River down to 'trickle' in June, USGS reports

By Ted Morris

Herald/Review

SIERRA VISTA — Nearly a year after the San Pedro River stopped flowing, it almost stopped again.

On June 29 of this year, a federal scientist measured the stream at Charleston gauge to be moving at 0.012 cubic feet per second.

It was the lowest flow the stream had measured since a zero flow for 12 days in 2005, starting on July 5.

These events have gotten the attention of environmentalists and political leaders.

“It is a trickle,” described Emmet McGuire, a supervisory technician with the U.S. Geological Survey’s Arizona Water Science Center office in Tucson.

“I actually measured it,” said the 53-year-old McGuire. “I was there.”

He recorded the measurement at 5:49 p.m.

McGuire said he used a 3-inch Parshall flume, a precision instrument that costs about $400. “I carry it in my front seat.”

He emphasized, “My job is to collect data,” but McGuire noted the significance of the situation.

“It is an important event on that river system,” McGuire said, noting the USGS anticipated the June 29 event and began stepping up measurements as the Charleston gauge indicated a slower and slower rate during June.

“That’s why we are there. That’s why we increase our monitoring activities at that site. It’s just common sense to do that.”

Reactions to the June 29 event were varied, ranging from criticism and deep disappointment to constructive thinking and recognition of progress made toward combining growth with water conservation.

San Pedro Partnership reaction to low flow

Bob Strain, who serves as the chairman of the Upper San Pedro Partnership Advisory Committee, and is the vice chairman of the partnership’s executive committee, declined to comment.

“Low-flow is not no-flow,” said Carol Sanger, executive director of the Upper San Pedro Partnership, on Tuesday. “However, that doesn’t mean that there isn’t a lot of concern about low-flow.”

Sanger added, “There are many innovations in science lately that allow us to look at the river in a new and exciting way.”

For example, she noted how tie-dye maps have introduced the concept of spaciality to projects that are developed with the river in mind: “Where you recharge or where you re-use becomes important.”

“Information is getting better in a way that is useful to us as we move forward,” Sanger said. “We try to adapt to new information, and incorporate that information into our project definition and development.”

The partnership’s technical committee analyzed last year’s river stagnation and concluded “the no-flow occurrence cannot be attributed solely to a single factor,” the committee stated last September, as reported in the Herald/Review.

Holly Richter, chairwoman of the technical committee, on Friday said she was aware of the June 29 measurement.

“It’s not unexpected,” said Richter, who is The Nature Conservancy’s program manager for the Upper San Pedro. “It is an important threshold that we need to recognize it as a signal that we really need to pay attention to.”

The partnership “will revisit the same issue because of the low-flow. We will get the best scientists in the room and ask questions, really look at low-flows this year, compare them to last year, and try to understand what are the factors,” Richter said.

There are multiple factors, Richter said.

“It has been a droughty winter,” she said. “We will have to look at precipitation and get better context.”

Richter noted a recent U.S. Geological Survey report showed that mesquite thickets along the river are consuming vast quantities of water — more than previously thought — and at least twice as much as the cottonwoods that line the river.

The USGS report estimates the mesquite trees — the most abundant vegetation type within the Upper San Pedro Riparian National Conservation Area — are drinking as much as 5,436 acre-feet, or about 1.8 billion gallons, of water between Mexico and Tombstone, Richter said.

That compares with 2,373 acre-feet, or about 748 million gallons, of water sucked up by the cottonwood forest.

Mesquite trees are very hardy desert plants because they have extremely long root systems that can grow as long as 80 feet, according to desertusa.com.

Richter credited the U.S. Bureau of Land Management for initiating a prescribed-fire plan to reduce the abundance of mesquite.

Tricia Gerrodette of Audubon Arizona, a member of the partnership, expressed concern about the June 29 stagnation of the river.

“In my mind it effectively went to zero,” Gerrodette said. “It’s not a surprise, I guess. We had our first indication last year, and it’s happened again this year.”

Birders are deeply concerned, she said.

