in historical and modern times. Rivers connect us to the great outdoors, to the wild and untamed, a source of inspiration and rejuvenation.

Wherever you are, you are facing new climatic normals. It is not enough to be cognizant of the basic climate trends and have a strategy for dealing with them. You also need to know how the other players in your region plan to deal with them and realize their plans just might conflict with yours. Most of all you need your friends and allies. RMS wants to hear from you. How are your normals changing, and what are you doing about it?

To help face these challenges, we are preparing the next RMS Biennial Symposium. We will be meeting at the Renaissance Denver Hotel, April 15–17, 2014. Our theme for this symposium is *Managing Rivers in Changing Climes*. We will focus not only on the changing weather patterns but also the changing social, legal and political landscapes affecting you and the work you do. We expect your agency budgets will be tight.

The question on this symposium is not whether you can afford to attend; it is whether you can afford not to. ♦

Dennis Willis  
RMS President



# The Colorado River Basin



by Greg Trainor

John Wesley Powell, at the 1893 International Irrigation Congress meeting in Los Angeles, threw away his prepared notes from which he was to speak and addressed the assembly as follows:

*“When all the rivers are used, when all the creeks in the ravines, when all the brooks, when all the springs are used, when all the reservoirs along the streams are used, when all the canyon waters are taken up, when all the artesian waters are taken up, when all the wells are sunk or dug that can be dug, there is not sufficient water to irrigate this arid region. I tell you, gentlemen, you are piling up a heritage of conflict and litigation over water rights, for there is not sufficient water to supply these arid lands.”*

He reports that he was booed and that he was a “heretic in a church full of believers,” for he felt, from his irrigation surveys, that only about 4% of the public domain could be irrigated.

Now, 120 years later, confirmation of Powell’s warning is coming from the Bureau of Reclamation. Their end-of-year 2012 report, “The Colorado River Basin Supply and Demand Study,” confirms that by 2060 there could be annual shortages of between 3.2 to 7.7 million acre feet (MAF) of water. Employing the latest techniques in dendrochronology, paleo-reconstruction of historic hydrologic flows, and scenario-based approaches for water supply/demand futures, the Bureau has zeroed in on scenarios that describe likely outcomes and risks of a diminished water supply versus the projected demands for water from all sources. Increased competition for water from population growth, recreation, in-stream flows, fish flows, mining and energy, and continued agricultural usages are juxtaposed against the wild card of

drought and climate change. The outcomes are risky unless adaptation strategies are adopted. No one has said we ought to be thinking of packing our steamer trunks and moving East. Yet. But that possibility is not beyond our imagination.

Tree ring studies (dendrochronology) and reconstruction of historic river flows have pushed the flow data back to the 1500 and 1600’s.

The outcomes indicate that drought in the southwest is the rule and not the exception to the rule. Conversely,

actual recorded flows in the Colorado River back to the 1890’s and up through 2012, show that the year 1922, when the Colorado River Compact was negotiated, was in the midst of one of the wettest periods of history within the last 450 years. Climate is a “wildcard.” One of the most significant water policy decisions reached during the past 90 years was based on incomplete data, dividing up water that was not there before 1922 or after 1922, plus or minus a few years. Of course, methods have improved and capacity for data processing has increased significantly, so who can be blamed? But now that we have extended the record and increased the number of possible outcomes, are we to blame if we do not undertake actions to curtail demand and close this 3.2 - 7.7 MAF gap?

What are those actions? Increased conservation is one with a target to reduce per capita use by 40% by 2060. This can be done by increases in the cost of water or through continued and relentless education.

Augmentation projects like tamarisk removal, cloud seeding or desalination

## Supply and Demand Study

*No one has said we ought to be thinking of packing our steamer trunks and moving East. Yet.*

are on the books. The Bureau study also looks at pipeline projects bringing water to Colorado’s east slope from the Green River or from the Missouri River to Denver. But such projects carry a caution: you have to tap into reliable supply to begin with. You have to have water/snowpack to put into new reservoirs or new pipelines. A double caution: If new

supply is used to support growth, then when the next drought comes and the once-reliable supply is exhausted, the community

is in a worse fix, having added to their thirsty population base. Water transfers from agriculture to cities are possibilities. However, we may not have much control over a willing farm seller and a willing city buyer. “Buy and dry” should not be the only possible option. There are successful methods that allow for sharing between agriculture and cities. Renting and leasing in times of drought, paying farmers for lost profits, rotational land fallowing, and water banking are also on the list.

The gap is too large to be remedied by one approach. But increased conservation to drive demand below 90 gallons per person per day is a significant target and can be reached. Additionally, agricultural conservation is also a reasonable target. That is where the water is so let’s figure out how to stretch it. The study indicates that critical imbalances will begin to show by 2025 and, thus, the time required to start is now. ♦

*Read the full study at [www.usbr.gov/lc](http://www.usbr.gov/lc). Greg Trainor serves as the Secretary of the Southwest Chapter of RMS.*

# Eagle County Open Space River Access

by Toby Sprunk and Jason Carey, P.E.

Eagle County, Colorado, recognized the need to improve access to the Colorado River between State Bridge and Dotsero. While the river received more than 65,000 user days annually upstream from State Bridge, the 45-mile reach downstream received so little use it was not even tracked by the BLM. The County recognized that this discrepancy created congestion on the upper portion of the river and degraded the user experience, while the lower river was virtually unused. This situation resulted from a conspicuous lack of public access points downstream from State Bridge. The entire 45-mile reach was characterized by large tracts of private lands, dangerous public access points and the presence throughout the entire reach of an active railroad.

To address this concern, Eagle County embarked on an ambitious plan in 2011 to use Open Space Funds to acquire strategic properties along the Colorado River, to facilitate public recreational access and to conserve outstanding wildlife habitat, working ranches, senior water rights, and scenic vistas. Since this visioning process was completed, the Eagle County Open Space Program has permanently preserved more than 1,300 acres, including over four miles of river frontage, and developed boat

ramps and facilities at three new public access points between State Bridge and Dotsero. Development of two additional boat ramp sites and a river camping site, boat access only, is planned for 2013.

Partnerships have been critical to the success of this effort. These significant acquisitions were matched by \$3.96 million from Great Outdoors Colorado (lottery proceeds) through the Rivers Initiative Program. Three of the sites are managed jointly through formal agreements with the Bureau of Land Management offices in Kremmling and Silt, Colorado. Significant transactional contributions were also provided by The Conservation Fund and Colorado Open Lands.

This creative use of Open Space Funds has already had significant recreational and economic benefits for area residents, tourists, and outfitters and speaks to the power of creative thinking, ambitious planning, and successful partnerships. This unique undertaking of river recreation management at the County level will set an example for the nation.◆

*2-Bridges Eagle County Open Space boat ramp designed by RiverRestoration. Photo: Jason Carey*



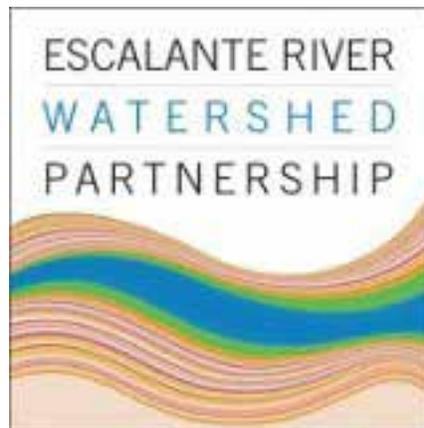
# Broad Partnerships Engage

## *in Large Scale Restoration Efforts on Southwest Rivers*

by Mike Wight

In 2013, hundreds of committed individuals will advance the effort to restore riparian habitat along river systems in the southwestern United States. Iconic waterways such as the Escalante, Dolores, Verde, Virgin, Gila and other rivers in the West have been impacted through years of proliferating invasive species. Tamarisk, Russian olive, tree-of-heaven, giant reed and secondary invaders such as knapweed and kochia are outcompeting native species along these rivers and impacting wildlife habitat, native plant diversity, prevalence of fire, access, and aesthetics.

While these problems are not new, efforts to manage them on a large scale are. Partnerships aimed at watershed-length habitat restoration have grown in scope and number in recent years, and these broad collaborative efforts engage multiple members to achieve impressive results. Conservation organizations such as The Nature Conservancy have teamed up with the spectrum of land managers, private landowners, state, city, and county governments, and non-profit resources like the Tamarisk Coalition to assess, plan, and ultimately, implement multi-year projects. Objectives extend to engaging local contractors, recent era veterans and conservation/youth corps to provide the workforce while stimulating local economies, creating jobs, educating participants and advancing conservation stewardship. Capacities are increased through engaging public funders and private foundations such as the Walton Family Foundation (Freshwater Conservation Initiative). Project work builds upon that of previous years to span traditional boundaries and achieve cohesive results.



Partnerships are glued together by mutual trust, common goals, and Memorandums of Understanding. Many partnerships are not formal entities themselves but groups of committed participants and organizations that share planning, fund development and implementation tasks. Much of the leg work in partnerships is completed by focused subcommittees that specifically address topics like project planning, funding, implementation, science and monitoring, outreach, and more. Subcommittees report back to the broader partnership at regular intervals in order to unify efforts and engage the gamut of participants. Public participation and input is welcomed.

This year, the Escalante River Watershed Partnership will guide crews and volunteers in the backcountry to treat Russian olive for the 4th year in a row. The Dolores River Restoration Partnership will engage corps crews and contractors to treat tamarisk and Russian knapweed, building upon 821 riparian acres treated thus-far. The Verde Watershed Restoration Coalition currently has crews on the ground, and will continue to connect with private landowners in the Verde Valley to advance contiguous treatment of giant reed, Russian olive, tamarisk and tree of heaven. Workforces in the Virgin River Southwest Willow Flycatcher Collaborative will continue work to restore habitat for this endangered bird species. The Gila Watershed Partnership will build upon many years of project work with increased implementation in the coming year. This is just a sampling of the growing partnerships in one region of the country completing meaningful restoration.◆

# Recreational In-Channel Diversions In Colorado

by Jason Carey, P.E.

Prior appropriation, the governing idea behind water law in the Western US, requires proof of a “beneficial use” of water to secure a water right. Since the 1800’s a “beneficial use” was generally thought of as taking water out of the river and using it for economic gain. 150 years of water development later, the west has a thriving river recreation economy. In Colorado, commercial whitewater rafting is a \$61 Million industry with a \$155 Million economic impact (<http://www.croa.org/media/documents/pdf/2011-commercial-rafting-use-report-final.pdf>). The outdoor recreation industry itself is a national economic giant at \$646 Billion in revenues and employing more Americans than any other industry ([http://www.outdoorindustry.org/pdf/OIA\\_OutdoorRecEconomyReport2012.pdf](http://www.outdoorindustry.org/pdf/OIA_OutdoorRecEconomyReport2012.pdf)). We river managers know that water is the key element of any outdoor recreation.

It seems obvious, but in 1992, the value of water for recreation had to be argued in front of the Colorado Supreme Court. In the end, the Court found that recreation constituted a “beneficial use” of water and, therefore, could be reason to secure a water right, protected under state law. This set off a 20 year legislative tug of war between traditional water developers and the new economy. The nuances of water law are state specific; Colorado’s laws around its newest beneficial use have become known as Recreational In-Channel Diversions or RICDs.

The legislative tug of war is due to the sheer volume of water that recreation can now legally secure in Colorado. Water rights up to 2,500 cfs have been claimed. These are claims of greater magnitude than have been made in the past and greatly inhibit ideas of endless future water development. The legislative battles have narrowed the applicability of RICDs only to human-made structures, designed for non-motorized boating, and can only be claimed by certain governmental bodies. A RICD helps to protect

the investment Colorado communities make in whitewater parks and the economic benefits associated with those parks. The unique attributes of RICDs are that they keep water in the river channel, they are non-consumptive, and they approximate the fluctuation of the natural hydrograph. These attributes also have the incidental benefit of keeping our rivers healthy with flow. ♦

## Pending RICD Applications

Grand County	
Hot Sulphur Springs	up to 900 cfs
Gore Canyon	up to 2500 cfs
Pitkin County	up to 2000 cfs
Town of Carbondale	up to 1600 cfs

## Decreed RICDs

Town of Avon	200 cfs, 350 cfs and 1400 cfs
Chaffee County	250 cfs up to 1800 cfs
City of Durango	185 cfs up to 1400 cfs
City of Longmont	50 cfs up to 350 cfs
City of Pueblo	100 cfs up to 500 cfs
Town of Silverthorne	100 cfs and 600 cfs
City of Steamboat Springs	95 cfs up to 1400 cfs
Upper Gunnison River	
Water Conservancy District	270 cfs up to 1200 cfs

## Pre RICD Recreational Water Rights

Eagle River Water and Sanitation District	400 cfs
Town of Breckenridge	500 cfs
City of Golden	up to 1000 cfs
City of Fort Collins	55 cfs

*Stephen Wright in Glenwood Wave,  
designed by RiverRestoration. Photo: Jason Carey*



# River Users' Response to Tamarisk Control

by Robyn L. Ceurvorst and E. Clay Allred

## Introduction

Tamarisk, or salt cedar (*Tamarix* spp.), is a prevalent invasive alien plant genus on the waterways of the Colorado Plateau.

