

Currents

Santa Fe Watershed Association

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Fall 2015

From the Executive Director

After a week of meetings and calls and letter writing, I'm often left wondering if we really make a difference for the "health and vibrancy of the Santa Fe River and its watershed." This quote comes directly from our mission statement. There are so many days when I see the River only in passing, driving by on my way to another meeting.



SFWA Executive Director Andy Otto

Is the River flowing today? How much? How far down is the water reaching? Could we get in there and clear the dead wood out of those willows a bit...?

But the meetings and calls and letter writing are all part of the job: in order to be a steward of the watershed, we show up, and speak up, to make sure that the River and its watershed have a seat at the table. What we do "Downtown" is crucial to keeping the Santa Fe River on everyone's radar as a place that ought to be watched after and cared for.

During these meetings, I'm reminded that so many people assume that the Santa Fe River and the arroyos are taken care of and maintained by some "governmental agency."

No single agency has responsibility for such – maybe that's the confusion: numerous agencies and departments have authority over some aspect of the functions of the watershed.

That's where we come in. We are singularly focused on this River and this watershed. Our job is to be in the riverbed with our volunteer Steward teams – a regular citizens action task force – who help to keep the river and its arroyos

from serving as dumps. Our job is to watch what's going on and make sure that problems are dealt with ASAP.

*"We're there for the Santa Fe River,
and we're there for everyone
who can't be there."*

We don't do this by some governmental-given authority, but by the community's authority – you trust us to be **here**, and we are. We go to the meetings, all of them, to make sure that the "health and vibrancy of the Santa Fe River and its watershed" are topics that cannot be put aside.

But we can't stop there, so we don't.

In order to appreciate our river, we have to have a relationship with it, and often, it helps to have help comprehending what's going on. Environmental education is key to understanding the dynamics of a watershed. We provide

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The City of Santa Fe has been able to send 2,015 acre-feet of water down the river between April 15 and October 31, 2015.



THE MISSION of the Santa Fe Watershed Association is to protect and restore the health and vibrancy of the Santa Fe River and its watershed for the benefit of people and the environment. We achieve this through education, restoration, stewardship and advocacy. From the river's headwaters to the Rio Grande, we honor the connection of people and the watershed.

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From the President

"One cannot be pessimistic about the West. This is the native home of hope. When it fully learns that cooperation, not rugged individualism, is the quality that most characterizes and preserves it, then it will have achieved itself and outlived its origins. Then it has a chance to create a society to match its scenery."

— Wallace Stegner

I like to think of the Santa Fe Watershed Association as a group of people working to achieve Stegner's vision: building a society to match our breathtaking scenery.

From double rainbows arcing over the Sangre de Cristo mountains to crimson sunsets and golden aspen vistas, it is hard to imagine scenery more inspiring than what Santa Fe offers us on a daily basis. The element that makes it all possible is water. The Santa Fe River is a major reason why a pueblo was established here, millenia ago, and the City in turn. If the water disappears, so does our future.

That is where the Santa Fe Watershed Association comes in. We bring people together in cooperative efforts to help make sure that our beautiful City will have the resources it needs to endure for at least another 400 years.

These efforts include taking thousands of children into the Upper Watershed so they can discover where their water comes from, organizing hundreds of volunteers to clean and restore Santa Fe's river and arroyos, teaching individuals and businesses how to reduce their carbon and water footprints, and successfully advocating for sustainable management of

the forest where our water originates and for the restoration of a living, flowing river through the heart of Santa Fe.

We are deeply honored that the Santa Fe Community Foundation has selected SFWA for this year's Piñon Award for Courageous Innovation in recognition of our years of work connecting people to one another, to the land, and to the water that sustains our community. This honor has been a wonderful opportunity for us to reflect on the work we do and recommit ourselves to the vision that inspires us.

Every rain garden built, every arroyo adopted, every tree planted, and every student who learns to love and care for his/her natural environment brings us one meaningful step closer to creating a society that is worthy of our extraordinary home.



KRISTINA G. FISHER

2015 Piñon Award for Courageous Innovation: Santa Fe Watershed Association

Each year, the Santa Fe Community Foundation's Piñon Awards recognize excellence in four not-for-profit organizations operating in New Mexico. In August 2015, the Foundation announced the winners of this year's Piñon Awards, recognizing the work of the Santa Fe Watershed Association with the Courageous Innovation Award.

