




COLORADO MESA
UNIVERSITY

RUTH POWELL HUTCHINS
WATER CENTER

**ANNUAL
REPORT**

2014/2015

coloradomesa.edu/watercenter

TABLE OF CONTENTS

- Upper Colorado River Basin maps 2
- Mission 3
- From the Coordinator and Faculty Director 3
- Education and Outreach 4
 - Partnering with Western Slope Basin Roundtables 4
 - Events 4
 - Documentary Film 4
 - Academic Opportunities 4
- Research 5
 - Fens Research Grant..... 5
 - Upper Colorado Basin River Ruide..... 6
 - Colorado River Geomorphology and Vegetation Removal 6
- Dialogue 6
 - Annual Upper Colorado River Basin Water Forum..... 6
 - Produced Water Initiative 7
- Looking Ahead 7
- Water Center Financial Summary 8
- Revenues and Balances; Expenditures..... 9
- Water Center at CMU 2015 Advisory Council..... 10
- 2014 Water Center General Support Donors and Grantors 11



Upper Colorado River Basin

Map credit: Drezden Kinnaird, CMU Geographic Information Systems Student



Uniquely situated at the confluence of two major headwater rivers, the Water Center at CMU serves a critical role pulling together science, opinion and culture into a format that decision makers can use to craft a viable water future for citizens of the Colorado River Basin.



—David Graf,
Colorado Division of Parks and Wildlife

To coordinate with the University's academic and fiscal years, the Annual Report covers the time period July 1, 2014 – June 30, 2015.

Note: Fiscal Year (FY) = July 1 through June 30

THE MISSION OF THE WATER CENTER AT COLORADO MESA UNIVERSITY IS TO PERFORM AND FACILITATE INTERDISCIPLINARY AND COLLABORATIVE RESEARCH, EDUCATION, OUTREACH AND DIALOGUE TO ADDRESS THE WATER ISSUES FACING THE UPPER COLORADO RIVER BASIN.

From the Coordinator and Faculty Director

In 2014 and 2015, the Water Center at CMU made progress in all areas of our mission: education, outreach, research and dialogue. We increased our research activities while continuing to develop effective publications and programs including e-newsletters, weekly newspaper columns, seminars and tours. Partnerships with other agencies and organizations are fundamental to all of these efforts.



New Initiatives

In 2014, the Water Center distributed funds through a competitive grant program to promote more research on how high-altitude fens are affected by water management activities, and in 2015, we initiated a new scientific and technical report series. We also premiered a documentary film about the Grand Valley's relationship to its rivers. In addition, the Water Center created and hosted the first Colorado Student Water Field Conference, which is becoming an annual Colorado event.

Service to the CMU Community

The Water Center engages CMU students and faculty with water professionals and policy makers in discussing current water challenges. Students attend all Water Center events free of charge, and the Water Center has organized student-professional networking events. In addition, the Water Center has supported the development of a new general education course, "Water, People and Environment," focused on water. It is also working with the River Management Society and two other universities to offer a River Studies and Leadership certificate to undergraduate students who complete the required coursework and professional project.



Hannah Holm,
Coordinator

Service to the Region

The Water Center is committed to promoting the development of creative solutions to the region's water challenges by creating a communication bridge between stakeholders, policy makers and researchers from different corners of the Colorado River Basin. We invite you to join us in this exciting endeavor!



Dr. Gigi Richard,
Faculty Director

Education and Outreach

The Water Center conducts education and outreach to the general public, the water community and the academic community through events, e-newsletters, social media and traditional media outlets.

Partnering with Western Slope Basin Roundtables

The Water Center works with the Colorado and Gunnison Basin Roundtables to increase public awareness of their work to assess and address the water needs in their river basins. The Basin

Roundtables are groups of water managers and stakeholders charged by the Colorado legislature with doing "bottom up" water planning. A major focus of this work in 2014 and 2015 involved developing their contributions to Colorado's Water Plan, which is due to be finalized in December 2015. Water Center staff developed slide shows roundtable members could give to community and local government groups and wrote and edited weekly columns on roundtable activities and other water issues that appeared in newspapers across the Western Slope.