To survive dry desert climates, tamarisk grows close to water sources, including thick groves along riverine corridors such as on the Colorado and Green Rivers. Some public land management agencies, such as the National Park Service (NPS) and the Bureau of Land Management (BLM), have employed

numerous efforts and resources to control invasive species and restore areas to a more natural state. Executive Order 13112 mandates federal agencies, where practicable and permitted by law, to take actions including preventing the introduction of invasive species, detecting and responding rapidly to and controlling populations of such species in a cost-effective and environmentally sound manner, and providing for restoration of native species and habitat conditions in ecosystems that have been invaded. Some methods used to control tamarisk have included manual removal (pulling trees and cut-stump methods), mechanical (mulching trees), chemical control (foliar herbicide application), biological control (the release of the tamarisk leaf beetle, *Diorhabda elongate*), and prescribed fire.

During the river experience, what do recreationists think about ecological resource management practices used to control invasive species?

This article provides an examination of social influences and implications of invasive alien species management in Canyonlands National Park river corridors. Tamarisk control methods applied in riparian areas support restoration of natural landscapes and quality visitor experiences. River users (n = 330) were questioned about their knowledge of tamarisk and preferences for tamarisk management on the Green and Colorado Rivers within the park. Aspects examined included overall knowledge of tamarisk, norms for different control method application options (e.g., cut-stump, tamarisk beetle, prescribed fire, mechanical), soundscape implications and desire for increased interpretation regarding tamarisk and related management. Findings revealed a lack of overall knowledge, levels of acceptability and agreement among users for most control method options minus the mechanical method, varied response to location of application, sensitivity to soundscape



Cairn above Colorado River. Photos: Robyn Ceurvorst

impacts in wilderness settings, and a major desire for more interpretive efforts regarding tamarisk management. Many respondents stated they supported tamarisk removal due to reasons that align with ecological health. A discussion of management and future research implications concludes the study.

## Background

While diverse methods are used to control tamarisk, public natural resource management

decisions may need to consider policy and social factors tied to visitor experiences. The National Park Service (NPS) mission, for example, strives to preserve park resources and values for visitor enjoyment (USDOI 2006). Studies have acknowledged invasive species presence along river corridors could alter opportunities for shade, shore access, safety elements, access to cultural sites, viewscape and opportunities for viewing wildlife during the river-based recreation experience. Few studies have addressed the human dimensions of managing invasive species such as stakeholder knowledge of ecological aspects of public lands, support of or opposition to invasive species control methods, and the need for more interpretation regarding these areas of public land management. More research is also needed regarding human dimensions of invasive species management along river corridors closely tied to communities dependent on recreation and tourism uses of the river resource. This article examines river users' knowledge of tamarisk, tamarisk control methods, potential for conflict for control methods, setting and soundscape implications, and preferences for additional tamarisk management interpretation and education along the Green and Colorado River corridors.

Managing parks and similar protected areas with the objective to preserve natural soundscapes is becoming an important aspect of public land and waterway management. With various human-caused noises from aircraft, vehicles on roads, maintenance, and park visitors, natural soundscapes are increasingly scarce resources. Visitors in places like national parks want to experience natural quiet without the addition of human-caused noise. Past research shows that the vast majority of visitors are drawn to national parks to enjoy natural soundscapes. In general, visitors increasingly exposed to unnatural noise may find imposition on a naturally quiet, nature-based experience.

## Methods

The area of study along the Green River and Colorado River experiences approximately 2,000 annual river users. Researchers gathered 330 completed questionnaires at trip completion on return shuttles from river recreationists during the river recreation season, which included the months of April to October of 2011. An unusually high water year was experienced by researchers during data collection, which made access to the area unavailable for several weeks in May when the National Park Service and other commercial companies highly recommended recreationists do not float the river for safety reasons.

Respondents answered a close-ended question concerning whether or not they wanted tamarisk to be removed from the river recreation area. Respondents were prompted with an open-ended question to elaborate on the main reason they did or did not want tamarisk to be removed. A series of questions regarding norms for control methods location of application, and soundscape preferences were administered. Finally, the questionnaire assessed whether or not more interpretation and education on tamarisk was needed by asking preferences of respondents.

## Results

### *Knowledge of tamarisk and support for removal*

The majority of respondents (57%) had “some knowledge.” Some respondents reported having “no knowledge” of tamarisk (23%). Few respondents indicated having “advanced knowledge” (17%) or “expert knowledge” (3%) of tamarisk. Overall, most river users (80%) assessed their knowledge of tamarisk at low levels (e.g., some or no knowledge).

Most river users (88%) would like tamarisk to be removed from the river corridors. Many respondents (62%) stated they supported tamarisk removal due to biocentric-based reasons (e.g., reasons that align with ecological health or the benefit of nature). For example, written comments from respondents expressed support for tamarisk removal due to the plant being invasive or not supportive of a healthy native riverine ecosystem. Some respondents (9%) reasoned in favor of tamarisk removal for recreation-specific reasons (e.g., access to shore for recreation or safety). The remainder of respondents in favor of tamarisk removal did not articulate reasons for supporting the removal of tamarisk from the corridor. Few respondents (6%) provided reasons opposing tamarisk removal. When asked to provide reasons why they did not want tamarisk to be removed, respondents provided open-ended sentiments such as wanting to “leave nature alone,” thinking the tamarisk removal “task was too large,” and believing that “tamarisk was not a problem.”

### *Control Methods and Soundscape*

Results additionally revealed different responses to the location of tamarisk management within the proposed wilderness area and for soundscape considerations. River users expressed a preference for use of chainsaws over handsaws to remove tamarisk. Please refer to the River Management Society’s website for full extensive results, tables and figures.

### *Education and Interpretation*

Finally, this research addressed river user desire for additional education and interpretation regarding tamarisk and tamarisk

management in the questionnaire. Most respondents (84%) reported that they would prefer more educational or interpretative information regarding tamarisk. This offers public land managers a nonintrusive and effective way to inform the public about management actions. Offering additional education could assist public land managers influence public awareness and social acceptability of tamarisk management.

## Discussion

These findings have implications for management consideration and further examination. First, visitors who lack knowledge desire more information. River users’ interest in receiving additional education should be addressed by public land managers, as outlined in EO 13112. In addition to mandating the control of invasive alien species, EO 13112 requires federal land management agencies to educate the public, where possible and practical. Examples of this education may include interpretive talks by rangers, increased or improved signage, engagement of interested volunteer groups to provide education opportunities, and informative multimedia approaches (e.g., website, video, brochures, and river permit packet information) for visitors and other stakeholders.

Although visitors had a low level of knowledge, a majority wanted tamarisk removed and many knew it compromised ecological health.

Respondents found burning, use of the tamarisk leaf beetle, and the cut-stump methods acceptable. But cut-stump and leaf beetle acceptability outweighed burning.

Visitor acceptability differed depending on the nature of the control method implemented, in other words, the more impact the control method imposed on the visitor experience, the less acceptable respondents rated or agreed upon the method. For example, visitors held the least agreement and acceptability for the burning and mechanical methods within campsites perhaps due to the costs, access, air quality, viewscape and soundscape impacts a large piece of machinery could impose in or around campsites. Burning the tamarisk, for instance, may cause more smoke and pose a safety threat to recreationists utilizing the site. Mechanical tamarisk removal, for instance, may cause excessive amounts of noise impeding on the natural soundscape and large machinery may result in an intolerable imposition on the viewscape of freshly cut stumps. more in-depth inquiries could be made regarding the reason responses are given.

Managers should exercise caution if using burning and mechanical removal given respondents’ norms displayed less support / acceptability, more disagreement about norms for the removal method / potential for conflict, and more distance / difference between implementation within campsites versus between campsites. Future research could further assess reasons for differences in stakeholder response and compare responses in other locations which experience various levels and types of use.

Similar to previous studies, chainsaw noise was less acceptable along the wilderness setting of the Green River versus the areas not managed as wilderness on the Colorado River. Managers should take note, contrary to previous soundscape studies,

*(continued on page 30)*

# Spokane Riverkeeper Uses Legal and Policy Tools to Address Nonpoint Source Pollution in Washington

by Bart Mihailovich

Nonpoint source pollution is the largest threat to water quality in the state of Washington and presumably many states across the West and the rest of the country. It's pervasive nature requires a state-wide regulatory scheme to manage the adverse environmental impacts that nonpoint source pollution poses to Washington's water bodies.

In 2012, Spokane Riverkeeper, along with Columbia Riverkeeper, North Sound Baykeeper and Puget Soundkeeper, together the four Waterkeeper Alliance organizations in the state of Washington that make up the coalition known as "Waterkeepers Washington," joined a multi-year long legal battle to assure that the state of Washington can in fact maintain the state-wide regulatory scheme that we trust is required.

As a Riverkeeper, or even just an advocate for clean water, having the state environmental agency confident and capable to regulate nonpoint source pollution is imperative to the larger goal of clean water protection. We can challenge pollution permits and fight point-source pollution issues with every tool imaginable, but in reality, that work is negated daily by the unchecked and

unregulated occurrence of nonpoint source pollution.

Helping the Department of Ecology maintain its ability to address water quality is about as important an action as we Keepers can take in the state of Washington (especially now, in a time where the threat to weaken environmental regulations and oversight is increasing).

The Clean Water Act provides the ability for citizens to address point-source pollution, but it doesn't give any tools to address nonpoint source pollution. This is where the state of Washington comes in; this is where the Department of Ecology must be strong. For these reasons, we felt standing up for the state's authority to regulate nonpoint source pollution was the only way to ensure our point-source focus would be effective, and that the state of Washington's water bodies would benefit.

At issue is Joseph Lemire, 68, a cattle rancher near Dayton, WA, and a 2009 order from the Washington State Department

*Cattle wander freely through Pataha Creek in southeastern Washington, highlighting a serious nonpoint source pollution problem.  
Photo: Courtesy of Washington State Department of Ecology*



of Ecology that required him to stop allowing cattle access to Pataha Creek - a creek that is already listed as an impaired body of water. The worry is that when cattle use streams for drinking, they trample the natural shoreline and leave their fecal waste in the water, polluting not only the stream, but also lakes and rivers downstream.

Lemire appealed the order in 2011 to the State Pollution Control Hearings Board (PCHB) objecting to the scope of the order and disputing the fact that the livestock were actually causing pollution. The PCHB ruled that "The outcome of this appeal is not dependent on testing of Pataha Creek, as the agency need only show the substantial potential for pollution to occur," and granted Ecology's motion to dismiss the case. Lemire then appealed that decision to the Columbia County Superior Court, which found in Lemire's favor, overturning the PCHB decision.

In late September 2011, Ecology filed an appeal with the Washington State Court of Appeals to overturn the decision by the Columbia County Superior Court that prohibits Ecology from taking action to keep cattle from polluting streams and rivers. "We think the judge has it wrong. His ruling strikes at our fundamental authority to help prevent pollution in the water in the state," said Kelly Susewind, Ecology's Water Quality Program manager in Olympia.

Ecology had this to say about their decision to appeal: "Because of the importance of maintaining our ability to protect water quality statewide, and because clean water is a statewide resource necessary for the health and safety of our citizens, businesses and communities as well as our fish, Ecology will ask the state appellate court to review the facts. The Clean Water Act prohibits polluting the state's water. A healthy agricultural industry and clean water are equally essential to our state's economy and way of life. Both depend on clean water."

In 2012, Waterkeepers Washington filed an Amicus Brief in support of the State of Washington, Department of Ecology stating: *The degradation of Pataha Creek and other Washington water bodies from unmanaged nonpoint sources of pollution, such as cattle, are serious concerns to Waterkeepers Washington. Without the authority to regulate nonpoint source pollution and its precursors, Ecology lacks essential tools necessary to control water pollution and meet the requirements of both state and federal law. The burden of all water pollution within Washington will rest upon point source operations and community groups to find non-regulatory methods of combating nonpoint source pollution. Ecology is better suited to implement the necessary best management practices to combat nonpoint source pollution and mitigate the regulatory burden on point source pollution.*

*Waterkeepers Washington joined with Ecology and respectfully requested that the court reverse the superior court's decision and uphold the Board's decision affirming Ecology's Order that is supported by the record.*

Because I too am not a lawyer, here's what an Amicus Brief

or Amici Curiae is, "Literally, friend of the court. A person with strong interest in or views on the subject matter of an action, but not a party to the action, may petition the court for permission to file a brief, ostensibly on behalf of a party but actually to suggest a rationale consistent with its own views. Such amicus curiae briefs are commonly filed in appeals concerning matters of a broad public interest; e.g., civil rights cases. They may be filed by private persons or the government. In appeals to the U.S. courts of appeals, an amicus brief may be filed only if accompanied by written consent of all parties, or by leave of court granted on motion or at the request of the court, except that consent or leave shall not be required when the brief is presented by the United States or an officer or agency thereof."

On November 13, 2012, the Washington Supreme Court heard arguments from both sides (Lemire and the Washington State Department of Ecology), and a decision has yet to come out as of early 2013.