The Courageous Innovation Award honors an organization that uses a bold approach to solving a persistent problem in the community. This is how the Santa Fe Community Foundation described the work of SFWA that merits this recognition:

"Over the past 18 years, the Santa Fe Watershed Association (SFWA) has made steady and inspiring progress toward its vision of a healthy and vibrant river and watershed that will sustain the community for generations to come. In demonstration of this long-term commitment, the members, volunteers, staff, and supporters of the SFWA dedicate thousands of hours a year leading schoolchildren into the

Upper Watershed and teaching them about the source of their water. They have picked up trash, planted native vegetation, built rain gardens, and kept a living river flowing through the heart of Santa Fe.

"Regardless of the project, SFWA's signature is its collaborative, community approach."

"In addition to educating Santa Fe's children, SFWA organizes adult education classes, hikes, and van trips into the protected Upper Watershed to help connect Santa Feans with their river.

"The stewardship work of SFWA is exemplified by its successful Adopt-the-River program, in which local businesses, foundations, churches, schools, and families adopt reaches of the river and work with SFWA staff to keep them clean.

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SFWA Is Awarded Grant Funding to Create Rain Gardens, Make Use of Stormwater

In July 2015, the Santa Fe Watershed Association received a grant from the National Fish and Wildlife Foundation and Wells Fargo Bank to construct Santa Fe River Demonstration Rain Gardens.

At least six stormwater retention basins will be constructed in 2016 at educational facilities and other public spaces, with assistance from youth and adult volunteers.

The Rain Garden project is designed to provide hands-on training and demonstration sites to inspire Santa Fe to recognize stormwater as a resource, not a problem, and to address stormwater pollutants and flooding.

Why?

One of the greatest threats to healthy watershed function is the widespread development of hardscape – “impermeable grey infrastructure” such as concrete, asphalt and buildings. These materials keep precipitation from finding its way into the soil. Grey infrastructure generates stormwater runoff, instead of:

- supporting vegetation that stabilizes soils, and provides shade and wildlife habitat; and
- recharging aquifers and baseflow to rivers.

At the same time, this failure to make good use of our own rain and snowfall exacerbates social and political pressure to take water from more distant watersheds that may themselves be threatened.

In the late 1940s, Santa Fe began consuming more water than the watershed above the dams could deliver. Today, we consume *twice* as much water as the Upper Watershed delivers in an average year. Furthermore, the water table that our City wells tap into has dropped approximately 40 feet in the past 40 years. This demand has compelled the community to purchase and divert water from as far away as Colorado's San Juan River on the far side of the Continental Divide.

Let's Do the Math

Only 9% (17,000 acres) of the Santa Fe watershed lies *above* the reservoirs that collect the water that the City treats and delivers to its water users. In a good year, the City of Santa Fe collects approximately 5,000 acre-feet of water from the watershed *above* the reservoirs.

On average, the land area *below* the reservoirs (approximately 175,000 acres) receives just under 12 inches of precipitation every year. That's the equivalent of roughly 175,000 acre-feet of water.

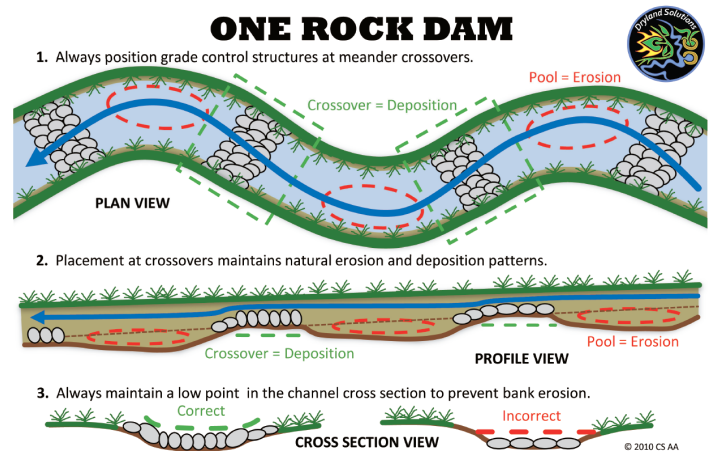
We treat much of this water as a problem – as stormwater runoff – but it could be a game-changing resource.

