

VERDE WATERSHED SYMPOSIUM—STATE OF THE WATERSHED IN 2001

CLIFF CASTLE CASINO CONFERENCE CENTER

MAY 17-19, 2001

FINAL MEETING BROCHURE, AGENDA AND ON-SITE REGISTRATION INFORMATION

Venue

Cliff Castle Casino Conference Center
555 Middle Verde Road
Camp Verde, Arizona 86322
800-524-6343

Introduction

We invite you to attend the **Verde Watershed Symposium—State of the Watershed in 2001**.

The Symposium is sponsored by the Verde Watershed Research and Education Program at Northern Arizona University.

The focus of the Symposium is the State of the Verde Watershed in 2001, as viewed from the perspective of the watershed stakeholder community, including the general public. Keynote speakers will provide an overview of the watershed and current issues. Technical sessions on watershed science, the riparian corridor, water supply, water quality, and other topics will offer the latest on advances in our knowledge about the watershed. A special session will provide timely updates by agencies and communities in the watershed. A headwaters area field trip will provide opportunities for people to visit the upper portion of the watershed and visit with technical specialists to exchange ideas and information. Also, we are offering workshops for the general public on: Water Law, Riparian Ecology and Watershed Hydrology.

Sponsor: Verde Watershed Research
and Education Program

Please visit <http://verde.nau.edu>

Registration & Fees

REGISTRATION IS REQUIRED FOR ALL. SYMPOSIUM REGISTRATION RECEIVED AT NAU BY MAY 10th (!!!) INCLUDED LUNCHES.

MEMBERS OF THE GENERAL PUBLIC: FEES REQUIRED ONLY FOR SPECIAL EVENTS.

PRESENTERS, MEMBERS OF STAKEHOLDER GROUPS, NGOS, AND GOVERNMENTAL ORGANIZATIONS: FEES REQUIRED FOR SYMPOSIUM AND SPECIAL EVENTS.

MEMBERS OF THE PRESS: FEES REQUIRED ONLY FOR SPECIAL EVENTS

THE FIELD TRIP IS SOLD OUT

ONSITE REGISTRATION WILL BE AVAILABLE AT THE CLIFF CASTLE CONFERENCE CENTER

Organizing Committee

Marcelle Coder, Conference Coordinator

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Co-Sponsors

USDA Forest Service (Coconino, Kaibab, Prescott, and Tonto National Forests)