Here are some photos taken by Ecology of Lemire's ranch: <http://www.flickr.com/photos/52665252@N03/sets/72157627839843862/show/>

To sum up, here is the closing from our Brief: *Ecology has the authority to regulate and manage nonpoint source water pollution. Ecology's Order represents the proper manifestation of the Ecology's authority pursuant to both the Clean Water Act and the Washington Water Pollution Control Act to control nonpoint source and its precursors. Lemire's cattle ranching practices posed a substantial potential to pollute Pataha Creek. Ecology's ability to regulate similarly situated land owners that violate the Washington Water Pollution Control Act is of great importance to Waterkeepers Washington and the residents of Washington.*

*Nonpoint source pollution is the largest threat to water quality in Washington and its pervasive nature requires a state wide regulatory scheme to manage the adverse environmental impacts nonpoint source pollution poses to Washington's water bodies. The court's decision in this matter will determine the strength of the Washington Water Pollution Control Act and where the burden of Washington's water pollution will be placed: nonpoint sources and its precursors or point sources and community groups. Waterkeepers Washington seeks the balanced approach envisioned in the Washington Water Pollution Control Act.*

We expect to hear a ruling from the State Supreme Court sometime in the first part of 2013. We hope that the Supreme Court will realize that limiting the regulatory authority of the Department of Ecology in dealing with nonpoint source pollution can only result in poorer water quality for the state of Washington. For a state known for its natural resources, this would be an awful precedent to set. If the Supreme Court rules in favour of Lemire, they can certainly expect a challenge from Waterkeepers Washington. ♦

*Bart Mihailovich is the Director of Spokane Riverkeeper.*

# Balancing Access with River Protection in Yosemite:

## Merced and Tuolumne River Plans Released for Public Review

by Mike Yochim

On January 8, 2013, the National Park Service opened another chapter in Yosemite's history by releasing both the Merced and the Tuolumne Wild and Scenic River Draft Comprehensive Management Plans for public comment. The Tuolumne River Plan (TRP) is open for a 70-day public review period, through March 18, 2013; the Merced River Plan (MRP), for 100 days, ending April 18, 2013.

As one would expect of a management plan for the river flowing through the heart of Yosemite Valley, the MRP is a substantial document, in size, complexity, and comprehensiveness—2,500 pages, all told. The TRP, which covers the popular Tuolumne Meadows and long wild classifications of river, is shorter, but still about 1,000 pages. Both plans are comprised of three volumes, with the first being the Wild and Scenic Rivers Act components and management alternatives, the second being the description of current conditions and environmental impacts, and the third being appendices. Both plans include executive summaries and summary guides, which help to understand such lengthy documents. Because both plans use similar methodologies, readers will more easily be able to comprehend one plan once they have digested the other.

The NPS is excited about both plans and the comprehensive approach they take toward wild and scenic rivers planning. After presenting the river classifications and boundaries and the Section 7 methods, both plans identify the outstandingly remarkable values (ORVs) and their conditions. The plans clearly and, where possible, quantitatively define the two key terms of adverse impact and degradation for each ORV, and for water quality and free flowing condition (collectively, the river values). Additionally, the management standard—the desired condition—for each river value is presented, also quantitatively. Finally, another key term is introduced—management concern, a segment-wide impact (the other terms are also segment-wide) identified in the condition assessment that requires corrective action to keep the river value's condition at or above the management standard. Along with defining these terms for each river value, the plans also present at least one indicator for each river value. Indicators are measures of condition for each river value. Finally, the plans present management actions keyed



to those indicators. These are actions that NPS will take if a management concern or long-term declining trend in a river value condition is present, to restore the river value to its management standard. By clearly defining all of these terms and explaining the program NPS will use to monitor and manage or restore the river values, the NPS is confident that the MRP and TRP will protect and enhance the river values in accordance with the Wild and Scenic Rivers Act.

As noted above,

both plans present a number of different management alternatives (five for the MRP, four for the TRP), pursuant to the National Environmental Policy Act, in addition to No Action alternatives. Both preferred alternatives provide for extensive restoration of key meadows in the river corridors—those in Yosemite Valley and in Tuolumne Meadows—that have been affected by visitor use and/or historic sheep grazing. Both plans would also improve the sense of welcome and arrival into Yosemite National Park, by improving parking organization and traffic flow. Private vehicle access and public transportation options would be retained under both preferred alternatives, as would public access to the rivers and their resources. While horseback riding of one day or less will continue in Wawona (on the South Fork of the Merced), such rides will be eliminated from both Yosemite Valley and Tuolumne Meadows. Existing lodging and food service in both river corridors will remain, helping to maintain Yosemite's positive effect on local and regional economies. Existing substandard, temporary, and aging employee housing will be replaced in both Yosemite Valley and Tuolumne Meadows with code compliant residences. Both plans will regulate user capacities—which are numerically specified in all management alternatives—largely through parking management and regulation of bus services. The two river plans also specify actions NPS will take should parking capacities be regularly exceeded. For both river corridors, the preferred alternatives would allow for visitation at or slightly above those seen in recent years.

Other specific actions under the MRP include the elimination of commercial raft rentals, though boating access to the river in Yosemite Valley will continue. Responding to enthusiastic public comment, the MRP will substantially expand camping opportunities in Yosemite Valley. The MRP will also promote



Merced River and Half Dome. Photo: Mike Yochim. Map (left) and graphic (below) courtesy of the NPS, Yosemite National Park.

environmental sustainability and public safety by relocating facilities away from flood and rockfall hazards to more resilient, buildable sites. Finally, the MRP preferred alternative will eliminate facilities that NPS determined were not necessary for public use, including some tennis courts, swimming pools, an ice rink, a post office, and other facilities.

The TRP Preferred Alternative will construct a new visitor contact station, wastewater treatment plant, and comfort stations in the campground in Tuolumne Meadows. The campground will receive a much-needed overhaul. Due to the river's steep gradient through the Grand Canyon of the Tuolumne (with numerous waterfalls) and difficulty of access, no boating access to the Tuolumne River will be provided.

Collectively, the two plans set the future course for most developed areas of the park and represent a strong foundation for Yosemite's future. The plans adhere to the dual mandates present in both the Wild and Scenic Rivers Act and the NPS Organic Act: *To provide access while protecting resources.* The NPS expects to finalize both plans later this year.

The NPS is planning a robust public outreach for both plans, with about 20 public meetings or webinars planned throughout California from January through March 2013. For a copy of the plans and a complete description of all alternatives, please visit the park's website at [www.nps.gov/yose/parkmgmt/mrp.htm](http://www.nps.gov/yose/parkmgmt/mrp.htm) (MRP) or <http://www.nps.gov/yose/parkmgmt/trp.htm> (TRP). Comments on either DEIS can be made through the NPS

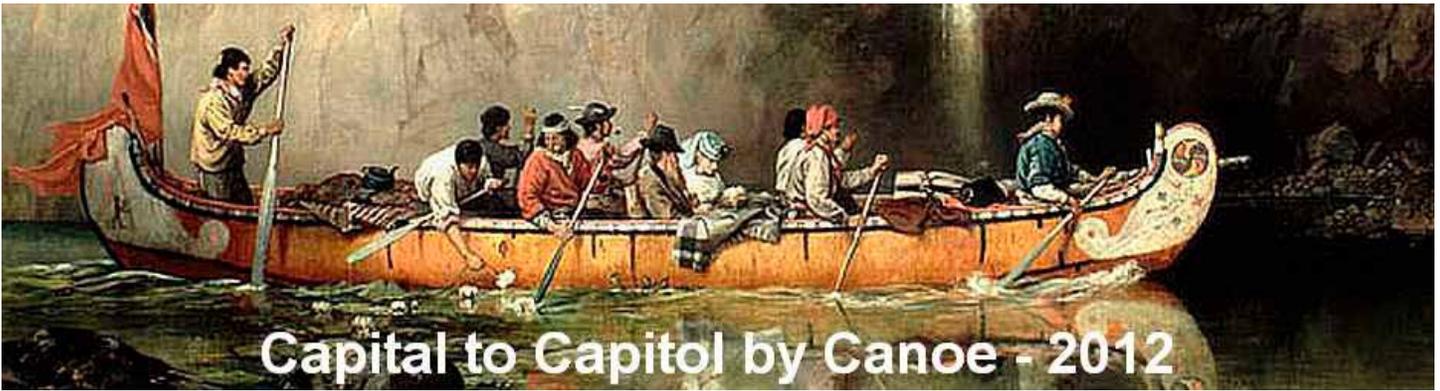
Planning Environment and Public Comment (PEPC) website at [http://parkplanning.nps.gov/yose\\_mrp](http://parkplanning.nps.gov/yose_mrp) (MRP) or [http://parkplanning.nps.gov/yose\\_trp](http://parkplanning.nps.gov/yose_trp) (TRP). Comments made through this website are the preferred method of submission. However, comments can also be sent via email to [yose\\_planning@nps.gov](mailto:yose_planning@nps.gov) or via U.S. mail to Superintendent, Yosemite National Park, Attn: Merced River Plan or Attn: Tuolumne River Plan, P.O. Box 577, Yosemite, CA 95389. ♦

*Michael J. Yochim, Ph.D. is the Program Manager for the Tuolumne River Plan and Wilderness Stewardship Plan.*

## MERCED AND TUOLUMNE RIVERS Draft Comprehensive River Management Plans and Environmental Impact Statements



Yosemite Open House - Wednesday, January 30, 2013



## A Journey for Clean Water

by Max Finkelstein

The sound every paddler dreads hearing is the crackling of fiberglass. That is the sound that rises above the wind and breaking waves as a big roller picks up the stern of our canoe, pushes it two metres sideways, and drops it on a jagged rock. Liz, undaunted and unknowing, 34 feet in front of me at the bow, doesn't miss a stroke as she sets the pace, and the big canoe slowly, ponderously, pulls away from shore, heading west across Chesapeake Bay.

Young Willis, fresh out of North Brooklyn and new to the stern, holds the course. Seated in front of Will, I check for damage, and try to determine whether the water sloshing around is from splash and spray, or from a tear in the hull. It flashes through my mind that this crossing might be a mistake. We had hoped to cross the bay on a calm day, not the windiest day of the journey!

But our crew - five of us from Ottawa who have been here from the start, Jodi and Tom, who have just joined us that day in Rock Hall, the young sailors from the tall ship *Gazella*, Sean and Kelsey - just put their heads down and paddled, well, they paddled like Hell for the thin grey line of the eastern shore.

I'm relieved to see that the hull is intact, the big canoe is angling nicely into the breakers, slow and steady, our progress measured by the slow passing of the five-mile bridge across Chesapeake Bay on our port side.

With Sean and Clive singing: '*What will we do with the drunken sailor, put him in a boat and make him row across Chesapeake Bay,*' we find a seam in the

wind and with the waves now on our quarter instead of crashing directly over the bow, suddenly the canoe takes on new energy, and we see the distant shore begin to look...can it be?...closer. We paddle even harder and as we slide across the shipping channel, and triumphantly paddle to the safety and calm of the western side, Washington has never looked closer. Our crossing of Chesapeake Bay is as meaningful to us as President Washington's crossing of the Delaware. It not only puts a difficult obstacle behind us, but changes the course of our lives forever. *Backpaddle! What's a Voyageur Canoe from Canada doing in Chesapeake Bay?*

On September 5, 2012, a group of 100 people gather at Victoria Island (known as Asinabke to the Algonquin People), across from the Parliament Buildings in Ottawa, for the ceremonial launch of the **Canadian Wildlife Federation Capital to Capitol Canoe Expedition**. For thousands of years, Asinabke has been a traditional meeting place, a place of cultural and political evolution—and it is an honour for us to launch our expedition here. The trip is dedicated to Algonquin spiritual leader Grandfather William Commanda, and his vision for a Circle of All Nations, with the canoe as a symbol of how people, water, and nature combine and work together to animate peace, healing, and understanding.

His daughter Evelyn is here to bless the canoe and the paddlers. Traditionally, voyageur canoes carried cargos of furs and trade goods. But our canoe carries a different kind of payload—ideas, hopes

and dreams. *Our mission is to draw attention to the need for our neighboring countries to work together to restore our rivers and waters.* We want to draw attention to the need for our two countries to work together at all levels, from citizen advocacy to the highest political echelons to make sure our waterways remain vibrant and healthy. One outcome we hope for is a sister river program, starting with the Ottawa and Potomac rivers. To symbolize this idea, we carry a bottle of water scooped from the Ottawa River just below Parliament Hill in Ottawa.

Our route takes us down the Ottawa River, through the city of Montreal via the Lachine Canal to the St. Lawrence River, down the St. Lawrence to the City of Sorel, and then up the Richelieu River. Just north of Lake Champlain, we cross the border to the US, and head south into Lake Champlain, the Hudson River and to New York City. From here, we take a portage by truck and trailer from the Raritan River to the Delaware River, paralleling the now impassible Raritan and Delaware Canal, down the Delaware River past Philadelphia to Delaware Bay. From here, the 12-mile D&C Canal links to Chesapeake Bay and the Potomac River. About a thousand miles in total. Six weeks of hard paddling.