Imagine what could grow, and imagine how the groundwater could be recharged, if we helped the rain and snow that falls on us to soak into the ground.

Holding a Paradigm Shift in Our Hands

Stormwater runoff is one of the most under-utilized water resources available in Santa Fe. A paradigm shift that treats stormwater as a resource, rather than a pollutant, is crucial to addressing water-scarcity issues brought about by grey infrastructure. The Rain Garden in-class presentations and hands-on workshops for youth and adults is a first step toward this paradigm shift.

Not only is there an opportunity to work with the community on this issue, there is a demand. Educators and community members have requested curricula and volunteer opportunities to actively engage in watershed planning and restoration. The Rain Gardens pilot project is designed to help meet these demands.



Classroom Presentations and the Hands-On Workshops

SFWA is now working with the City of Santa Fe and Santa Fe Public Schools to select sites for the first six rain gardens. In Spring 2016, SFWA will begin coordinating classroom presentations and hands-on workshops with volunteers, walking participants through:

- how to read landscape to determine runoff volumes,
- the origin of potential stormwater pollutants, and
- how to decide where to locate a stormwater basin.

Basins will be designed to provide sufficient passive irrigation to sustain native and drought-tolerant vegetation. Plants will also be selected to remediate stormwater pollutants near stormwater outlets, to increase shade cover for west-facing parking lots, and improve pollinator habitat near gardens and orchards.

Documentation or signs about the basins will provide an educational legacy about the value that “green infrastructure” can play in improving watershed health.

Please watch our web site in early 2016 for more information, schedules, and to apply to participate in workshops.

— by Aaron Kaufman, Ph.D.
and Andy Otto, SFWA Executive Director

My Water, My Watershed

Planning Ahead: Planting Seeds in the Hearts and Minds of the Next Generation

*“The purpose of life is not to be happy.
It is to be useful, to be honorable, to be compassionate,
to have it make some difference that you have lived and lived well.”*

— Ralph Waldo Emerson

For those of us engaged in conservation and environmentalism, there was most likely a moment in our childhood that transformed us and put us on the path we are on today. This moment could be tied to a particular place or experience that opened our eyes to the power of the natural world and created a connection to the outdoors that has grown and evolved over the years. For me, this moment occurred when I was a child, in a woodlot in the midst of the asphalt jungle of suburbia – looking at a salamander. That moment started me on a road that has led to the work I do today. What was that moment for you? How did it transform you and shape your perspective on nature?

As you are reading this, we have wrapped up our fall semester of My Water, My Watershed, the three-day program that we provide for individual classrooms of Santa Fe Public School fourth- and fifth-grade students; we take each classroom on a full school-day field trip into the Upper Santa Fe River watershed.

This day exploring the ponderosa pine forests above Santa Fe provides countless opportunities to connect students with the Santa Fe River and the water that literally makes it possible for all of us to live here. This day introduces students to the complex relationships of fire, water, forests, and climate. We do this by putting on rubber boots and wading into the Santa Fe River. We turn over rocks and catch and identify aquatic macro-invertebrates. We use a tree corer to look *inside* a ponderosa pine so that we can count the years since it sprouted. We collect data, we sit still, we sketch, and we write, all to begin to comprehend the complex world of ecosystems.

Our intention, at the Santa Fe Watershed Association, is to provide Santa Fe's youth with a multitude of opportunities to connect with the outdoors. If we were not able to provide these experiences, the community of Santa Fe would risk raising a generation that is not connected with nature. We would thus risk not being able to protect the resources that we depend upon, such as water and areas to find refuge and solitude away from our busy lives.

What can you do to help? Head outdoors and encourage others to do so as well. Take time to take the kids in your life outside and connect with nature. Join the Santa Fe Watershed Association, because your membership dollars go toward connecting Santa Fe's youth with the outdoors.

— Eileen Everett, *SFWA Environmental Educator*



The City's Summer Youth Program explores the Santa Fe River above Nichols Reservoir as part of the My Water, My Watershed Program.