**Arizona Department of Water Resources
Yavapai County Water Advisory Commission**

Arizona Public Service/Pinnacle West

Salt River Project

USGS

Phoenix Cement

Agenda—Verde Watershed Symposium

Thursday, May 17

- 7:30 – 9:00 AM **Registration—Lobby**
- 9:00 **Welcome and Introductions—Sedona Room**
Verde Watershed Research and Education Program – Charlie Schlinger and Abe Springer
Yavapai Apache Nation Chairman – Vincent Randall
Yavapai County Supervisor – Chip Davis
Arizona Department of Water Resources – Dennis Sundie
- 9:30 – 11:00 **Keynotes—Sedona Room**
Geography and Geology of the Verde Watershed – Ron Blakey, NAU
History of Verde Watershed Area – Jim Byrkit, Retired NAU
State of Knowledge on Verde Water – Ed McGavock, Errol Montgomery & Assoc.
- 11:00 – 11:15 **Break—Sedona Room**
- 11:15 – Noon **Current Watershed Issues – Sedona Room**
Issues Surrounding the Export of Groundwater from the Big Chino Sub -basin – John Munderloh, of Yavapai County
Update on Proposed Yavapai Ranch Land Exchange – Steve Sams, Prescott National Forest
- Noon – 1:30 PM **Lunch—Sedona Room**
 Herb Dishlip, Assistant Director, Statewide Water Planning Division, ADWR
- 1:30 – 3:15 **Concurrent Sessions**
- I) Riparian Corridor—Jerome Room**
Upper Verde Valley Riparian Area Historical Analysis, Sharon Masek Lopez
A Photographic Review of Habitat Conditions of the Upper Verde River, Alvin Medina
A Preliminary Analysis of Riparian Habitat Conditions of the Upper Verde River, Alvin Medina
- II) Watershed Condition and Science—Cottonwood Room**
Subsurface Solution Caves, Sinkhole Development, & Local Channelization of Groundwater, Sedona, AZ, Paul Lindberg
Watershed Condition of Select 5th Code Watersheds along the Verde River, Michelle Girard and Albert Sillas
Update on Fossil Creek Decommissioning, Leslie Herman of Pinnacle West
- III) Poster Session—Camp Verde Room**
Assessment of Hydrologic Alteration of the Lower Verde River & Possible Ecological Consequences, Vanessa Beauchamp and Julie Stromberg
Yavapai County "Almost Free" Private Well Water Testing During National Drinking Water Week, Russ Radden
Conservation Easements: Tool for Water Resource Protection, Jan Bush
Geomorphology and Hydrology of Fossil Springs Damsite, Stephen Monroe
Conservation of Southwestern Native Fishes in the Verde River, AZ, Allen Haden, John Rinne and Edward Smith
Hydrogeologic Data Assessment for the Coconino Plateau, Donald Bills and Marilyn Flynn
Simply Remove the Fossil Creek Dam? Probably Not..., Charles E. Jones, Jr. and Patrick Phillips
High-Resolution Aeromagnetic Data from the Verde River Headwaters Region, AZ, Reveal Geologic Framework, V.E. Langenheim, J.S. Duval, Laurie Wirt and Ed Dewitt
Watersheds and Fisheries Relationships: State of Knowledge, Southwestern United States John N. Rinne and Daniel G. Neary

Agenda—continued

- 3:15 – 3:30 **Break**
- 4:00 – 6:00 PM **Tutorial Workshop for General Public – Watershed Hydrology—Cottonwood/Camp Verde Rooms**
Overview of the Hydrology of the Verde River Watershed, Malchus Baker, Jr., USDA Forest Service Rocky Mountain Research Station
Ground Water – Betsy Woodhouse, USGS
- 6:00 PM **Dinner—Sedona Room**
Holocene Alluvium Ruling – Stanley Goodfarb, Retired Maricopa County Superior Court Judge
- 7:30 – 9:00 PM **Tutorial Workshop for General Public – Water Law—Sedona Room**
History of Ground Water and Surface Water Regulation in Arizona – Hank Lacey, Attorney
Modern Dynamics of Water Policy, Management and Regulation – Michael Pearce, Chief Counsel, ADWR

Friday, May 18

- 7:00 AM **Arizona Watershed Alliance Meeting—Camp Verde Room**
- 8:00 AM – Noon **Community and Agency Updates & Issues Forum—Sedona Room**
Jerome – Jane Moore
Clarkdale – Gayle Maybery
Camp Verde – Brenda Hauser
Chino Valley – Carl Tenney
Flagstaff – Randy Pellatz
Paulden/Big Chino – Art Coates
Prescott – Brad Huza
Prescott Valley – Larry Tarkowski
Sedona – Anita MacFarlane
Yavapai Apache Tribe – Charles Bonnaha
Yavapai-Prescott Indian Tribe – Anne DaVega
Fort McDowell Apache Nation – Marilyn Ethelbah
Payson – Buzz Walker
Pine/Strawberry – Howard Matthews
Salt River Pima-Maricopa Indian Community – Abel Ramirez
Lower Verde/Lower Salt River Watershed Advisory Group – Dan Salzler
Deadhorse Ranch State Park – Max Castillo
USFS – Prescott National Forest – Tom Bonomo
USFS – Tonto National Forest – Rich Martin/Grant Loomis
USFS – Kaibab National Forest – Dave Brewer
USFS – Coconino National Forest – Rory Steinke
Chino Winds NRCD – Jack Bohning
Verde NRCD – Kaki Rowland
Cornville Community Association – Belle Starr
Prescott AMA – Jim Holt
The Nature Conservancy Verde Program – Mindy Schlimgen-Wilson
Cottonwood Ditch Association – Andy Groseta