Our group of paddlers is as diverse as the waterways we follow. For some of us, including me, my old friend and paddling companion Dot Bonnenfant, and new friend and former Yukon River guide Nick Tilgner, paddling and river conservation have been central to our lives. "I was born in a canoe," jokes Dot. Others, including

Clive Doucet, former city councillor for Ottawa, have little experience in a canoe. Liz Elton, who spends much of the trip setting the pace, is an experienced kayak racer, but this is her first canoe trip. Five of us sign on for the entire distance. The crew is constantly changing, as folks have to go home to their jobs and lives, and others take their places. One obvious characteristic of the crew is our age, or the abundance of years.....of the five who travel the entire distance, the average age is 60 (talk about Grey Power!).

We can't do this alone. Canadian

Wildlife Federation steps up to support the trip, along with local Riverkeepers and environmental groups along the route. As we paddle on, yacht clubs and canoe clubs, maritime museums and local people overwhelm us with their kindness and generosity. We have batteries charged, clothes dried, free meals in restaurants, fast food deliveries, home-cooked meals delivered to our campsite, shelter in storms, and once, a late-night cold beer delivery to a quite remote campsite on the Hudson.

Paddling through New York City

*"Paddling by the Statue of Liberty with my wife Connie, and our 13-year old son Isaac setting the pace at the front of the canoe, was a fantasy image that I visualized before we even left on the trip. To see that fantasy turn into reality, from my vantage point at the stern of the canoe, is a memory that will stay with me forever." —Max Finkelstein* Photo: Bill Shultz, Raritan Riverkeeper



stands out as a highlight, not only of the expedition, but of my paddling career.

My wife Connie and 13-year old son Isaac have joined the crew for two weeks for the Lake Champlain to New York City section. Paddling on a rainy day and passing by the Statue of Liberty, with Isaac up front setting the pace, is a fantasy I envisioned before the trip, and to have this fantasy fulfilled is incredible, unforgettable. (*Special thanks to Bill Shultz, Raritan Riverkeeper, for escorting us across New York harbor! We never could have done it without you!*) Definitely a canoe trip like no other!

Being spontaneously invited to participate in the Tall Ships festival in Philadelphia is a wonderful surprise for a tired crew. We sleep on the deck of the cod schooner Gazella, and leave with two young sailors from the Gazella to round out our crew (and lower the average age). In Washington, we mix the bottle of Ottawa River water with the waters of the Potomac in front of the Lincoln Memorial, and spread tobacco and sage given to us at the launch by Evelyn Commanda, escorted by Potomac Riverkeeper's Whit Overstreet. And finally we make it to Capitol Hill, where we are special guests at the 40th Birthday party celebration of the Clean Water Act. There, I speak these words:

"It takes a lot of courage and determination, but mostly cooperation, to complete a journey like this. And, that is what it will take to protect and care for and live better with the waters that we all share. The dream is simple: swim, eat the fish, and even drink the water. This is not my longest journey for Clean Water, not the shortest, not the first, and God willing, not the last. Like the eel depicted on our logo, water does not recognize arbitrary lines like international boundaries. The issues we deal with on both sides of the border are similar, as are the solutions, and, like this canoe trip, if we work together on solutions to these issues, we can achieve much."

Clive Doucet adds: "The challenge I present to you is to work together to make the Ottawa and Potomac sister rivers the world's cleanest, healthiest rivers to flow through national capitals in the world."

There is a noticeable ripple in the room. And, now the real work begins—to actualize the goals of the expedition and to develop a sister river relationship between the Ottawa River and the Potomac River. To be continued...♦

**Through-paddlers:**

- Max Finkelstein
- Clive Doucet
- Norm Radford
- John Horvath
- Liz Elton

*(all from Ottawa, Ontario)*

**Participants:**

Dot Bonnenfant (QC)  
*(Dot paddled the first three weeks and was instrumental in organizing the expedition!)*

- Max’s son Isaac Finkelstein, and
- Isaac’s mom Connie Downs (ON)
- Willis Elkins (NY)

*(Special thanks for coming a long way to teach Max how to use a cell phone!)*

- Nick Tilgner (YT)
- Emily Smith (YT)

Peter Brebner and daughter Merise (ON)

- Mary Hegan (ON)
- Chris Henderson (ON)
- Patricia Kot (ON)
- JP McMahon (ON)
- Rob Fournier (ON)
- Tom Barron (PA)
- Jodi Bigelow (QC)
- Phillip Musegaas (NY)
- Lenore Person (NY)

George and Leona Fluck, and Ken Heaphy  
*(PineyPaddlers of the Delaware)*

The Amazing Margo Pellegrino (NJ)  
*(Google Margo!)*

Susan Williams (PA)  
*(President, US Canoe Association)*

Gaynor Cote (NY)  
 Sean and Kelsey  
*(sailors from the tall ship Gazella!)*

And, three more sailors  
*(from the tall ship Kalmar Nyckel—thank you Captain Sharon!)*

Paddling the waters that connect these two great rivers, in these two great countries, is daunting, but not nearly as daunting as the challenge of restoring their ecological integrity which is essential to both nations.

*The crew is invited to give a presentation, as part of the delegation of the Canadian Wildlife Federation, at the 40th anniversary celebrations of the Clean Water Act on Capitol Hill, in Washington, DC (October 18, 2012).*



*First Row (L to R): Liz Elton (Ottawa), Max Finkelstein (Ottawa), John Horvath (Ottawa), Willis Elkins (New York)  
 Second Row: Jodi Bigelow (Quebec), Norman Radford (Ottawa), Clive Doucet (Ottawa), Tom Barron (Pennsylvania)*



**Letter to the Editor**

“Forced Green Agenda—Burden to Taxpayers”  
*An Opinion Piece*  
 RMS Journal  
 Winter 2012, Volume 25, Number 4 (page 17)  
 Written by Gary Marsh

I enjoyed reading this opinion piece in the last edition of the RMS Journal. I am sure it will be controversial and spark some vigorous debate among many members, which can only make for a healthier organization. As long as readers understand this is an opinion expressed by one member, and not an adopted RMS policy or suggested best practice, I am encouraged by the important conversation it has stimulated.

Michael Greco  
 Canadian Chapter  
 December 23, 2012

*(Inflatables, from page 1)*

and the miles of truck-mounted pontoons that got the 3rd Army over the hundreds of streams, canals, and rivers spread across western and eastern Europe. It was not just the Allies but also the Axis powers that depended on bridge building and squad-level transportation across rivers where no bridges existed. From the time of the Civil War, the European Theater, and down the rivers of southeast Asia the inflatable boat was there.

A consummate storyteller, RMS member Herm Hoops can be found at all the Colorado and Utah guide and outfitter meetings, the annual Moab River Rendezvous, and the RMS-sponsored River Ranger Rendezvous. A large man, with a black curly beard and booming, deep voice, Herm has been a ranger at Dinosaur National Monument, has worked with many of the nonprofit organizations running our southwest rivers and, in recent years with River Runners Transport, offers shuttle and river support for groups floating the Green and Yampa rivers.

I would also say that Herm has devoted thousands of hours and weeks of travel over the years gathering the data for his histories. He has gone to the sources, the principals of the companies that he describes. When finding the principals gone, he has gone to the “next of kin,” unearthing files, lists, photographs, and journals of the people that made the industry that made the river runners, and that saved the rivers (something had to carry the folks that floated the Yampa and the Green rivers and then raised a ruckus about the planned damming of the canyons of Dinosaur).

Herm continues to collect data and photos and has compiled them into several additional histories: *“The Dream Builders: A History of Rubber Fabricators, B.F. Goodrich, Rubber Crafters, and Demaree Inflatable Boats,”* *“A History of B.A. Hanten, Rogue Inflatables, and The Swanson Boat Oar Company,”* and, finally, an upcoming history of Udisco, Wing, Campways/Riken, and Domar. The

latter recently took Herm to California on a 4,500-mile, 10-day junket to interview Bill Wing, Richard DeChant, and George Wendt. Herm has discovered the interconnectedness between the people and the companies that makes this a truly amazing story.

If you want one of Herm’s “books” you may request an electronic copy of the text at no charge. For a hard copy, the books will be sold at cost. Herm has received some funding from the University of Utah, but most of the funds come from his boat repair shop, where 100% of the income goes to the project. Herm is a one man shop and the effort to produce just one copy is a huge expenditure of time and funds. Completed works are archived at the University of Utah, J. Willard Library, Special River Collections (Roy Webb). ♦

For more information, or to place an order, please contact Herm Hoops at: [hoops@ubtanet.com](mailto:hoops@ubtanet.com)

*Cross River Tours – Colorado River, Grand Canyon. Courtesy of Glade Ross, National Park Service.*



# The Tennessee Valley Authority (TVA)

## “Vision of Hope or Community Disruptor”

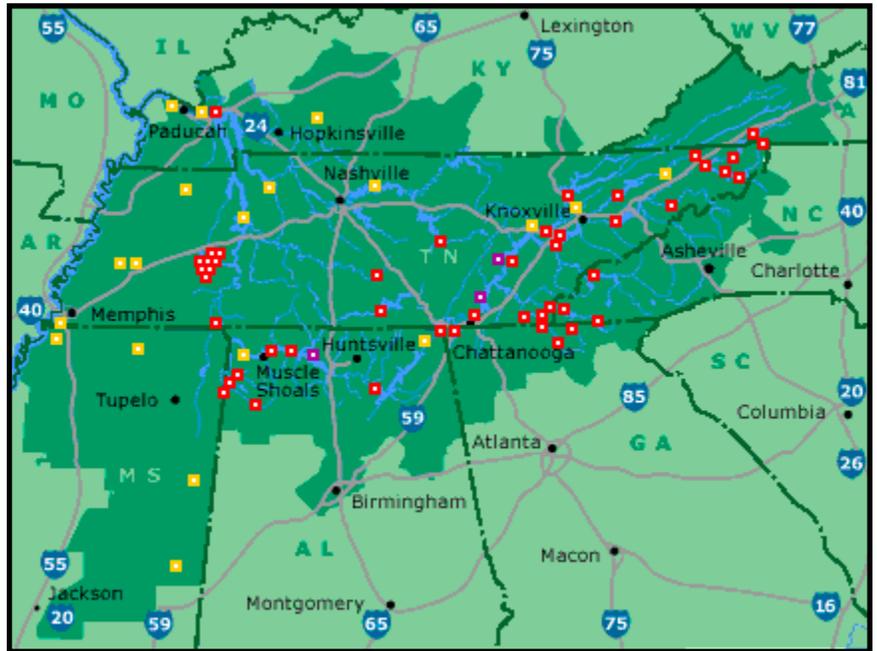
by Gary G. Marsh

In the 1920's, it was said the people in the southern seven state region of Tennessee, Mississippi, Kentucky, Alabama, Georgia, North Carolina and Virginia were 100 years behind the rest of the country. Depression was a way of life before it was officially declared “The Great Depression” in 1929. Residents worked for 75 cents a day from sunup to sundown. Starvation, smallpox, malaria, and typhoid were common. Floods devoured homes, towns, eroded topsoil, and denuded vegetation so that the land resembled a moonscape appearance prior to subsequent droughts. One flood in Union County, Tennessee, was said to have washed livestock 100 miles south. On May 18, 1933, some 79 years ago, Congress established the Tennessee Valley Authority (TVA), one of many of President Franklin D. Roosevelt's New Deal initiatives. The intent was to reduce flood damage, improve navigation on the Tennessee River, provide electric power, and promote agricultural and industrial development. For many it delivered a poor land out of darkness and pushed the limit of possibility for the people of the valley. People still remember the first spark, or ‘juice’ as some called it, of electricity from the fuse or switchbox, and magically produced running water to homes along with bright lighting. For others, TVA was an unwelcome intrusion of government and bureaucracy into their community and way of life.

The hope is portrayed in the “Song of the South” written by Bob McDill, and first recorded by American country music artist Bobby Bare. In November, 1988, it reached number one on the U.S. and Canadian charts by the country music group Alabama. The song tells the story of a poor Southern cotton farm-family during the Great Depression, as the lyric states:

*“Cotton on the roadside, cotton in the ditch. We all picked the cotton but we never got rich. Well, somebody told us Wall Street fell, but we was so poor that we couldn't tell. The cotton was short and the weeds was tall, but Mr. Roosevelt's gonna save us all. Daddy was a veteran, a southern democrat. They oughta get a rich man to vote like that. The county got the farm and they moved to town. Well, papa got a job with the TVA; we bought a washing machine, and then a Chevrolet.”*

So, who and what is the TVA? The TVA is a federal corporation and the nation's largest public power company covering some 80,000 square miles, including almost all of Tennessee, and parts of Mississippi, Kentucky, Alabama, Georgia, North Carolina and Virginia. It manages the nation's seventh-largest river system to reduce flood damage, produce power, maintain navigation, provide recreational opportunities, and protect water quality in a 41,000-square-mile watershed. TVA operates fossil-fuel, nuclear, and hydropower plants, and



TVA map of reservoirs and fossil plants. See the map: [www.tva.gov/sites/sites\\_ie.htm](http://www.tva.gov/sites/sites_ie.htm)

also produces energy from renewable sources. It has regional customer service centers, offices and watershed teams in seven watershed regions; 11 coal-fired plants which produce more than half of TVA's electricity in an average year; nine combustion turbine plants; three nuclear plants; 29 hydroelectric dams; and, a pumped-storage plant. It has added energy from three renewable sources—sun, wind, and methane gas. Eight Army Corps of Engineers dams and four Alcoa dams contribute to the TVA power system. TVA provides electric power to 155 local power distributors through a network of 15,900 miles of transmission lines. TVA sells power directly to 57 large industries and federal agencies, supplies electricity for nine million people, and its operating revenue from electricity sales in 2011 was \$11.7 billion. The state of Illinois and two of its counties receive payments for coal reserves TVA owns there. TVA's Environmental Research Center in Muscle Shoals, Alabama, has scientists who improve and develop technologies that increase the efficiency of power generation and transmission systems. They develop tools and methods to minimize and clean up pollution from industrial, municipal, and agricultural systems. Major focuses are atmospheric sciences, biotechnology, contaminated-site remediation, prevention of water pollution from nonpoint sources, and the research center claims to house the nation's leading constructed-wetlands R&D facility.