These slide shows, articles and related media stories are archived at coloradomesa.edu/watercenter/RoundtableEducationProject.html.

Events

The Water Center organizes an annual three-evening water course for citizens, co-sponsors the Mesa County "State of the Rivers" meeting with the Colorado River District and invites the public to CMU's "Natural Resources of the West" seminar series and tour each fall. The Water Center also promotes other organizations' water events through its monthly e-newsletter and social media.

In 2014, we expanded on these regular

offerings by hosting an evening with Kevin Fedarko, author of *The Emerald Mile: The Epic Story of the Fastest Ride through the Heart of the Grand Canyon*. This reception, presentation and book-signing drew more than 200 people, including many newcomers to Water Center events. On May 7, 2015, the Water Center hosted an evening with John Wesley Powell, as portrayed by Clay Jenkinson, award-winning historian performer and humanities scholar, which drew an even bigger crowd. Chevron is the primary sponsor of these high profile events.

Documentary Film

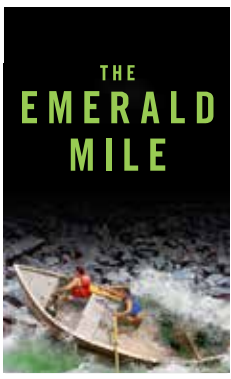
The Water Center worked with award-winning Gen9 Productions to produce a documentary that explores the relationship of the community in the Grand Valley to the Colorado and Gunnison Rivers, and how this relationship has changed over time. The documentary, *Water in the Desert: The Grand Valley and Its Rivers*, is a tool to inform the public and promote dialogue about the future of the river and the community, as well as other river communities in the region. The film was released in August 2014 with a screening, reception and panel discussion at CMU that drew approximately 250 people.

Academic Opportunities

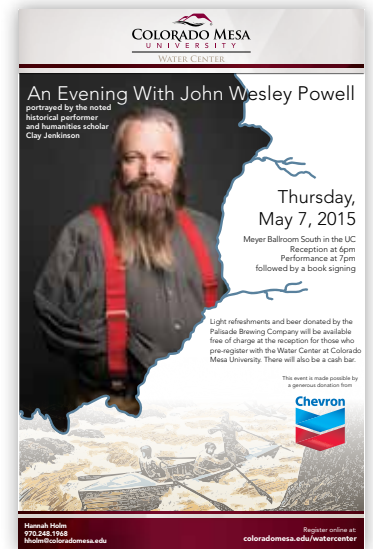
The Water Center promotes water education opportunities from K-12 schools to the university level. The Water Center

The Water Center fills a vital niche in the Grand Valley and the upper Colorado Basin as a whole. The programs and educational opportunities offered by the center have profoundly improved the knowledge of Tamarisk Coalition staff and our partner networks, strengthening not only our organization and the work we do, but also the watersheds and communities we serve.

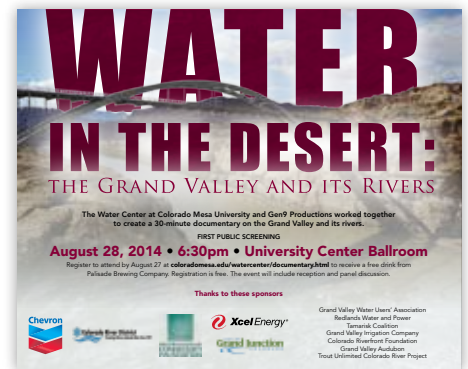
—Shannon Hatch,
Tamarisk Coalition



The Water Center hosted a reception, presentation and book-signing for "The Emerald Mile." The event drew more than 200 people, including many newcomers to Water Center events.