- Noon – 1:30 PM **Lunch—Sedona Room**
 Tom O'Halleran, Arizona State Legislature

Agenda, continued

- 1:30 – 3:15
- Concurrent Sessions

I) Watershed Science—Sedona Room

Tracer dilution approach for determining discharge from multiple spring networks in the Verde River Headwaters, AZ, Laurie Wirt

Regional Hydrogeologic Investigation of the Upper and Middle Verde River Watershed, Betsy Woodhouse and Marilyn Flynn

Hydrogeologic Processes in the Uplands of the Verde Watershed, Abe Springer

An Overview of Rocky Mountain Research Station Verde River Watershed Research Over the Past Five Decades, Daniel Neary and Malchus Baker, Jr.

II) Water Quality and Water Supply—Jerome Room

The Role of The SRP Verde Reservoirs in Water Resources Management at The Salt River Project, Charlie Ester and Dallas Reigle

A Preliminary View of Water Quality Conditions of the Upper Verde River, Alvin Medina

Role of Verde River Reservoirs on Water Quality: From Arsenic to Algae, Paul Westerhoff, Milton Sommerfeld, Darlene Bruce, Qiang Hu, My-Linh Nguyen, Tom Dempster, David Lowry and Samantha Dawson

Investigations in Arsenic Cycling in Montezuma Well, AZ, Anne-Marie Compton, Richard Foust, Jr., David Salt and Dean Blinn

III) Tutorial Workshop for General Public – Riparian Ecology—Camp Verde Room

Ecology of Southwestern Arid – Riparian Ecosystems – Vanessa Beauchamp, ASU

Riparian Vegetation and Changes in the Upper Verde River– Al Medina, USFS Rocky Mountain Research Station

Fishery Ecology and Changes of the Verde River – Andy Clark, Arizona Game & Fish

IV) Riparian Corridor—Cottonwood Room

Baseflow Trends and Native Fish in the Upper Verde River, Daniel Neary and John Rinne

Geomorphic Conditions of the Riparian Zone, Upper Verde River, Daniel Neary, Alvin Medina and Malchus Baker, Jr.

Wildlife & Fisheries Inventory & Monitoring along the Middle Verde River, Bill Burger

The Verde River & the Endangered Species Act, Tom Gatz, Debra Bills and Greg Beatty

Changes in Fish Populations in the Upper Verde River, John Rinne

- 3:15 – 3:30
- Break
- 3:30 – 4:00
- Conservation Easements – Jan Bush, TNC—Cottonwood/Camp Verde Room
- 4:00 – 5:00
- Panel Discussion on Current Needs and Future Directions—Sedona Room
- 6:00 – 8:00 PM
- Picnic at Deadhorse Ranch State Park

Saturday, May 19

Verde Headwaters Field trip

SEE ATTACHED FIELD TRIP AGENDA

On-Site Symposium Registration

Register for Symposium (no lunches):	Cost
<input type="checkbox"/> Agency, NGO employee	\$60.00
<input type="checkbox"/> Member of General Public	\$00.00
<input type="checkbox"/> Member of Press	\$00.00
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Verde Watershed Symposium – State of the Watershed in 2001

Upper Verde River Headwaters Field Trip

Saturday, May 19, 2001

Introduction

The Upper Verde River headwaters is a region with unique hydrology and geology that has played an important role as the site of the first territorial capital and the subsequent development of Northern Arizona, including the City of Prescott and the Grand Canyon tourism industry. Large artesian springs offer a continuous supply of surface water to both upstream (Chino Valley and Prescott) and downstream (Verde Valley and Phoenix) water users. This perennial water also supports an unusually diverse and rich riparian habitat in the Verde River. Competing water rights and rapid population growth in the Prescott AMA and other nearby parts of Yavapai County have raised concerns that increased pumping in the Big and Little Chino Valleys could reduce base flow in the Verde River. In this field trip we will explore the cultural history, hydrology, geology, and biology—and consider the effects of past and probable future land use changes on the area.