McClure Reservoir Construction Is On Track To Be Complete By December 2015

Concrete work on the new intake structure for McClure Reservoir was completed in October 2015. Installation of pipes, valves and electrical conduit is also complete. Construction is on schedule to be completed by November 27, 2015. The City can then begin filling the reservoir again. McClure has the capacity to hold 3,250 acre-feet of water – roughly one-third of Santa Fe's annual water supply.

The McClure Dam was constructed in the 1920s and raised in the 1940s when Nichols Dam was constructed.

Nichols has the capacity to hold 684 acre-feet of water.

The new intake towers are designed to improve dam safety (e.g., seismic stability), personnel safety, and control of reservoir releases and Living River target flows.

Replacement of the Nichols intake structure took place September 2013-May 2014. Work on McClure began in March 2015. During 2015, while McClure has been empty, the City has been able to bypass 2,015 acre-feet of water into the Santa Fe River.

River Stewards Re-Weave Our Community, Restore Habitat For All the Beings

Eighteen years ago, the Santa Fe River had become inhospitable for wildlife, unfit for recreation, aesthetically unappealing, and a place for trash to break down, releasing toxins into the waterway.

In 1997, Paige Grant, a resident with a vision, founded the Santa Fe Watershed Association. The “course” of Santa Fe’s favorite greenspace needed to be redirected. A walk along the Santa Fe River today tells a story of recovery.

The Adopt-the-River program is one of many coordinated by SFWA. Our volunteers tend 14 miles of the Santa Fe River, from the Santa Fe Canyon Preserve to Constellation Drive in the County of Santa Fe. In 2013, we branched into the arroyos as well – beginning to tend the 80 miles of arroyo that flow into the River.

Volunteer River Stewards remove trash, plant willows and cottonwoods, take out invasive species like Siberian elm, and report hazards in the river corridor.

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Turns Out It’s Fun!

Easy Way is a group of friends who meditate together in Tesuque, and who thought it sounded like a good idea to also get together a few times a year to care for the Santa Fe River. We gave them the long reach from Alire Street to Ricardo – where you’ll find them about six times a year.



Easy Way sends its work-party invitations to a long list of friends who come from far beyond the boundaries of the watershed itself.

The Easy Way Zendo sends its invitations to sit together, and its invitations to care for the river, to something like 40 people who live anywhere from Eldorado to El Valle – well beyond the boundaries of the Santa Fe River Watershed.

One of the regulars grew up on Acequia Madre decades ago. A few live or work near the river now. One, when he’s not doing this, fills daypacks with useful things like shampoo, socks, sunscreen and power bars to give to homeless people on the streets.

“It’s so fun to be with friends this way, visiting and laughing as we pick up trash,” says Margie Hughes. “We’re even a little competitive about who can find the best piece of litter. It’s a good feeling when we’re done and have several big bags of garbage, leaving the river cleaner for the homeless kids and veterans, and the folks who enjoy the River Trail.”

David Goldberg agrees. “I love working with friends on behalf of the community, but the main thing I think of out there is that I’m doing this for our kids and future generations. As a child, I loved our trips to the river – the natural beauty and the wildness – and I want our children to be able to have memories like that, too.”

– Marty Peale

2015 Clean-Up Totals (January-October)

2015 Community River Cleanups	Volunteers	Hours	Bags
Love Your River Day (February)	166	330	205
American Rivers (June)	127	242	131
Hunt for Red Rocktober (October)	85	148	200
<i>subtotal</i>	<i>378</i>	<i>720</i>	<i>536</i>
Year-Round Stewardship			
The River	785	1,170	1,019
Arroyos	261	348	285
<i>subtotal</i>	<i>1,046</i>	<i>1,518</i>	<i>1,304</i>
Totals	1,424	2,238	1,840

The Capital High School National Honor Society has been serving as Angel Stewards this year, filling in where the River needs care, and working toward qualifying to be an ‘official’ Steward Group.



Please Help Us Welcome Three New Board Members

Steven Hamp

Steven Hamp is a retired hydrologist with 35 years of experience in watershed hydrology, streamflow and water-quality monitoring, contaminated-land assessment and remediation, regional groundwater basin studies, environmental impact analysis and regulatory compliance.



Steven started his career with the U.S. Forest Service and the Bureau of Land Management. He later worked for the Department of Energy (DoE) and in the private sector for Honeywell International. While he was with the DoE, Steven was responsible for directing cleanup and groundwater protection at multiple uranium-mill-tailing sites in several western states.