John Wesley Powell, the leader of the first expedition on the Colorado River through the Grand Canyon, was portrayed by Clay Jenkinson in May 2015.



Approximately 250 people attended the screening, reception and panel discussion for the documentary, "Water in the Desert: The Grand Valley and Its Rivers."

received a grant from Xcel Energy to provide a workshop for teachers and to partner with the Western Colorado Math and Science Center improve water education resources for K-12 classrooms. We also developed three new programs for university students.

River Studies and Leadership Certificate

The Water Center at CMU is happy to announce a new partnership with the River Management Society (RMS) and two other universities to offer a certificate for undergraduate students certifying focused studies in the field of river studies. CMU offers courses to satisfy the river science track of the certificate. Enrollment in the certificate program provides students with networking opportunities, a one-year membership in RMS and admission to an RMS symposium. In addition to coursework, students are required to conduct a river-related professional project and present the results at an RMS symposium or in the RMS newsletter. Learn more about the River Studies and Leadership Certificate at river-management.org/river-studies-leadership.

New General Education Course: Water, People and Environment

In 2014, CMU offered a new general education science course focused on water entitled: Water, People and Environment. Twenty-four students enrolled for the spring 2014 semester and the course covered a variety of water-topics from the hydrologic cycle to rivers, water pollution and water law. The course was accepted in 2015 for inclusion in the State of Colorado's guaranteed transfer program for general education courses, and is now offered every spring semester.

Student Water Field Conference

In September 2014, the Water Center hosted the first Annual Colorado Student Water Field Conference, which drew 30 students and faculty from front range universities and CMU for a weekend of camping, rafting and site visits to learn about water, agriculture and river restoration in the Grand Valley. Tours were hosted by Orchard Mesa Irrigation District, Grand Valley Irrigation Company, U.S. Fish and Wildlife Service, Colorado State University Orchard Mesa Research Station, Rettig Farms, Tamarisk Coalition and University of Colorado faculty. A farm dinner was hosted by Field to Fork CSA in Palisade, Colo. and additional funding for the dinner was provided by Metro State University of Denver's One World One Water (OWOW) Center. In September 2015, Metro State's OWOW Center is hosting the second field conference in Denver.



Students from the Colorado Student Water Field Conference tour the fish screen at Grand Valley Irrigation Company.

Research

The Water Center is excited to be expanding activities to promote research on regional water challenges.

Fens Research Grant

In 2013 the Water Center received a grant from a private donor to fund research on high-altitude fen ecosystems. Additional funding was provided by Ute Water. Several water providers in Colorado have encountered issues with proposed reservoir expansions and potential impacts to these fragile ecosystems. A small committee of experts on fen ecosystems was formed to develop a Request for Proposals (RFP), which was widely distributed. The goal of the research funding is to enhance our understanding of the resiliency of fens to disturbances related to water



Water tour of a fen on the Grand Mesa.



One of the most important goals of the Water Center is to increase public awareness and knowledge of water issues affecting Colorado and the entire Upper Basin. The center's educational programs such as the water law course, notable speaker events and special programs have turned the spotlight on the challenges of managing water resources in the arid West.



—Cary Baird, *Chevron*



Alex Asay, CMU geoscience student, surveys as part of a research project on channel morphology and tamarisk removal.

management activities, the capacity of fens to recover after disturbance and the potential for restoration of fens or mitigation of impacts to fens. The committee reviewed proposals and selected a research group coordinated by the Mountain Studies Institute as the recipient of the funding in 2014. The principle investigators for the grant are Rod Chimner, PhD, and John Hribljan, PhD, from Michigan Technological University, and Marcie D. Bidwell from the Mountain Studies Institute in Silverton, Colo. Work on this project will be completed in December of 2015.



Gigi Richard, Faculty Director, Water Center

Technical and Scientific Report Series

The Water Center is initiating a research publication series with reports on an expert panel discussion on the spread of the tamarisk beetle and the Water Center-supported study of how water management activities affect fens.