“What we are afraid we are witnessing is the beginning of the end … the demise of the river,” Gerrodette said. “We’re very concerned.”

Silver, fort trade jabs

Dr. Robin Silver, chairman of the Tucson-based Center for Biological Diversity, a tough advocate of preserving the San Pedro River, said the June 29 event indicates that local leaders have failed to heed the “wake-up call” of July 2005.

In an approximately-3,000-word e-mail sent out July 11 to various entities, the Phoenix physician harshly criticized the partnership, which is a local umbrella group charged by Congress to take care of the last undammed river in the Southwest .

“The June 29, 2006, near-zero flow is now the second ‘wake-up call,’ ” Silver wrote. “The price for repeat antagonistic response by USPP members will beget increasingly disastrous consequences. No public relations firm can hide zero stream flow and its only controllable cause: excessive, unmitigated deficit groundwater pumping and $830.6 million annual local defense dollars fueling the deadly pumping.”

Fort Huachuca officials did not take Silver’s e-mail lightly. On Friday, the fort issued an answer.

Col. Jonathan Hunter, the fort’s garrison commander, who was out of state during the week, relayed the response through Maj. Matthew Garner, head of the fort’s public information office.

In the statement, Hunter said: "The Center for Biological Diversity's attempt to tie the fort to a recent low-flow event at the Charleston gauge yet again ignores the facts. The CBD conveniently chooses to ignore the fact that the drought is among the most severe event of its kind in the past 350 years, and is primarily responsible for ongoing decreased flow in the river.

"In addition, the CBD ignores the best available science, which indicates that the fort's wells are downstream and would have little if any measurable effect at the Charleston gauge.

"Despite the CBD's continuous campaign of disinformation, the fort continues to reduce its water usage dramatically. In fact, water usage at the fort in 2006 is the lowest in the past 17 years."

Hunter concluded: "The fort will continue to be responsible environmental stewards and encourages the CBD to join the fort as part of the solution."

County's role

Cochise County Supervisor Pat Call, who serves as vice chairman of the Upper San Pedro Partnership Advisory Committee, also commented on the Silver letter.

Call said the large number of exempt wells in the wildcat subdivisions near Hereford and Palominas "probably had more of an impact than growth in the city and Fort Huachuca, and the Center for Biological Diversity needs to consider that."

The partnership has limited power, but the member agencies are taking the right steps, Call said.

"Cochise County is one of the most innovative when it comes to combining growth and water issues," Call said.

For example, the Babocomari Area Plan, recently adopted by the county supervisors, imposes stringent water-conservation measures on developers. Lot-splitters cannot exceed daily water usage rates per person estimated for 4-acre lots, based on a 1990 Arizona Department of Water Resources study, Call said.

"The goal is to not make the deficit any worse," Call said.

The partnership's agencies are taking positive steps that Silver ignores, Call said.

"He never mentions all the good things that are being done."

Silver said, "The July 5, 2005, zero flow should have been a serious 'wake-up call' for USPP members. Instead their consistent responses betray their pledge to 'balance the area's water deficit by 2011.' "

Silver's letter acknowledges drought as the first of three significant causes of "zero stream flow near Fort Huachuca."

Streamside vegetation that drinks from the river is listed as the second cause. The third major cause, Silver says, is "excessive deficit groundwater pumping." He also calls it the only controllable factor.

State authority

In March 2005, after a four-year study of the Upper San Pedro Basin and its two subwatersheds in Sierra Vista and Benson, the ADWR decided against establishing an Active Management Area for the basin.

Active Management Areas are strictly regulated by the ADWR. Outside of those AMAs, there are few state regulations governing the siting of wells that pump fewer than 35 gallons per minute.

"That's a statewide issue, really," said Linda Stitzer, manager of resource assessment planning for the ADWR. She coordinated the Upper San Pedro Basin Active Management Area Review that culminated in a 219-page report and the

ADWR’s decision not to place the Upper San Pedro under an AMA. That report, which notes the existence of more than 20 million acre-feet of water stored beneath the river, is available by searching the ADWR’s Web site, azwater.gov.