Groups Unite to Mitigate Impacts of Seasonal Havasu Canyon Floods

For the people of the blue green water, floods have always been a part of life. The Havasupai Tribe was said to have originated from a girl who was tucked away in a tree trunk to survive a great flood. And forces of nature have shaped the spectacular Havasupai Falls and travertine ledges that define the area near the Supai Village at the bottom of the Grand Canyon.

On Aug. 18, 2008 the Havasupai experienced another flood.

"A big thunderhead developed over the basin during the monsoon season," recalls U.S. Geological Survey hydrologist Greg Fisk. "It was north of Redlands Camp and a little downstream in Cataract Canyon."

Carl Taylor, Coconino County Supervisor for District 1, has been studying the flood and its impacts. When the National Weather Service learned the flood was coming, he says they sent a warning call to the village police department but nobody answered. Amazingly no injuries were reported.

Article VII
Human Dimension and Science
Section 3.
Provide processes for the resolution of resource management issues and conflicts.

In the wake of this natural disaster, Supervisor Taylor called a meeting in November to come up with a plan to minimize the impact of future flooding. Nearly 100 people attended from county, state, federal and tribal organizations, along with representatives from Cataract Ranch.

The meeting resulted in recommendations and actions to protect the people and property of the Supai Village.

In December and January, the USGS installed two precipitation gauges for flood warning systems: one just below Redland's Camp on the Cataract Ranch; another in Heather Canyon halfway to Supai. The Redlands Site will provide some eight hours of flood warning.

"When the water hits there, the Weather Service coordinator for the state will notify the Havasupais. The Heather Canyon site will give a four-hour warning," said Fisk. "This area will flood. Typically, there are two to three floods during the monsoon season and we have to be able to warn people down there."

Other mitigation measures identified include improving communications infrastructure such as the installation of an Arizona Inter-agency Radio System repeater on Long Mesa overlooking Havasupai and more permanent and interagency compatible radio communications infrastructure at Supai.

Another recommendation is a safe house for evacuees that will double as a visitor center on the Hilltop Plateau stocked with generators, a water storage tank and food.

In addition, the Northern Arizona University Ecological Monitoring & Assessment Program and Foundation established by Babbitt Ranches has received a $20,000 grant from the Arizona Water Institute to conduct a scoping project in the watershed that will track what actions are being taken and document research in the watershed. Following this study, EMA representatives say the organization is committed to assisting in improving and maintaining communications among stakeholders; to seeking funding for activities that stakeholders identify as important; and, strengthening the relationship between NAU and the Havasupai Tribe.

"With the funding, EMA has conducted a scoping project to check in with everybody who has been involved to see what folks are doing," said EMA Project Coordinator Patty West. "We are looking at needs and moving forward with an on-the-ground matrix of information. The next step is to complete a comprehensive assessment on the Havasu Creek Watershed."

West says what's needed is to find ways to slow down the water in case of flooding. "We need more storage tanks in case of an emergency, but that becomes complicated with Arizona's water rights. We need more tracking devises and flood gauges in Arizona's largest watershed, which covers 3,000 square miles."

"It is a complex jurisdiction issue covering a large landscape and many entities involved. It will require efforts from multiple jurisdictions including private landowners to mitigate the effects of future flooding," said EMA Director Karan English. "The role EMA plays, along with Babbitt Ranches' support, is completing a scoping project that assesses the state's various jurisdictions as an educational tool so that the different entities are aware of each other and provide collaborative and concerted efforts to mitigate future impacts."

"The good news," said Supervisor Taylor, "is that stakeholders have gathered to collectively make a future event less difficult."

A report identifying groups and resources has been presented to the Havasupai Tribal Council.

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Bridges *continued from page 3*

Article IX
Priceless Values
Section 2.
Ecology
Across the high desert landscape of northern Arizona, Babbitt Ranches promotes and respects regional continuity, wildlife habitat, diverse vegetation, watersheds, historic sites, cultural resources and access for recreationists and scientists. Ethics are the standards we employ to determine our actions.

The preferred alternative identified in the project's Environmental Assessment calls for widening the two-lane road to a four-lane divided highway. Arizona Game and Fish Department researchers have been focusing on an 18-mile stretch through the CO Bar Ranch including the northern end of the Coconino National Forest to the Navajo Nation boundary to study the movement of pronghorn.

"If pronghorn won't cross roads or fences, they get genetically isolated and as a result there is inbreeding and fewer fawns. Also they can't access resources. In 1967, 80 percent of the pronghorn were killed in a snowstorm because they couldn't cross a fence to follow their migration routes to escape deep snow and get to food and water," said Gagnon.

Wildlife managers are concerned about pronghorn because their numbers are rapidly declining.

"Historically they were out here in the tens of thousands, but now their population levels are suffering in northern Arizona. There's only a few hundred in the Wupatki area. Roads and development continue to split up their habitat, which may cause them to go extinct."

Gagnon adds that pronghorn don't like to go through culverts. "They are more apt to use overpasses or very large grass-covered bridges because they'll be able to see predators. But nobody has ever built overpasses in pronghorn country. It's hard to say what's going to work."

In the meantime, the Arizona Game and Fish Department has pulled fences at Wupatki and is considering placing water sources in between fences and roads to coax the animals across perceived barriers.

Gagnon has worked with ADOT on wildlife highway projects for eight years. Currently he is involved in nine. One particular project near Payson involves underpasses, which deer, elk, black bear, foxes and other animals are using.

"It's really neat and rewarding to see results right away. Car accidents involving animals are down 85 to 90 percent."

Babbitt Ranches, Howe and Gagnon have been working for years, studying the pronghorn barrier situation on Highway 89 and discussing crossings on the CO Bar. "This is one of the only ranches I've worked with that cares to do something to help the pronghorn," said Gagnon.

"ADOT looks forward to evaluating the study results with the Arizona Game and Fish Department in an effort to identify a location for future crossing structures," said Howe. "We plan to make the roadway less of a barrier for daily and seasonal movements of pronghorn in the area, which should also result in recovering herd numbers."

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