My, and many of my wife's, ancestors were born and raised in North Carolina, Tennessee, and Virginia. I was born and raised in Knoxville, Tennessee, 22 miles from TVA's first hydroelectric dam, named for Senator George W. Norris of Nebraska, known as the Father of TVA. Construction of Norris Dam started on October 1, 1933, and the dam was operational on July 28th, 1936. I had two neighbors who worked for TVA—one a draftsman in

the engineering division and the other maintained the penstocks. My parents' friends had a ski boat so I had the privilege to learn how to water ski and play "crack the whip" via a pulled sled on Norris Lake. They also had a houseboat on which we stayed overnight and dangled a hand line with dough balls to catch brim and sunfish. When I turned 16, my first 'real' summer job was at Hickory Star boat dock and swimming pool on that same lake. I made a whopping 90 cents an hour but got "three hots and a cot" in the deal. Later on, my wife also worked at Norris for TVA as a clerk. Little did I know some 12 years earlier, people hated TVA for moving them from their ancestral homes. In America, the South being no different, people have strong roots to their land, property and freedom. Seeing some government official walk up to your porch and inform you they are going to condemn your land, give you a fair price for it, relocate you and all your belongings, including your buried ancestors, in the name of flood control doesn't sit well. Some 34,000 acres were submerged in the process and 14,000 families and 5,000 graves were relocated. Although carried out by TVA with compassion and professionalism, people with deep cultural ties resented the sacrifices which had to be made, i.e., loss of their farms, homes, and the private property their ancestors had worked and invested in for perpetuity. This was only the beginning of many more dams and inundation to continue in the Valley. John Erwin founded the Museum of Appalachia as a tribute to those who were forcibly moved for creation of the dam.

Forty miles southwest of my home is Watts Bar Dam where my dad and grandparents lived in Meigs and Rhea counties, Tennessee. My grandparents' homes may have also been inundated as a result of construction and a steam plant in 1939-40. Watts Bar Dam is located some 530 miles upstream from the mouth of the Tennessee River, halfway between Knoxville and Chattanooga. Watt Island's potential for a dam was recognized in 1870, when the U.S. Army Corps of Engineers built a dike to improve flow in the main river channel. The Corps dredged the island in 1911-13 deepening the channel, and proposed a dam be built in 1930. In 1936, the TVA assumed direction to build (and acquire) a series of dams along the Tennessee River to improve navigation and flood control, and to aide in the region's economic development. The construction of Watts Bar Dam and reservoir required the purchase of 54,600 acres of land and flowage rights; 7,304 acres were forested and had to be cleared. Some 832 families, 17 cemeteries, and 121 miles of roads were

relocated. The community of Rhea Springs, along the Piney River a few miles upstream from the river's mouth, was completely inundated. The dam was completed and the gates closed on January 1, 1942. The Army Corps of Engineers designed the dam's lock, which went into operation on February 16, 1942. A nuclear plant was started in 1972; it was licensed and reached full power in 1996.

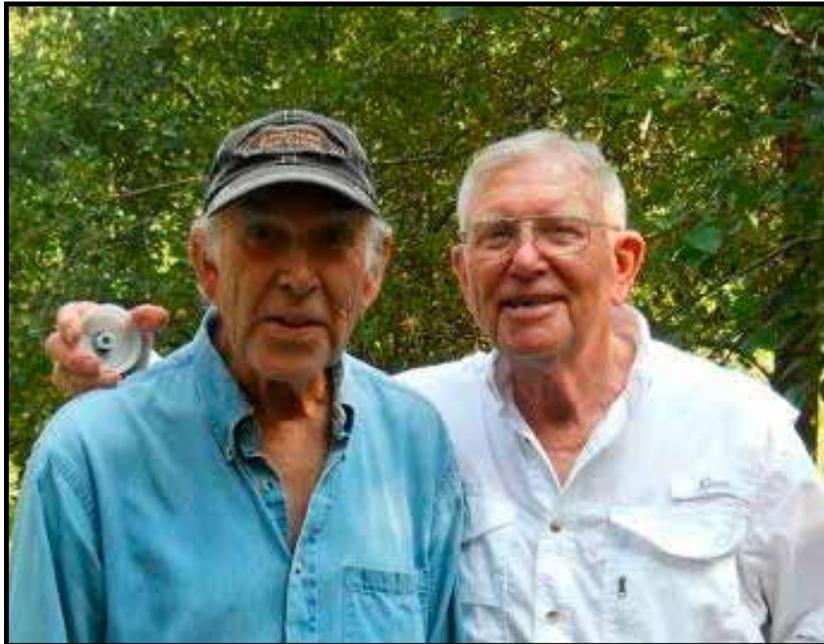
Sixty miles south of my home are the Great Smoky Mountains and the Fontana Dam project built to power aluminum factories, like Alcoa, in World War II to produce airplanes. Some 5,000 workers (mostly soldiers) worked on Fontana and cleared the land for the dam in 1,000 days. Due to a shortage of steel they used locally cut timber. They used rocks from the Smoky Mountains instead of concrete. They worked three shifts a day and seven days a week. Many fell from towers 50 stories high.

One worker was so close he said he heard the wind whistling through his co-worker's britches as he fell to his death. Such a project usually took ten years, but Fontana was completed in three. Power from Fontana to Alcoa helped build 50,000 fighter planes just in time to end the war.

Thirty miles east of my home, Douglas Dam was retrofitted in 1942 to deliver some 200 kilowatt hours a month to an unknown location. Germany was building a bomb and the United States wanted to beat them to it. So, the secret city of Oak Ridge, Tennessee, which was 22 miles west of my home, became a government nuclear testing facility,

and the birthplace of the atomic bomb. Seventeen miles of fence guarded identical concrete houses, and thousands of locals were hired to work on the project, along with engineers from around the world. Some 30,000 residents made up the fifth largest city of Tennessee, which was not even on a map. Commuters couldn't tell a soul where they were or what they were working on. All their families and friends knew was that it was secret and it was big. The fate of the nation hung on Douglas Dam which was completed on March 14, 1943— it only took 12 months and 17 days—the fastest dam ever constructed. Most of the power generated from Douglas Dam just 'disappeared' to Oak Ridge. On August 8, 1945, the device called "Little Boy" was evidenced by a flash over Hiroshima and the secret of Oak Ridge, Tennessee, was out to the entire world.

We currently live 20 miles from Watauga Dam, created due to flooding of Elizabethton, Tennessee. Construction started in 1942 but was curtailed due to other wartime building efforts. Work resumed in 1946, and the dam was completed in 1948.



*(August 2011) Joseph G. Lipford (my wife's father, now 91) and D. L. "Lester" Lipford (Joe's brother, now 84) were uprooted in 1947 from their childhood home in Old Butler, TN, which was inundated to create Watauga Dam. Joe and Lester were 26 and 19 years old when they had to move to "New Butler." Photo: Michael L. Lipford*

Watauga has a flood-storage capacity of 152,800 acre-feet. People above the dam didn't see the need, and the ones below wanted it. My wife's grandparents lived upstream along the Watauga River, in the town of Old Butler, and certainly didn't see the need for a dam. The project would inundate prime farmland and multiple fresh-water springs. But in 1947, the TVA began to move families to "New Butler." My wife's grandfather, great aunts/uncles, and her dad vividly remember the town where they grew up, played, were educated, and lived. Books describe Old Butler as the "town that wouldn't drown." Animosity still runs deep toward the 'Authority' and the federal government making them move to higher ground in the name of the damn TVA and 'progress.'

In 1972-73, my wife worked for TVA in the planning division on a project called "Timberlake," a planned community on a 16,000 acre playground called Tellico Lake, 60 miles southwest of Knoxville. On August 12, 1973, University of Tennessee biologist/professor David Etnier discovered the snail darter in the Little Tennessee River while doing research related to a lawsuit involving the National Environmental Policy Act. The lawsuit stated that Tellico Lake, created by the dam on the Little Tennessee River, would alter the habitat of the river to the point of extirpating the snail darter. For 300 farmers who would lose their land, native Cherokees who had sacred sites here, and for conservationists, this was unforgiveable. They united to fight the TVA. The dam project cost over 100 million dollars and was 95 percent complete. U.S. Marshals had to remove the last three homeowners from land their families had farmed for generations. Thomas Beryl Moser, a Monroe County postman, vowed to be the last to leave and said they would have to run him off or carry him off. He made the national news when 15 U.S. Marshals escorted him out of his house, then bulldozed and buried it. He and his sister were escorted by U.S. Marshal Harry Mansfield. Everything he had was taken. Moser sighed and said, "I still feel the same way I did 10 years ago. The hell with it. The hell with TVA." Nellie McCall, an 84-year old widow, burst into tears as she packed to leave. Farm silos can still be seen above the waterline at Tellico Lake. Samuel Adams said, "*Among the natural rights of the colonists are these:... [a right] to property; together with the right to support and defend [it] in the best manner they can.... Now what liberty can there be where property is taken away without consent?*"

Two Tennessee members of Congress became critical to the story: Congressman John Duncan, Sr., whose district included Tellico and who had been a long-time supporter of the project, and Senator Howard Baker.

- Howard Baker was a leading sponsor of an amendment to the Endangered Species Act (ESA) that was passed into law in November 1978. The idea was to create a mechanism whereby a specific project could be excluded from the ESA. If a controversy arose, the amendment called for the creation of a special committee consisting of various Cabinet level members and at least one member from the affected state where the project in question was located. There was a fear in Congress that many projects would be affected by litigation as biologists might discover obscure species. Proponents of the committee saw it as a way of keeping the ESA alive.
- January 23, 1979, the Committee unanimously denied an exemption for Tellico specifically on economic grounds,

rather than ecological grounds. Tellico Dam opponents had successfully sued under the provisions of that law to stop the dam.

- Baker drafted an amendment that excluded the Tellico project from the ESA, along the lines initially suggested by the federal courts. Duncan got the amendment passed by the House on June 18, 1979, on a voice vote.
- Baker introduced the amendment in the Senate on July 17 and was defeated.
- Undeterred, Baker reintroduced the amendment in September. Baker stated on the Senate floor that the project would produce 200 million kilowatt hours of hydroelectric power and save an estimated 15 million gallons of oil.
- On September 10, 1979, Baker's amendment passed.
- On September 25, 1979, Jimmy Carter signed the bill exempting Tellico from the ESA.
- On November 29, 1979, the TVA closed the gates on the Tellico Dam. But before the closure of the gates, numerous snail darters were transplanted into the Hiwassee River in Tennessee.
- The snail darter was reclassified from endangered to threatened on July 5, 1984.

Tellico Lake represented TVA's greatest triumph since the Great Depression. For opponents, it meant the death of home and of a way of life. TVA engineers first envisioned the Tellico Dam in 1936 as a companion project to Norris Dam, an experiment in public power, conservation and planned living. Construction, halted by World War II, took 31 years to start, with a final price tag of \$116 billion. Lawsuits, public debate and an endangered fish created further delay. TVA officials insisted the project would bring tourist dollars to the region and enhance the natural beauty. Critics said it wasted money and buried East Tennessee's best farmland in favor of a "Robin Hood" style of economic development. Neighbor turned against neighbor as the debate dragged on. TVA crews moved 219 snail darters from the Little Tennessee to nearby rivers and streams. More than 340 families left their homes behind. Most agreed to sell to TVA. A few, like Moser and McCall, returned their checks. Although the darter survived, it had left a black mark on TVA's reputation. As a result, TVA started a Natural Heritage program to collect data on species and today has over 100 biologists to watch for rare and endangered species. There are more fish species in Tennessee than all of Europe.

In summary, it's hard to be objective when you are close to an issue. As the ancient Greek fabulist Aesop said, "*Every truth has two sides; it is as well to look at both, before we commit ourselves to either.*" Hopefully I've piqued your interest to learn more about the TVA. If you have a story about TVA or a related story, I encourage you to share it. The quotes and websites below relate to this article and provide further research opportunities. ♦

#### Credits

A 2011 television documentary aired on 9/16/2012, "Built for the People," narrated by Beau Bridges.