Upper Colorado River Basin Resource Guide

Shell Oil Company provided funding to create a searchable online database of studies, publications, relevant entities and data related to water in the Upper Colorado River Basin for public access. Three CMU students worked with CMU faculty and CMU Tomlinson Library staff to develop this online guide. The guide will serve as a clearinghouse for water information for each of the major sub-basins including the Yampa/White, Green, Gunnison, Dolores, Colorado Headwaters, and San Juan basins. Information available on the guide includes maps of each basin, locations of stream gages, links to water data, links to recent studies and reports relevant to each basin, and links to entities involved in the management of water in each basin. The CMU library is hosting the resource guide and providing support for the project. We appreciate feedback and suggestions for additional content for the guide, which can be found at uppercoloradoriver.org.

Colorado River Geomorphology and Vegetation Removal

The introduction of tamarisk to the riparian zone adjacent to the Colorado River and many rivers in the southwestern U.S. has contributed to increased stability of the river channels. Recent efforts at removal of tamarisk could contribute to increased bank erosion and therefore increased channel mobility. With funding from the Colorado Water Conservation Board and Xcel Energy through the Tamarisk Coalition, the Water Center is conducting a study of potential impacts of tamarisk removal on channel stability. The purpose of the study is to assess changes in channel mobility following tamarisk removal along the Colorado River in the Grand Valley. Water Center Director Dr. Gigi Richard is working with CMU geology and GIS students to analyze repeat aerial photos of the channel and side channels in areas where removal has been accomplished. In addition, during the summers of 2013 and 2014, they conducted field surveys of the river in areas where tamarisk removal is planned with the intention of continued annual monitoring to measure cross-section geometry changes. The study continues into 2015.

The Water Center offers learning opportunities so that citizens can participate constructively in critical Upper Colorado River Basin water conversations.

—Greg Trainor, former Chairman,
Water Center at CMU
Advisory Council

Dialogue

The Water Center at CMU continues to expand its capacity to serve as a hub for the exchange of fresh information and ideas on how to address regional water challenges.

Annual Upper Colorado River Basin Water Forum

In November 2014, the Water Center brought together water experts from around Colorado and other states in the Colorado River Basin for the fourth annual Upper Colorado River Basin Water Forum. The 2014 theme was "Seeking a Resilient Future." Speakers addressed how regional water leaders are addressing increased demands for dwindling water supplies, whether changes are needed in how water is allocated between states and what we can expect river and streamflows to look like in the future. Speakers included Pat Mulroy, with the Brookings Institute West, and Bill Hasencamp, from the Metropolitan Water District of Southern California, as well as other top water managers and academics from Colorado, Utah and Arizona. The 2015 forum theme is "Managing for Extremes," and is also drawing a diverse group of experts. Presentations are archived at: coloradomesa.edu/watercenter/UpperColoradoRiverBasinWaterForum.html.

Looking Ahead

In 2015/16, the Water Center is looking forward to progress on existing initiatives, as well as new projects. Some highlights include:

- **Education and outreach.** The Water Center plans to host a tour for local elected officials of critical water infrastructure.
- **Research.** The Water Center will continue to expand its new scientific and technical report series and add content to the Upper Colorado River Basin Resource Guide.
- **Dialogue.** The Water Center is working with the Colorado Basin Roundtable to pursue funding to bring diverse stakeholders and water users together to develop a framework for integrated water management planning.
- **Organizational sustainability.** On October 1, 2015 the Water Center celebrated its endowment by officially being renamed the Ruth Powell Hutchins Water Center. We will continue to expand and diversify our funding base.

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As a nonprofit organization, we rely on the expertise and capacity of other organizations to augment our own knowledge and networks in order to achieve our mission. The Water Center has helped us become a stronger organization through their valuable programming and are raising the bar on community knowledge of our local and regional water resource issues.