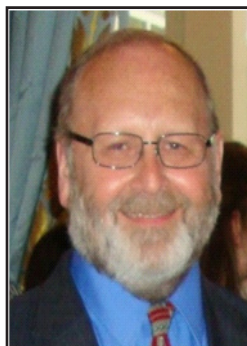
Steven holds a certificate in Executive Leadership from the U.S. Department of Agriculture Graduate School, Professional Geologist Certification from the American Institute of Professional Geologists, and Registered Environmental Manager Certification from the National Registry of Environmental Professionals.

Steven has been board director and president of the Open Space Alliance in Albuquerque, and has served on the Research Committee with Friends of the Rio Grande Nature Center State Park. He participated in ecological-restoration service projects with both organizations.

Steven lives in Santa Fe. He has enjoyed the New Mexico outdoors for more than 30 years, and is an avid hiker and photographer.

Anthony Ricketts

Tony is a biologist who pursued a 30-year career in research with the world's largest animal-health company. He grew up in the Midlands of England, where his fascination with animal life and ecology began at an early age. Three years reading Zoology at the University of Oxford fed that fascination and set him on the track of original research. After training at the University of Cambridge and the Texas Medical Center, he joined Pfizer, Inc. He directed a biology lab in Connecticut, discovering new veterinary medicines, and later joined the Leadership Team for the Research Division in Michigan.



In 2014, free to retire anywhere, Tony and his wife, Deb, chose Santa Fe for its natural beauty, great climate and the City's many other assets. What Santa Fe has to offer comes at a price: dedicated citizens working together to enrich the City and its infrastructure and surroundings. As the West faces challenges ahead, Tony is eager to join those who value our natural environment enough to work to preserve and enhance it.

Stephen Wiman

Stephen is a geologist with an M.S. and Ph.D. from the University of Colorado. He has a passion for water conservation and an ever-increasing concern about the sources of our water supply.



His interests include water chemistry, the regional distribution of water contaminants, and the development and application of water-conserving treatment solutions.

Stephen has owned Good Water Company for 10 years, providing treatment for water supplies and wells, and specializing in treating well water with multiple contaminants. The company also supports numerous causes and events in the Santa Fe community.

Stephen's former career was oil and gas exploration, both domestic and international. He writes the monthly column, "Our Water Quality," for the "Home Real Estate Guide" in the *Santa Fe New Mexican*, and he serves on the City of Santa Fe's Water Conservation Committee.

Stephen has worked with LANL water specialists on multiple water projects and participated in regional water-testing programs with the City of Santa Fe, Santa Fe County and the NM Environment Department.

Courageous Innovation Award (cont. from page 2)



"Regardless of the project, SFWA's signature is its collaborative, community approach. The Santa Fe Watershed Association seeks to build the resiliency of human connections with one another and with the river, as well as the resiliency of the natural environment itself."

Adopt (cont. from page 5)

The Adopt program empowers our residents: our volunteers cultivate a sense of community while contributing to a unified effort to confront river-quality issues head-on.

Our Steward teams are our friends and neighbors who see to it that the river continues to be good habitat for all beings in our community. Some days, River Stewards buck tires, shopping carts, construction barrels, car bumpers, city garbage cans, or yard after yard of ruined sleeping bags from the Santa Fe River. On lighter days, they might round up micro-trash like styrofoam packing materials, as well as liquor bottles, used hypodermic syringes, more than a laundry basket full of discarded clothing, bullets, toothpaste tubes, plastic bags, purses and, occasionally, lost cash.

Our volunteers share their time and ideas with us to help protect, enhance and conserve the Santa Fe River. We're proud of the teams listed below. The energy and talent they invest in the Adopt-the-River program is priceless. We hope, when you're walking, biking, or driving along the river, you will think of our volunteers. Join us in thanking them, and consider becoming a Steward, too.

— Keely Kennemore Jackson, *Volunteer Coordinator*



In March 2015, Santa Fe High ROTC began tending the river as Angel Stewards. In October 2015, they qualified to be the official Stewards of the challenging reach up- and downstream of Siler Road.