<http://www.tva.com/>

<http://www.tva.gov/abouttva/history.htm>

<http://www.tva.gov/heritage/index.htm>

[http://www.tva.gov/75th/pdf/tva\\_timeline\\_by\\_year.pdf](http://www.tva.gov/75th/pdf/tva_timeline_by_year.pdf)

<http://www.tva.com/abouttva/keyfacts.htm>



Above: The homestead of Sherman Stiner, Union County, Tennessee. Mr. Stiner is a prosperous and progressive farmer. Much of his 1500 acres will be flooded by the Norris Dam reservoir. Stiner raises fine Hereford cattle (11/8/1933). Below: Esco Glandon, a renter, lives at Bridges Chapel on land that will be islanded by the Norris Dam reservoir (10/31/1933). Courtesy: [www.tngenweb.org/tva/NorrisDam/flooded.php](http://www.tngenweb.org/tva/NorrisDam/flooded.php)



Below: Watauga Lake, located southeast of Elizabethton, TN, was created by the TVA with the completion of the Watauga Dam and Reservoir. Courtesy: [www.cartercountyhistory.com/watauga-lake.html](http://www.cartercountyhistory.com/watauga-lake.html)



## Timeline - TVA History by Year

- President Roosevelt signs the TVA Act 5 18 1933
- Norris Dam operational 7 28 1936
- Wheeler Dam operational 11 9 1936
- Pickwick Landing Dam operational 6 29 1938
- Chickamauga Dam operational 3 4 1940
- Hiwassee Dam operational 5 21 1940
- Watts Bar Dam operational 2 11 1942
- Watts Bar Steam Plant operational 3 16 1942
- Cherokee Dam operational 4 16 1942
- Douglas Dam operational 3 21 1943
- Ocoee No. 3 Dam operational 4 30 1943
- Appalachia Dam operational 9 22 1943
- Fort Loudoun Dam operational 11 9 1943
- Kentucky Dam operational 9 14 1944
- Fontana Dam operational 1 20 1945
- Kentucky Lake impounded, completing 650-mile long navigation channel linking Tennessee Valley with 20-state inland waterway system 4 8 1945
- President Truman dedicates Kentucky Dam 10 10 1945
- Watauga Dam operational 8 30 1949
- South Holston Dam operational 2 13 1951
- Johnsonville Steam Plant operational 10 27 1951
- Widows Creek Steam Plant operational 7 1 1952
- Boone Dam operational 3 16 1953
- Shawnee Steam Plant operational 4 9 1953
- Fort Patrick Henry Dam operational 12 5 1953
- Kingston Steam Plant operational—  
world's largest coal-burning power plant 2 8 1954
- Chatuge Dam operational 12 9 1954
- Colbert Steam Plant operational 1 18 1955
- John Sevier Steam Plant operational 7 12 1955
- Nottely Dam operational 1 10 1956
- Gallatin Steam Plant operational 11 8 1956
- Allen Steam Plant operational 5 22 1959
- Paradise Steam Plant operational 5 19 1963
- TVA decides to build first TVA nuclear power plant at Browns Ferry, AL 6 17 1966
- Bull Run Steam Plant operational 6 12 1967
- Cumberland Steam Plant operational 3 1 1973
- Browns Ferry Unit 1, TVA's first nuclear power unit, operational 8 1 1974
- Sequoyah Nuclear Plant operational 7 1 1981—  
2nd in nation and 8th in world in overall annual power generation in 1990
- Browns Ferry Nuclear Power Plant Unit 2 achieves full-power operation 5 24 1991
- Watts Bar Nuclear Plant in Tennessee receives full-power operating license 2 7 1996
- Watts Bar Unit 1 reaches 100% power 5 9 1996
- Olympic Whitewater Slalom on Ocoee River 7 1996
- TVA Board approved returning Browns Ferry Nuclear Plant Unit 1 to service 5 16 2002
- TVA restarts Browns Ferry Nuclear Plant Unit 1, the nation's first nuclear unit to begin commercial operation in the 21st century 5 22 2007

# RMS Chapters

## Canadian Chapter News and Views

by Michael Greco

Over the past few years, Canada has been feeling the economic pinch that the rest of the world has been experiencing, albeit to a much lesser extent, perhaps. Fully 85% of the Canadian economy is directly dependent on our exports into the US market, so, as the US goes, so goes Canada.

One of the reactions taken by Canada in addressing the latest fiscal challenge, has been to cut back on a number of federal programs, many of which include monitoring programs of all sorts, which have been used in the past to set economic and social policy. Such was the case, when measures were taken to seriously curtail the five-year, comprehensive federal census, removing the mandatory response requirement for all Canadian citizens, and chopping many of the questions from the survey. Many economists have complained that this action will move Canada from being a world leader respected for the work of its "Statistics Canada" Department, to the realm of the third-world, where subjective opinion and conjecture lead policy, and not objective measurement.

In similar fashion, there appears to have been a concerted effort to improve Canada's resource economy by encouraging special deals with foreign powers (notably allowing Chinese government-owned companies to buy controlling interests in Canadian telecommunications and resource industries) and seriously downgrading the required environmental monitoring and assessment programs previously required

to protect our country's air, land and water.

It has been very frustrating over the past five years to have to watch the dismantling of environmental programs which took many of us years to build. I am sure it is not any easier for those



*It has been very frustrating over the past five years to watch the dismantling of environmental programs which took many of us years to build.*

working in the US, as evidenced in the recent resignation of the person in charge of the EPA.

The latest movement I have become involved with is the Canadian native "Idle No More" movement, a movement which is now blockading minor transportation corridors and has three First Nations' Chiefs camped out in a 30-day-old (so far) hunger strike, occupying a teepee on Victoria Island (the site of the proposed Aboriginal Healing Centre and Museum which William Commanda, Kirk Wipper, Douglas Cardinal and I, among many others, have been campaigning for, for more than 15 years now).

The main impetus for the latest actions being taken by Canada's "Indian" peoples is the current government's passing of an "Omnibus" bill affecting

all of Canada's air, land and water.

This includes the gutting of several environmental programs, and with them go many well-trained and long-serving atmospheric, lakes, fisheries and environmental scientists employed by

the Canadian government to run those programs. With those cuts, so too go the respective monitoring and environmental assessment and approvals processes which the industrialists and economists see as an impediment to fast-tracking economic development, especially in Canada's North. The best examples are tracking of the downstream effects of the Athabasca Tar

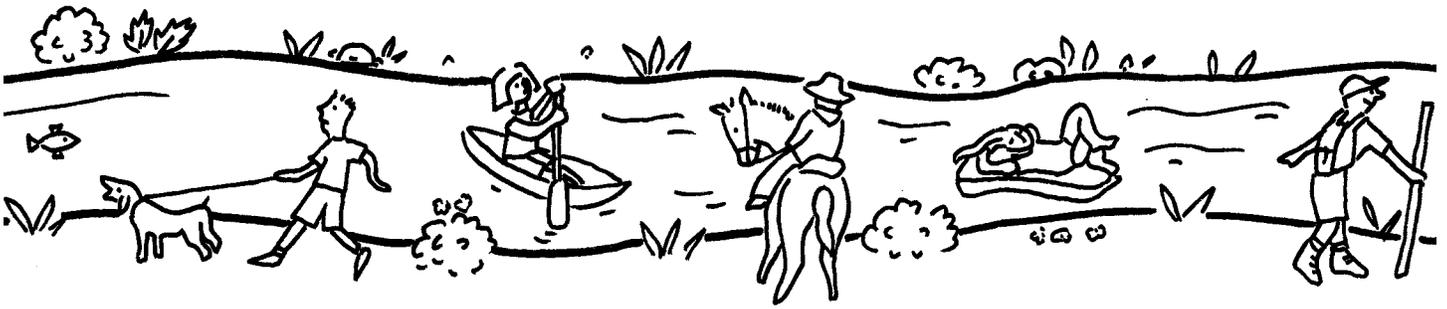
Sands in northern Alberta, the closing of the 50-year running, thirty-lakes, acid-rain monitoring project in central Manitoba, and the environmental assessment, or lack of

that requirement, for the now 'infamous' Keystone Pipeline project, to name just three of the major ones.

The latest 2013-14 federal omnibus budget bill also contained clauses which would, in effect, seriously downgrade our federal "Navigable Waters Protection Act," again to reduce the number of rivers and lakes that require any environmental assessment prior to development ... a reduction from virtually all of them (any of which could support or float a log, i.e., the definition of a navigable water), to now less than a few hundred rivers and lakes, which are now named in that bill, a bill which has become law recently!

Any type of major legal change to the management or protection of our country's natural resources are by treaty law,

*(continued on page 30)*



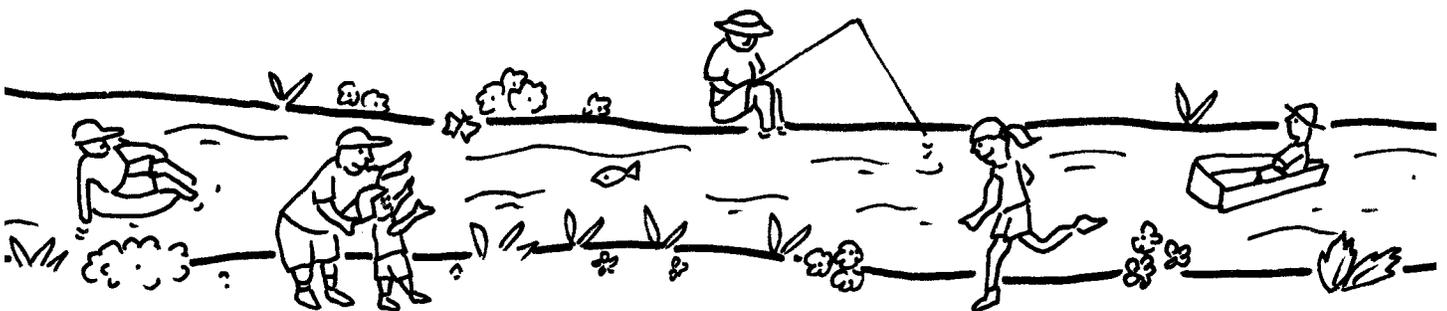
## Become a RMS Sustainability Donor with a Monthly Gift

For a few dollars each month you can contribute painlessly to RMS! It is easy to set up an automatic monthly donation, and your 100% tax-deductible gift can be as little as \$5.00 per month (\$60/year) or another amount that you choose. Apart from a one-time set up, it is hassle free! You can stop making monthly donations, or change your level of giving, at any time. 2013 monthly donors are eligible for preferred access to purchases, such as receiving 35% off a purchase of a Canyon Cooler.

*You can sign up for our monthly giving program by going to the 'Donate' page at [www.river-management.org](http://www.river-management.org).*

*Please contact Risa Shimoda with questions:  
[executivedirector@river-management.org](mailto:executivedirector@river-management.org).*

We value and appreciate the ongoing support of our Sustainability Donors, and hope you will consider joining them. Thank you!



# Pro Deal

## Great Savings for RMS Members!

Most RMS members in good-standing can obtain substantial savings on high quality whitewater gear and outdoor equipment and at the same time help RMS earn a little extra money in the form of a small sales commission. The businesses that continue to support RMS by giving us pro deals include Jack's Plastic Welding, Northwest River Supplies (NRS), Partner Steel Inc., Riverwear and White Water Manufacturing Inc.

Please note that this purchasing arrangement is for Lifetime, Professional and Organizational\* members (Associate or Student members are not eligible). Also note that the gear purchased must be for your personal use. Please do not attempt to purchase for any non-member.

To help expand our program, please contact Scott Springer, RMS Pro Deal Coordinator, if you know of companies that would potentially provide us with deals on their merchandise.

To place orders or ask questions, please contact Scott via email with a list of items by number, size and color:

**Scott Springer**  
**Bureau of Reclamation**  
**2800 Cottage Way**  
**Sacramento, CA 95825**  
**sspringer@usbr.gov (or) 916-978-5206**

Please take a look at the following vendor specific ordering details prior to contacting the Pro Deal administrator:

**Northwest River Supplies (NRS)**  
2009 S Main St, Moscow ID 83843  
877-677-4327; www.nrsweb.com

NRS has offered us a discount on anything listed on their website or retail catalog. The discounts vary from 10% to 40% with the largest discounts being on NRS brand items. If you are interested in obtaining a quote on an item or list of items please contact email the RMS Pro Deal Coordinator with a list of items by number, size and color. Do not attempt to make contact NRS directly!! The RMS Pro Deal Coordinator will contact you to verify that they are a member in good standing and will provide you with a quote per item. Once you have confirmed the items to be purchased call the RMS Pro Deal Coordinator by telephone so that he may process the transaction securely. Please be ready to provide a mailing address, phone number, and a credit card number so that the order can be placed immediately. At times items may be backordered or discontinued, the coordinator will be able to inform you of those conditions at that time. The minimum amount for an order is \$100.00. You will be responsible for sending your 5% commission to RMS for the total merchandise purchase price for negotiating this ProDeal.

### **Jack's Plastic Welding**

115 S Main Ave, Aztec NM 87410  
800-742-1904; fax 505-334-1901; www.jpwinc.com

Jack may be best known for his sturdy waterproof Paco Pads and several types of waterproof gear bags. Other items include inflatable kayaks, catarafts, and rafts. Contact him for a list of items with discounted prices or if you need a brochure of his products. Place your orders directly with Jack's and identify yourself as a RMS professional member to receive the outfitter price (20-30% off retail). Payments need to be made directly to Jack's. RMS will not be involved with the ordering from Jack's. We strongly encourage you contribute 5% of the purchase price of your items to RMS for negotiating this ProDeal.