Purpose

The purpose of this field trip is to visit the major springs that discharge to the uppermost Verde River and to discuss the geological, hydrological, and biological aspects of their origin and occurrence—and how they have evolved through historic and geologic time. Resource people who have been involved in this issue, including many who will be in the audience, will be invited to share information.

- 7:45 Load vehicles at Cliff Castle Casino, Camp Verde, depart for Chino Valley
- 8:45 Stop at McDonalds in Chino Valley
Bathroom Stop
Pickup locals who didn't depart from Camp Verde
Distribute field trip handouts
- 9:15 Del Rio Springs. Coffee, OJ, and refreshments.
Welcome/Introductions
(*Abe Springer, 10 min*)
History of Del Rio Springs from prehistoric to this century
(*Terry Munderloh, Sharlott Hall Museum, 15 min*)
Wildlife and Ecology of Del Rio Springs
(*Carl Tomoff, Prescott College, 15 min*)
Hydrology of Del Rio Springs
(*Laurie Wirt, USGS 15 min.*)
Competing Water Interests at Del Rio Springs
(*Jim Holt, Prescott Active Management Area, 15 min*)
Future plans for the Del Rio Ranch Development
(*hydrologic consultant from Allen Stephenson and Associates, 15 min*)
Discussion or to walk around (15 min)
- 11:45 Sullivan Lake Dam (Verde River mile 0.0) off old state route 89
Geologic history of Big and Little Chino basins
(*Ed DeWitt, USGS, 15 min*)
Hydrology of Upper Verde River headwaters
(*Laurie Wirt, USGS, 10 min*)
Overview of USGS-Tucson studies
(*Betsy Woodhouse, USGS, 10 min*)

- 12:30 Park near Old Morgan Ranch on Verde Canyon rim road
Distribute box lunches
Hike 0.5 mile to confluence of Verde River and Granite Creek (river mile 2.0)
Lunch with invited speaker to talk about endangered fish and riparian habitat.
(*Pam Sponholtz, Arizona Game and Fish, 30 min*)
Brief tour of Stillman Lake and first perennial flow in the Verde River.
(*Laurie Wirt, USGS, 20 min*)
- 1:30 Hike to major springs
(1.6 mile round-trip on level terrain)
View about a half dozen springs that make up the Verde Headwaters Springs, the major spring network contributing to base flow in the Verde River
(*Laurie Wirt, Betsy Woodhouse, Ed deWitt, and Victoria Langenheim, USGS; Marnie Greenbie, ADEQ; about 2 hours*)
Questions and discussion welcome!
- 3:45 Scheduled departure from Verde Canyon (hike 0.5 mile back up to the rim)
- 4:15 Chino Valley drop off
- 5:15 Return Cliff Castle Casino, Camp Verde

Recommended Gear

- Small daypack or fanny pack
- Layered clothing (cool morning, warm afternoon)
- Long pants (potential for poison ivy and watch out for snakes!)
- Hat (with wide brim)
- Sunscreen
- Sunglasses
- Water bottles (we will provide ice water, as well)
- Sturdy foot gear (with high likelihood of getting wet/muddy)
Texas or old sneakers work well; please stay on the path!
- Cameras (with film)
- Binoculars (for bird watchers)

Drivers of vehicles (NAU personnel)

- Abe Springer
- Charlie Schlinger
- Other NAU faculty and students

Provided by VWREP/NAU

- Lunch
- Coolers for box lunches and beverages
- Water coolers
- Vans
- Field trip handouts
- Day trip bathroom facility (ammo can)

Trip Speaker Contacts:

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