In 2014, the City of Santa Fe Reached a Low Water-Use Milestone

Between 1997 and 2013, the City of Santa Fe reduced its water use by 50%. In 2014, City water users broke through the 100 gallon/person/day threshold, reaching a new low of 95 gallons/person/day.

Congratulations, Santa Fe!

Western Cities in 2013 — gallons/person/day

Santa Fe	101
Flagstaff	113
Tucson	127
Los Angeles	129
El Paso	132
Albuquerque	135
Denver	142
Colorado Springs	173
Phoenix	185
Salt Lake	233

From the Executive Director (cont. from page 1)

this education to residents of all ages – from elementary school My Water, My Watershed classes to adult Climate Masters classes. And we're about to engage residents to help build demonstration "Rain Gardens," to show how water infiltration may hold a key to sustainability in this southwestern North America climate.

So that's what we do. With the support of our members and donors, we are able to spend our days in the riverbed and arroyos, in the classrooms, and in the meetings. We're there for the Santa Fe River, and we're there for everyone who can't be there. We are your lobbyist for the "health and vibrancy of the Santa Fe River and its watershed," and we are very committed to this role.

We do it for you, and we couldn't do it without you. We thank you all for your support.

Adopt-the-River & Adopt-an-Arroyo Stewards

Upaya Zen Center ★ Santa Fe Prep ★ Amma Center of NM Green Friends ★ Rio Grande School ★ Women Who Walk on Water ★ Santa Fe Garden Club ★ New Mexico School for the Arts ★ New Mexico State Land Office ★ New Mexico State Supreme Court Building Commission ★ Up Cycle Santa Fe ★ Santa Fe Waldorf School ★ Rotary Club ★ St. Elizabeth's Emergency Shelter ★ The Sierra Club ★ Desert Montessori ★ Dragonfly School ★ O(G)D ★ Grace Community Church ★ Heather Karlson & Bill Leeson ★ Easy Way ★ Capitol High School National Honors Society ★ Friends of Frenchy's Field ★ Navy Junior ROTC ★ Aldea & Friends ★ Dharma Group ★ Santa Fe High School ★ The Aspen Class of Desert Montessori School ★ The MASTERS Program ★ Arroyo Ratz of Santa Fe Prep



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6: Board photos courtesy of
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School ROTC, G. Beans.



“Thank You,” Sponsors of Adopt-the-River & Arroyos

Our Adopt-the-River Program is going strong, and we are thankful for those Sponsors who have continued to support the program through their generous donations throughout the years. Many sponsors have been with the program for more than 10 years – talk about dedication!

Over the past year, we have welcomed many new fiscal Sponsors, joining the many businesses, church groups, school clubs, neighborhood groups and individuals that have supported us for years.

Please help us welcome our newest Sponsors: The Residents of Cerro Gordo ★ Inn & Spa of Loretto ★ Children's Adventure Company ★ Agua Fria Nursery ★ Aldea & Friends.

And please help us thank our long-standing Sponsors: Angelica Foundation ★ Brindle Foundation ★ Mike McCally & Chris Cassel ★ McCune Charitable Foundation ★ The Glassmire Family ★ Karen Walker Real Estate ★ Inn on the Alameda ★ El Castillo Retirement Residences ★ Rotary Club of Santa Fe ★ La Fonda Hotel ★ Inn of the Governors/Del Charro Grill ★ Los Alamos National Bank ★ *Outside Magazine* ★ *Santa Fe New Mexican* ★ The United Church of Santa Fe ★ New Mexico Bank and Trust ★ Santa Fe Stone ★ La Montanita Coop ★ Turtle Mountain ★ Dahl Plumbing of Santa Fe ★ Arrowhead Ranch ★ Santa Fe Natural Tobacco Company ★ Sam's Club

Mark Your Calendars

Saturday, February 13, 2016

Love Your River Day

Saturday, June 25

American Rivers Cleanup Day

Saturday, October 22

Hunt for the Red Roctober

Please watch our web site
for more information.

Santa Fe River Brew

We'd also like to give a shout out to the Santa Fe Brewing Company. Over the summer, we partnered with the brewery to introduce Santa Fe River Brew. The River Brew is a tap beer. It has been served at Del Charro Grill and Violet Crown Cinemas. Look out for Santa Fe River Brew in other establishments in the spring and summer of 2016.