### **Partner Steel Co., Inc.**

3187 Poleline Rd, Pocatello ID 83201  
(208) 233-2371; fax (208) 233-2536; www.partnersteel.com

Harvey Partner is well known for producing a high quality durable cook stove as well as an aluminum toilet/human waste carryout system. Other products include folding stove stands, coffee pots, blasters and the "Wishy Washy" hand washer. Place your orders directly with Partner Steel and identify yourself as a RMS member to receive a discounted price. Payments need to be made directly to them. RMS will not be involved with the ordering. We strongly encourage you contribute 5% of the purchase price of your items to RMS for negotiating this ProDeal.

**Riverwear** (Stanley store: Open May-October)  
PO Box 148, Stanley ID 83278  
(208) 774-3592; www.riverwear.com

Riverwear is offering our members 20% off retail prices for either mail orders or on site purchases in their store located in Stanley, Idaho. They make a high quality line of comfortable Riverwear brand fleece items. They also carry the following brand name gear: Columbia, Woolrich, Royal Robbins, Lowe Alpine, Gramicci, Kavu, and Mt. Hardware clothing; Teva, Simple, Onepport, and Nike footwear; Mountain Surf, Kokatat, Lotus PFDs; Madden and Lowe Alpine Packs; Cascade Design; Mt. Hardware; Kelty; Specialized Bikes and MORE! Contact Riverwear for further information on products and prices, or you can visit their website. Not everything available from their store will be on their website, but you can contact them for your specific needs. Place/pay your orders with Riverwear directly and identify yourself as an RMS professional member (they will have a list of member's names to reference) to receive 20% off their retail prices. We strongly encourage you to contribute 5% of the purchase price of your items to RMS.

## White Water Manufacturing Inc.

1700 SW Nebraska Ave, Grants Pass OR 97527

1-800-GO-SOTAR; www.sotar.com

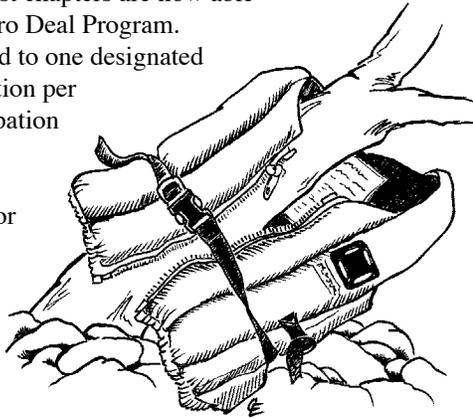
White Water Manufacturing, Inc. is willing to offer us a discount price on Sotar rafts, catarafts, IK's and cargo bags. View their products online. Place your orders directly Sotar and identify yourself as a RMS member to receive the discounted retail price and subject to product availability. Payments need to be made directly to White Water Manufacturing, Inc. The RMS Pro Deal Coordinator will not be involved with the ordering from White Water Manufacturing Inc. We strongly encourage you to contribute 5% of the purchase price of your items to RMS.

### \*Purchases for RMS Organizational Members

Organizational members in the Alaska, Southwest, Midwest and Southeast chapters are now able to participate in the Pro Deal Program.

Participation is limited to one designated member per organization per calendar year. Participation must be for the individual's personal use. No gifts, family or organizational supply purchases please.

Contact Risa for details and designation. ♦



## Reminder for Organizational Members

If you belong to RMS as an Organizational member, don't forget that you are able to add additional 'Organizational Staff' members from those who work at your location—(1) if you work at a non-profit, and (3) Organization Staff members if your employer is a government agency or corporation. Organizational Staff members will receive RMS Journals and digital RMS Digests, and they can subscribe to the RMS listserv.

To add or replace an Organizational Staff member, ask your Primary Contact (the person in whose name the membership is administered) to log into the Membership page of the RMS website and add colleagues to your membership with the Organization Staff Update Form. Your Primary Contact can change Organizational Staff members or their profile information at any time, and Organizational Staff members can add to their own member profile and connect with other members via the Membership Directory. ♦

## Welcome New Members

### Professional

Emily Alcott, Fluvial Geomorphologist/Ecologist  
Inter-Fluve, Inc., Hood River, OR

Stewart Allen, Socioeconomic Specialist  
Bureau of Land Management, Portland, OR

Heather Bateman, Assistant Professor  
Arizona State University, AZ

Matt Blocker, Outdoor Recreation Planner  
Bureau of Land Management, Price, UT

Jeff Cartwright, Realty Specialist  
Bureau of Land Management, Cottonwood, ID

Shane Csiki, Fluvial Geomorphology Specialist  
New Hampshire Dept of Environmental Services, NH

Corrie Kegal, Civil Engineer  
USDA Forest Service, MT

Ben Kennedy, Hydrologist  
Bureau of Land Management, AK

Glen Leverich, Senior Geomorphologist/Geologist  
Stillwater Sciences, Berkeley, CA

Andrea McNeil, Manager  
Canadian Heritage Rivers System, QC

Elizabeth Verdecchia, Natural Resources Specialist  
International Boundary and Water Commission, TX

### Associate

Scott Hacking, District Engineer  
Utah Department of Environmental Quality, UT

Mark Tanaka-Sanders, Wilderness Planner  
Bureau of Land Management, NV

### Organizational

Hansel Klausner, Supervisory Park Ranger  
Kodiak National Wildlife Refuge, AK

Jason Oles, Refuge Ranger  
Kodiak National Wildlife Refuge, AK

Kent Sundeth, Deputy Manager  
Kodiak National Wildlife Refuge, AK

# RMS Chapters

## Southwest by Greg Trainor

Like Caesar's Gaul, water information on drought, climate and weather in the Southwest is divided into three parts. First, one can hardly pick up a southwest newspaper these days without the screaming headlines: "Water Woes in the Arid West," "Drought revives old water war among river states," "Depleted Water."

Second, the newest book offerings attempt to wade through the latest studies in dendrochronology, paleo-reconstruction of historic hydrologic flows, and scenario-based approaches for water supply/demand futures and tell us what it means, in lay terms. *Dead Pool* and *A Great Aridness* are two good examples.

Third, and finally, the Bureau of Reclamation's latest report, "The Colorado River Basin Supply and Demand Study," offers a detailed examination of what the southwest water landscape may look like in the latter half of this century (read more inside). The imbalance between median

demand and median supply is estimated to be an annual shortage of 3.2 million acre feet by the year 2060. The news headlines warn that the imbalance does not sneak up on us at year 2060, but that it is happening now. It is happening today. The data continues to trickle in.

As river managers, our part is to design ways to adapt to what appears to be significant change—changes in demands from increased recreation, in-stream flows, flow requirements for endangered fish, energy development coupled with decreased flows from drought, dust-on-snow, and changing weather patterns.

The Southwest Chapter, or all chapters for that matter, depends on its partnerships with others. For example, American Whitewater, through it's Colorado River Program Director Nathan Fey, is tackling many projects in the Colorado River basin, including river access and navigability, alternatives to Wild and Scenic river management, and

water supply planning. Nathan continues to work to resolve site-specific river access conflicts across Colorado and has worked to ensure that clearly defined recreational stream flow needs are included in Colorado's Statewide Water Supply Plan and the Bureau of Reclamation's Colorado River Basin Water Supply and Demand Study. This work is gaining significant attention and recognition from all levels of government.

The Southwest Chapter, over the last year, has tried to be in places and events that make a difference. Last year, at this time, we were at the annual meeting of the Colorado Water Congress in Denver. The Congress is made up of Colorado municipal water supply agencies, irrigation districts, water attorneys, state legislators, and engineering consultants, and the topic was water shortages. The Chapter helped sponsor the Moab River Rendezvous and was a presence at the annual meeting of the Utah Guides

*Southwest Chapter fall float down Ruby Canyon and Westwater on the Colorado River, west of Grand Junction, Colorado. Photo: Melissa Blair*



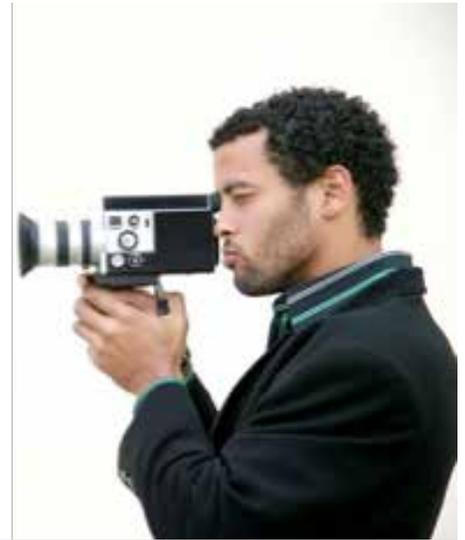
# RMS Chapters

and Outfitters and the Colorado River Outfitters Association in Grand Junction. This March, the Society will be the cosponsor of “River Crossings,” a three-day interagency event in Grand Junction with the Tamarisk Coalition, Bureau of Land Management, Water Center at Colorado Mesa University, and the International Submerged Lands Institute. The Chapter also organized a fall Chapter float in conjunction with a full RMS Board meeting in Grand Junction.

The biggest organizational issue of 2012 for the SW Chapter was the discussion about the location of the 2014 National RMS Symposium and whether our Chapter could support the effort. Denver was nominated as a location for the symposium, but many members of the Southwest Chapter are located on the west slope of Colorado, eastern Utah, northeast Utah, or Arizona. Denver as a location would challenge the Chapter because many members are a good distance from the symposium location. The concern was not about our willingness to assist, but the reality of time and distance. However, the Denver location was selected, and may prove an opportunity for the Chapter to recruit additional members in locations where we have few if any members: lower Arkansas, North Platte, South Platte, and Rio Grande.

Articles included in this edition touch on water supply and demand in the desert Southwest, recreational in-channel diversions, Tamarisk removal, open space river access, adaptive sport/educational organizations and river use, collaborative partnerships and, finally, a unique piece on the The History of Inflatable Boats and How They Saved Rivers, a printed documentary by Herm Hoops.◆

*Greg Trainor serves as Secretary of the RMS Southwest Chapter, and works for the City of Grand Junction in Colorado.*



## Up a river...with your camera! A Wild and Scenic Video / Photo Contest

RMS, with the support of the National Park Service and Bureau of Land Management, is conducting an awareness campaign to encourage understanding and appreciation for our Wild and Scenic Rivers System. The “Up a river...with your camera!” project has been fielded to:

- stir awareness of Wild and Scenic Rivers (that they exist, and which ones they are); and,
- develop a library of images and video that can be used to promote WSR and use internally for trainings.

Contestants will be asked to submit images or videos taken on a river that is part of the Wild and Scenic Rivers system, and will include ‘bonus’ points for images or videos submitted in HD formats. Please identify it as wild, scenic or recreational for our information.

Promotion and submissions will take place through the RMS Facebook page: we will depend on links to clouds like YouTube and Vimeo for video submissions and Flickr for the photos. Submissions will be accepted and winners announced in July.

Owners of the winning photo and video, respectively, will receive a prize of \$100, and RMS will match each prize with a donation, in their name, to a river charity of their choice. If you are interested in the program details, visit the Wild and Scenic page on the RMS website, or visit the RMS Facebook page!

A stalwart group has provided much-appreciated input on the preparation of a campaign that will encourage members of the public to submit videos and photographs of Wild and Scenic Rivers, eligible for prizes and the honor of having their work posted on both the RMS and [www.rivers.gov](http://www.rivers.gov) (Wild and Scenic Rivers) websites! Thanks go to Lisa Machnik, Lisa Byers, Jimmy Gaudry, Molly Wainwright, Josh Nadas, Christina Boston and Anja Wadman for their input and enthusiasm.◆

# RMS Chapters

## Southeast by Mary Crockett

Part of river management is the conservation and discovery of the rich cultural histories located in and along our waterways. In river management we usually include a chapter devoted to the cultural history of a river within our management plans. Lately, I have seen the thirst for our historic past during the many community meetings I attend concerning our rivers. These communities are currently rediscovering their rivers through the formation of riparian trails and boat landings. Authors are researching and writing about the many aspects of our rivers fueled by the many television programs about our history such as on the PBS, History and Discovery Channels. There are many citizens within our river communities who are interested in the discovery of family history and genealogy. As river managers we partner with all the many history agencies in the placement of signs and the telling of our river stories.

Recently, I was privileged to meet with a local graduate student from the University of South Carolina who had organized a group of undergraduate college students to help him conduct an archeological study of one of the first English backcountry trading garrisons established in South Carolina, along one of our major rivers. It was great to see all these young people spending their Saturday patiently digging and sifting dirt on a sunny spring day. Talking with these students about what they were doing, and how they were feeling, made for an interesting day.