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Stacy K. Beough, *Executive Director, Tamarisk Coalition*



Water experts from Colorado and other states in the Colorado River Basin attended the fourth annual Upper Colorado River Basin Water Forum in November 2014.



Water Center Financial Summary

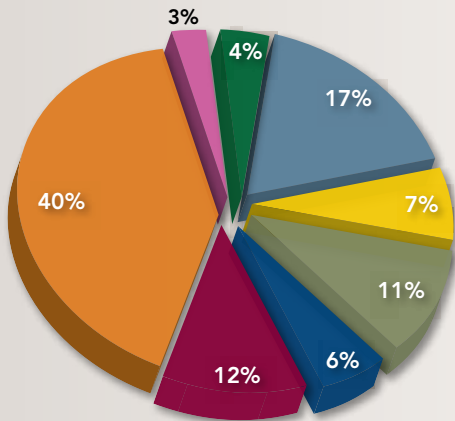
	FY* 13 SUMMARY			FY 14 SUMMARY			FY 15 SUMMARY		
	Donations + Events	Grants	Total	Donations + Events	Grants	Total	Donations + Events	Grants	Total
Fund Balance from previous FY	\$7,678	\$40,163	\$47,841	\$9,849	\$20,774	\$30,623	\$19,037	\$118,348	\$137,385
INCOME									
Grants		\$16,314	\$16,314		\$169,713	\$169,713		\$4,883	\$4,883
Donations + Sponsorships	\$24,357		\$24,357	\$42,220		\$42,220	\$47,988		\$47,988
Registrations	\$9,984		\$9,984	\$6,770		\$6,770	\$11,420		\$11,420
Tamarisk Coalition Conference (pass through)				\$10,888		\$10,888			
Fire re-seeding (pass through)	\$10,000		\$10,000						
SGM							\$3,010		\$3,010
FY Revenue	\$44,341	\$16,314	\$60,656	\$59,878	\$169,713	\$229,591	\$62,418	\$4,883	\$67,301
EXPENDITURES									
Wages	\$4,875	\$28,768	\$33,643	\$10,138	\$38,007	\$48,145	\$11,340	\$22,090	\$33,430
Benefits	\$627	\$3,860	\$4,487	\$1,303	\$5,318	\$6,621	\$1,479	\$2,932	\$4,411
Student Assistants					\$3,020	\$3,020	\$90		\$90
Guest Speakers and Professional Services	\$1,623	\$308	\$1,931	\$12,184	\$11,508	\$23,692	\$18,491	\$15,684	\$34,175
Printing				\$177	\$6,640	\$6,817	\$562		\$562
Meeting and Conference Registrations	\$1,035		\$1,035	\$1,891	\$545	\$2,436	\$617	\$597	\$1,214
Overhead**	\$12,937		\$12,937	\$1,229	\$445	\$1,675	\$1,572	\$250	\$1,822
Indirect Costs		\$944	\$944		\$997	\$997		\$1,587	\$1,587
Event Food and Drink	\$8,852		\$8,852	\$9,959	\$2,877	\$12,837	\$14,782		\$14,782
Subscriptions and Books				\$1,256		\$1,256		\$696	\$696
Travel	\$2,002	\$2,251	\$4,253	\$1,654	\$2,782	\$4,436		\$1,483	\$1,483
Tamarisk Coalition Conference (pass through)				\$10,888		\$10,888			
Fire re-seeding (pass through)	\$9,996		\$9,996						
Foundation CC fees	\$320		\$320	\$187		\$187	\$387		\$387
Other Expenses and Transfers	\$(96)	\$(428)	\$(524)	\$(177)		\$(177)			
FY Expenditures	\$42,171	\$35,703	\$77,874	\$50,690	\$72,139	\$122,829	\$49,319	\$45,318	\$94,638
FY Net	\$2,171	\$(19,389)	\$(17,218)	\$9,188	\$97,574	\$106,762	\$13,099	\$(40,435)	\$(27,337)
Fund Balance	\$9,849	\$20,774	\$30,623	\$19,037	\$118,348	\$137,385	\$32,135	\$77,913	\$110,048