They have the literature search of all that has been written about the site at their fingertips, as one of the students presented me with a cell phone image of a drawing of a neck of a 1718 wine bottle that was found during a 1970's field research project. With each significant find, they are so excited that you see lots of cell phones come out to snap pictures—even I used my cell phone to snap a picture of a student holding a piece of pottery she just removed from the ground (*see photo*). They had an official photographer with a good camera providing the official documentation and at least one student per unit using GPS/GIS to map their finds. Both generations (the college student and the recently retired) talking to each other were amazed at the



*Discovery of an artifact. Photos: Mary Crockett*

amount of field work and research that still needs to be conducted along all of our rivers in order to tell the story of these natural resource areas that helped us get to this point and will help us to understand our futures.

In closing, the SE RMS Chapter will be electing new officers this year, so if you are interested in serving as an officer please send me an email. Look to our website for new information and the date of our annual river trip and meeting site. ♦

# River Management Society 2012 Financial Report

Assets:	
Bank Accounts	13,907
Savings Account	98,914
Executive Director Fund	40,404
Receivables Due on Contracts	<u>0</u>
<b>Total Assets:</b>	<b>\$153,225</b>

**2011 Assets: \$185,300**  
**2010 Assets: \$191,600**  
**2009 Assets: \$100,100**

Liabilities:	
Contracts	24,830
Accounts Payable	0
Other Liabilities	<u>17,670</u>
<b>Total Liabilities:</b>	<b>\$42,500</b>
Equity:	<u>110,600</u>
<b>Total Liabilities and Equity:</b>	<b>\$153,100</b>

2012 Income:	
Contract Receipts	88,175
Membership Income	14,530
Merchandise Sales	2,693
Charitable Contributions	2,976
Event Income*	*110,212
Miscellaneous Income	<u>3,636</u>
<b>Total Gross Income:</b>	<b>\$222,222</b>

2012 Expenses:	
<i>Operating</i>	
Accounting	2,736
Credit Card Fees	3,529
Dues/Subscriptions/Licenses	494
Internet/Website	20,484
Meals & Entertainment	190
Merchandise	680
Miscellaneous	2,980
Office Supplies	1,212
Postage/Shipping	1,530
Registration Fees	535
Telephone	1,843
Travel & Lodging	<u>2,640</u>
<b>Total Operating Expenses:</b>	<b>\$38,853</b>

<i>Personnel Costs</i>	
Consulting - Executive Director	30,182
Travel	3,001
Health Insurance	4,800
Rent	<u>3,300</u>
<b>Total Personnel Costs</b>	<b>\$41,283</b>

<i>Program Expenses</i>	
Internship	2,298
RMS Journal	5,679
RMS Journal Consulting	10,099
Scholarships Paid Out	5,428
Symposium Expenses*	*110,903
<b>Total Program Expenses</b>	<b>134,407</b>

<b>Total Expenses</b>	<b>\$214,543</b>
<b>Total Net Income</b>	<b>\$7,679</b>

*Past RMS Treasurer, Lee Larson. Photo: Mary Crockett*



## Happy Trails!

It is hard to say goodbye as RMS National Treasurer. It was a great four years plus. I enjoyed almost every minute of it—there were only a few frustrating times. I enjoyed all the finest of individuals that I had a chance to work with and the new folks I met. The meetings and post meeting river trips were the greatest of good times. I witnessed some positive changes in the way we administered and managed our fiscal responsibilities. These changes ensure we are more accountable in using funds entrusted to us from sponsors and contractors. I am glad to have served RMS. I remain an active member of the Southeast Chapter and hope to see all my good friends and river buddies of RMS in the future. I do plan to finish the Appalachian Trail in two more years, and have many other adventures planned. ♦

—Lee V. Larson

*\*Both income and expenses are shown for the 2012 RMS Symposium in Asheville, NC. Report submitted by Lee Larson.*

*(Tamarisk, from page 9)*

respondents found chainsaw noise acceptable regardless of location applied.

Researchers could extend more attention to issues that complement tamarisk management in river corridors. After managers implement the control or removal of prevalent invasive species such as tamarisk, other invasive species may immediately succeed, out-compete, and invade the area due to optimal growing conditions in the ecosystem (e.g., more sunlight and availability of nutrients in the soil). Future studies should address the effectiveness of follow-up restoration techniques that could increase success of native plant succession and support a natural ecosystem state as dictated by public land management policy. A focus of these future studies could be on other alien species associated with populations of tamarisk, such as Russian knapweed (*Rhaponticum repens*, previously called *Centaurea repens*). Finally, future research should further examine the multitude of social implications and human dimensions tied to invasive species control and restoration broadening the scope to other recreation-based areas and beyond. ♦

*Robyn L. Ceurvorst, PhD (robyn.ceurvorst@usu.edu) is with the Dept. of Environment and Society, Utah State University. Clay Allred is with the Southeast Utah Group, National Park Service.*

*Horseshoe Bend, Colorado River, before Cataract Canyon.*



*(Canada, from page 22)*

and confirmed in many more recent agreements with our First Nations (of which there are more than 615 groupings of natives, registered as such, in Canada ... among some 50 major, different “Indian” cultural groups (Cree, Dene, Ojibwa-Algonquin (30 plus groups alone), Bloodfoot, Micmac, Huron, Haida, Tlingit ...) to be vetted through our aboriginal peoples, in accordance with both our British North American (BNA Act of 1967) and Canadian Treaty and Constitutional Laws passed during the past century. The current government has not been doing this, at least not to the extent that those affected would like, and so the natives are restless, and are not going to take it any more.

The environmentalists have, to date, been powerless to do anything to stop this so far, but over the past two months they have become aligned with the First Nations’ peoples in their fight to protect the environment, and the Government now has been forced to listen. It can choose to continue along the previous path, but it will do so at very serious peril to the country’s economy. There are some 500,000 “Indian” people living on reserves in Canada and another 150,000 or so living off reserves in our major cities.

And just last week, the Federal Court of Canada ruled, after 15 years of serious, legal challenges, that, for the first time in our country’s history, the Mi’qmaq and Metis peoples are also to be considered as natives with rights under the current Indian Act.

We also have approximately 50,000 Inuit (Eskimo) people living in Canada, many under the new Territory of Nunavut (created April 1, 1999) in Canada’s north. They are mostly “uni-cultural” and live in contiguous lands, which they now manage fairly well, for the most part by themselves, as Canada’s 3rd Territory among the other 10 provinces.

So, Canadian river managers have a lot to think about these days, as 1.5 million of our 33 million inhabitants spread across this land have suddenly begun to demand treatment which reflects their own stake in the future development of Canadian lands and resources, and most of our Nation’s rivers flow through, and, in many cases, entirely within their recognized, traditional, unceded, territorial lands.

The Canadian case is much different from that in the US, since the British and French first entered into treaties with the Native peoples, as equals, in the late 16th and 17th centuries, and the Government of Canada has continued to recognize those Treaty rights by special, numbered Agreements, signed with the representatives of those Native Cultural Groups over the past 150 years. Nevertheless, many feel very strongly that the governments of Canada have continuously ignored those rights, but never extinguished them, and now the issue is of growing significance, at the forefront of future economic development in Canada. And it won’t go away any time soon. ♦

*Michael Greco serves as President of the Canadian Chapter, RMS (1/14/13).*

# Chapter Officers

# To Join RMS

## ALASKA

David W. Schade, MPA, President  
Alaska Department of Natural Resources  
550 West 7th Avenue, Suite 1020  
Anchorage, AK 99501-3577  
tel (907) 269-8645 / cell (907) 230-6061  
david.w.schade@alaska.gov

Helen Clough, Vice President  
1765 Mendenhall Peninsula Road  
Juneau, AK 99801  
tel (907) 790 4189 / cell (907) 321-4004  
hcloughak@gmail.com

Jennifer Reed, Secretary  
U.S. Fish & Wildlife Service  
101 12th Ave, Rm 236, Fairbanks AK 99701  
tel (907) 455-1835 / fax (907) 456-0428  
jennifer\_reed@fws.gov

Bill Overbaugh, Treasurer  
Bureau of Land Management  
222 W 7th Ave #13, Anchorage AK 99513  
tel (907) 271-5508 / fax (907) 271-5479  
boverbau@blm.gov

## PACIFIC

Elaine Grace, (Interim) President  
PO Box 562, Naalenu, HI 96772  
tel (808) 339-0051 / grossmo@gmail.com

(vacant), Vice President

Scott Springer, Secretary  
Bureau of Reclamation  
2800 Cottage Way, Ste E2711, Sacramento CA  
tel (916) 978-5206  
sspringer@mp.usbr.gov

Larry Freilich, Treasurer  
Inyo County Water Department  
PO Box 337, Independence CA 93526  
tel (760) 878-0011 / lfreilich@inyocounty.us

## NORTHWEST

Lynette Ripley, President  
Bureau of Reclamation  
1375 SE Wilson Ave, Ste 100, Bend OR 97702  
tel (541) 389-6541 x.233  
lripley@usbr.gov

Jim Beaupre, Vice President  
Bureau of Land Management  
3050 NE 3rd St, Prineville OR 97754  
tel (541) 416-6776 / fax (541) 416-6798  
jbeaupre@blm.gov

Ryan Turner, Secretary  
Bureau of Land Management  
1 Butte Dr, Cottonwood ID 83522  
tel (208) 839-2146  
rturner@blm.gov

Molly Wainwright, Treasurer  
6120 SW Huber St, Portland OR 97219  
tel (503) 803-1640  
buckyb68@hotmail.com

## CRMS

Michael Greco, President  
Max Finkelstein, Secretary-Treasurer  
c/o CRMS, 6333 Fortune Dr, Ottawa, Ontario  
Canada K1C 2A4  
tel (613) 824-0410  
greco\_crms@yahoo.com

## SOUTHWEST

Robyn Ceurvorst, President  
Utah State University  
125 West 200 South, Moab UT 84532  
tel (435) 259-7432  
robyn.ceurvorst@usu.edu

Jason Carey, Vice President  
River Restoration  
PO Box 2123, Glenwood Springs CO 81602  
tel (970) 947-9568  
jason@riverrestoration.org

Greg Trainor, Secretary  
City of Grand Junction, Public Works & Utilities  
250 N 5th St, Grand Junction CO 81501  
tel (970) 244-1564 / fax (970) 256-4022  
gregt@gjcity.org

Jennifer Jones, Treasurer  
Bureau of Land Management  
82 E Dogwood, Moab UT 84532  
tel (435) 259-2136 / fax (435) 259-2158  
jjjones@blm.gov

## SOUTHEAST

Mary Crockett, President  
Congaree Land Trust  
2231 Devine St #100, Columbia SC 29205  
tel (803) 988-0000  
landprotection@congarerealt.org

Stephen Hendricks, Vice President  
Forest Service  
PO Box 2750, Asheville NC 28802  
tel (828) 257-4873 / fax (828) 259-0567  
shendricks@fs.fed.us

Glen Bishop, Secretary  
Arkansas Tech University  
Dept of Parks and Recreation  
Williamson Hall, Russellville AR 72801  
tel (479) 964-3228 / fax (479) 968-0600  
glen.bishop@atu.edu

Bill Marshall, Treasurer  
South Carolina Dept of Natural Resources  
PO Box 167, Columbia SC 29202  
tel (803) 734-9096 / fax (803) 734-9200  
marshallb@dnr.sc.gov

## MIDWEST

Peter Hark, President  
Minnesota Dept of Natural Resources  
500 Lafayette Rd, St Paul MN 55155  
tel (651) 259-5618 / fax (651) 297-5475  
peter.hark@dnr.state.mn.us

Randy Thoreson, Vice President  
National Park Service  
111 E Kellogg Blvd, St Paul MN 55101  
tel (651) 290-3004 / fax (651) 290-3815  
randy\_thoreson@nps.gov

Stuart Schneider, Secretary  
National Park Service  
PO Box 319, Valentine NE 69201  
tel (402) 376-1901 / fax (402) 376-1949  
stuart\_schneider@nps.gov

Sue Jennings, Treasurer  
Sleeping Bear Dunes National Lakeshore  
9922 Front St, Empire MI 49630  
tel (231) 326-5134 x.422  
sue\_jennings@nps.gov

## NORTHEAST

(vacant)

Name \_\_\_\_\_

Home Address \_\_\_\_\_

City \_\_\_\_\_

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

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

Organization \_\_\_\_\_

Office \_\_\_\_\_

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

City \_\_\_\_\_

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

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

Fax \_\_\_\_\_

Email \_\_\_\_\_

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

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

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

Membership Category (please check one)

- Professional \$50/yr (\$200 for 5 years)
- Associate \$30/yr
- Organization \$120/yr (government/corporate)
- Organization \$60/yr (NGO/non-profit)
- Student \$25/yr
- Lifetime \$500 (for individuals only)

Who referred you to RMS? \_\_\_\_\_

*Make checks payable to "RMS"  
RMS also accepts VISA or Mastercard:*

Card #:

Exp date:

Amount:

*Send this form, with payment, to:  
RMS, P.O. Box 5750, Takoma Park, MD 20913-5750  
(301) 585-4677 • rms@river-management.org*



**River Management Society**

RMS, P.O. Box 5750, Takoma Park MD 20913

Non-Profit Org.  
US Postage  
PAID  
TM



Next Journal Deadline - *“Kids Today, River Professionals Tomorrow”* - Submissions due May 1, 2013