*FY: Fiscal Year July 1 through June 30

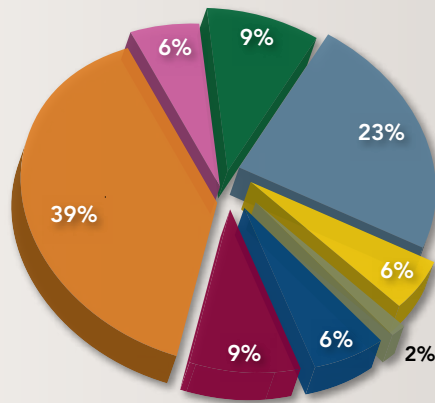
**Overhead: Supplies, telephone calls, advertising, postage, dues and membership, and rent/lease equipment (telephone).

Water Center Financial Summary (continued)

FY14 Revenues and Balance, \$249,326*
(includes fund balances from 2013)



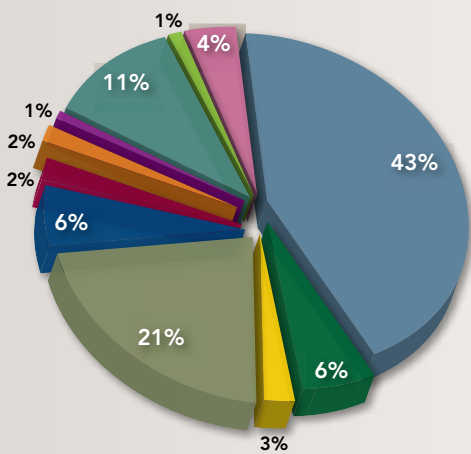
FY15 Revenues and Balance, \$204,686
(includes fund balances from 2014)



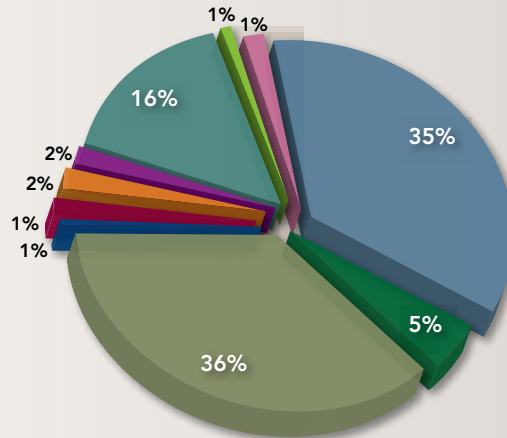
- Walton Family Foundation: Water Policy Education Grant
- Colorado Water Conservation Board Grants
- Fund Balance: Donations + Events
- Private Donor: Fens Research Grant
- Other Grants
- Event Registrations
- Shell Oil Company: Resource Guide Grant + Donation
- Admin + Events

*The Tamarisk Coalition conference (\$10,888) was not included to show a more realistic picture of Water Center activities.

FY14 Expenditures, \$111,931*



FY15 Expenditures, \$94,251



- Travel
- Overhead**
- Student Assistants
- Subscriptions and Books
- Meeting and Conference Registration
- Benefits
- Event Food and Drink
- Printing
- Wages
- Indirect Costs
- Guest Speakers and Professional Fees

*The Tamarisk Coalition Conference (\$10,888) was not included to show a more realistic picture of Water Center activities.
**Overhead: Supplies, telephone calls, advertising, postage, dues and membership and rent/lease equipment (telephone).



Advisory Council members, top to bottom: Mel Rettig, Rettig Farms; Shannon Hatch, Tamarisk Coalition; Bruce Smith, Western Water & Land.

Water Center at CMU Advisory Council

Chair 2015/16: Dan Crabtree, Palisade Irrigation District

Vice chair 2015/16: Ken Neubecker, Western Rivers Institute

- Cary Baird, Chevron
- Geoff Blakeslee, The Nature Conservancy
- Cory Beaugh, Colorado Division of Water Resources
- Larry Clever, Ute Water Conservancy District
- Lurline Curran, Grand Valley Manager
- Carlyle Currier, Rancher
- Bill Edwards, U.S. Forest Service
- Steve Fletcher, Uncompahgre Valley Water Users
- Russell George, Colorado Water Conservation Board
- David Graf, Colorado Division of Parks and Wildlife
- Mark Harris, Grand Valley Water Users Association
- Shannon Hatch, Tamarisk Coalition
- Mike Higgins, Grand Junction Pipe and Supply
- Will Hutchins, Farmer
- Kirsten Kurath, Williams, Turner & Holmes, PC
- John Porter, Dolores Water Conservancy District
- Bruce Smith, Western Water & Land
- Chris Treese, Colorado River Water Conservation District
- Kirby Wynn, Garfield County

Many thanks to these past council members. We appreciate their dedicated service to the Water Center for the last four years.

- Mark Hermundstad, Williams, Turner & Holmes, PC
- Mel Rettig, Rettig Farms
- Greg Trainor, retired from City of Grand Junction



This annual review of the accomplishments of the Center is an important reminder of just how much the Center is doing and how far it's reaching.



—Chris Treese, Colorado River District



Greg Trainor, former chairman, Water Center Advisory Council and Hannah Holm, Coordinator, Water Center



The Water Center is essential to the education necessary for the public to keep abreast of the most valuable resource that will determine Colorado's future. Topics are always relevant and timely.





—Lurline Curran, Grand County, Colo.

2014/15 Water Center Grantors, Donors and Sponsors

The Water Center appreciates the support of the following organizations whose generous grants, donations, and sponsorships support research projects and educational and outreach activities. Without this support, our work would not be possible.



GRANTORS

<p>Lake Powell (\$2,500+)</p>  	<p>DONORS*</p>	<p>2014 Water Course Sponsors</p> <ul style="list-style-type: none"> City of Grand Junction Rettig Farms SGM Ute Water Conservancy District Western Water & Land Williams, Turner & Holmes, PC 	<p>SPONSORS</p>
<p>Cataract Canyon (\$1,000 - \$2,500)</p> <ul style="list-style-type: none"> City of Grand Junction Grand Valley Irrigation Company Grand Valley Water Users Association 		<p>Documentary Film Sponsors</p> <ul style="list-style-type: none"> Chevron City of Grand Junction Colorado River District Colorado Riverfront Foundation Grand Valley Audubon Society Grand Valley Irrigation Company Grand Valley Water Users Association John McConnell Math and Science Center Palisade Irrigation District Redlands Water and Power Tamarisk Coalition Trout Unlimited Western Colorado Community Foundation Xcel Energy 	
<p>Echo Park (\$500 - \$999)</p> <ul style="list-style-type: none"> Colorado River District Grand Junction Pipe and Supply Uncompahgre Valley Water Users Association 			
<p>Shoshone (\$250 - \$499)</p> <ul style="list-style-type: none"> Aquacita Centennial Plastics Fresno Valves & Castings Hunter Industries Inman Interwest JM Eagle Plastics Munro Companies Netafim USA Regency Wire and Cable Ten Point Sales and Marketing 		<p>2014 Upper Colorado River Basin Water Forum Sponsors</p> <ul style="list-style-type: none"> Alpine Bank Chevron Colorado River District Colorado Water Conservation Board Denver Water Grand County Leonard Rice Engineers Rubicon Water SGM Trout Unlimited Ute Water Conservancy District Western Water & Land Wilson Water Group 	
<p>Four Corners (\$100 - \$249)</p> <ul style="list-style-type: none"> Loma Ditch and Lateral Rettig Farms <p>*The giving levels reflect flows at key points in the Upper Colorado River Basin.</p>			




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