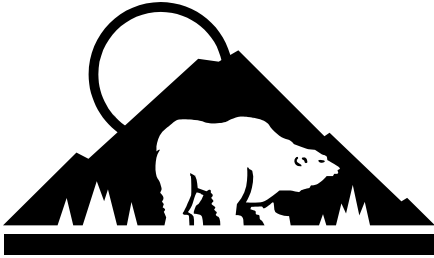


BEAR CREEK WATERSHED GROUP

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**Bear Creek Watershed redd survey Dec 16, 2006: Final Report**

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The 157 square mile Bear Creek watershed is located in Shasta County. Bear Creek enters the eastern side of the Sacramento River at river mile 278 (i.e., downstream of the confluence with Cow Creek and upstream of the confluence with Battle Creek). (see map) Landowners in the Bear Creek watershed are actively interested in protecting their creek so they are regularly attending the monthly watershed group meetings, commenting on the draft Bear Creek Watershed Assessment, and volunteering to perform fisheries and water quality monitoring, etc.

Both anadromous and resident fish are known to occur in the watershed, though long-term systemic fish population surveys have not been conducted. In terms of anadromous salmonids, data is needed for Central Valley steelhead (*Oncorhynchus mykiss*) and Chinook salmon (*O. tshawytscha*). In the past few years, local landowners have participated in one day salmon redd/carcass surveys for fall-run Chinook salmon.

This year's survey was organized by James Moller, Bear Creek and Cow Creek Watershed Coordinator for the Western Shasta Resource Conservation District (WSRCD). Landowners were contacted to attain permission in order access their land for the annual survey. Topographical maps and parcel maps were used to establish the reaches to be surveyed. Local landowners and Bear Creek Watershed Group (BCWG) members who were interested in participating in the survey volunteered and were outfitted with appropriate survey gear. A biologist from the USFWS joined with each of the two survey crews. The participants included: James Moller (WSRCD Coordinator), Tricia Parker (biologist), Stan Weidert (landowner), Roland Weidenkeller (landowner) for Reach One and Brenda Olson (biologist), Carl Weidert (landowner), Bea Nevins (landowner), Ryan Sabalow (Redding Record Searchlight) and Lucas Mobley (Redding Record Searchlight) for Reach Two (see map). The volunteer effort was deemed successful and there was substantial interest in repeating it in future years.

Weather/flows: The date for the survey was selected with assistance from Dave Dubose. Dave lives on Parkville Road near the survey area. Based on his local expertise, and knowledge of stream conditions, Dave was able to provide us with information on depth, flow and viewing conditions. The date of December 16 was chosen for the survey because it had safely wade-able water levels and excellent visibility along with close time proximity to previous surveys. The weather on the

16th was cool in the morning (33 degrees F) and foggy, resulting in perfect survey conditions. Water clarity was excellent with greater than 10' visibility. The people on the Reach One crew noted that the depth of the water at the confluence with the Sacramento River (mouth of Bear Creek) was about 18" deep this year compared to about 12" deep in 2004.

Gear: reach maps, survey forms (on write-in-the-rain paper), pencils, waders, warm clothes, and water bottles. In addition to people's personal gear, waders were supplied by the USFWS and DFG. A digital camera was available to capture photo points and visual data (attached are monitoring photos)

Logistics: Both groups departed from a central meeting location. The Reach One crew started at the Parkville Bridge at 10:30 am. This crew reached the confluence with the Sacramento River at about 1 pm. They then began about a 90 minute hike back along the ridge, across Dry Creek.

The Reach Two crew was driven to the start site near Parkville Cemetery. They began the survey at 10:45 am and finished at the bridge at 2:20 pm.

Media Coverage: Ryan Sabalow and Lucas Mobley from the Redding Record Searchlight participated in part of the survey and wrote a detailed article on our group's efforts that was on the front page of Saturday's paper (Dec 17, 2005). (Attached is the article from the Record Search Light.)

Summary of citizen surveys (one day surveys) since the watershed group was formed:

	2002	2003	2004	2005
Redds	31	12	4	6
Carcasses	11	1	2	1
Live fish	8	2	2	0
Miles of stream	13.7 mi	?	3 mi	3 mi
Reaches surveyed	1, 2, 3, and 4*	1, 2, and 3	1 and 2	1 and 2
Date	Nov 16	Nov 22**	Dec 13?	Dec 16***

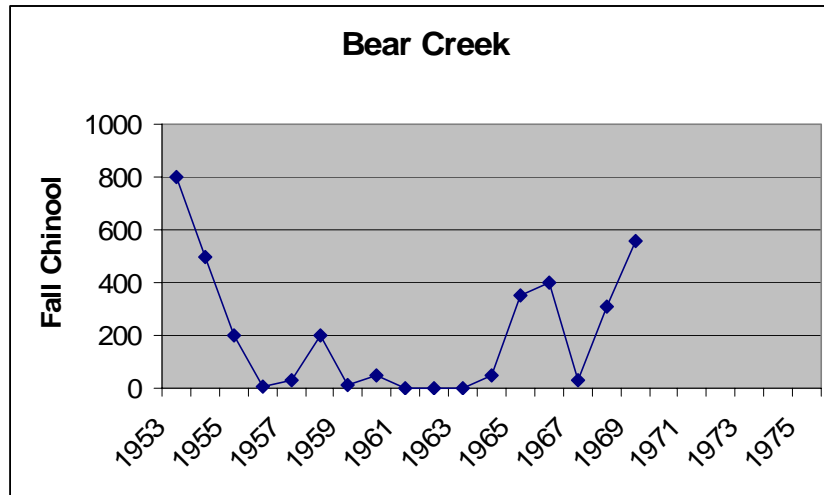
Reach One: confluence to Parkville Rd Bridge 1.5 miles
 Reach Two: Parkville Cemetery to Parkville Rd 1.5 miles
 Reach Three: from Dersch Rd to cemetery 2.7 miles
 Reach 4: Hwy 44 to Millville Plains 2.1 miles

* In 2002, the reaches were non-contiguous, but extended up to the confluence of the north and south forks of Bear Creek (see Nov 22 letter to Mary Schroeder at the WSRCD for a full reach description). Thirty of the thirty-one carcasses were found in Reach One.

** The 2003 survey is lacking a summary sheet. I found an email dated 11/23/2004 with the summary, citing that a final report was pending.

*** We also note that on November 10, Dave Dubose saw ten fish in Reach One and one carcass.

Historic records noted in GrandTab (DFG 8/3/2005 B.Kano) show the escapement estimates for fall Chinook in Bear Ck



USFWS Recommendations

1. Consider performing the survey earlier in the year and/or more frequently (e.g. weekly).
2. Consider linking landowners with biologist survey crews working on other tributaries for 1-2 days of training prior to performing the Bear Ck survey.
3. Pursue more formalized methods of attaining a count of the salmon in the Bear Creek watershed (e.g. video weir).





Lucas Mobley/Record Searchlight

SEARCHING FOR SIGNS: Bea Levins, right, looks at a possible salmon bed in Bear Creek in Anderson on Friday. Fellow searchers Carl Weidert, left, a biologist, and Brenda Olson, a U.S. Fish and Wildlife Service fishery biologist, say a critical eye is needed to spot the disrupted gravel and overturned rocks that are sure signs of where a female salmon laid her eggs.

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Group braves icy water to help fish

Volunteers, experts look for nesting sites along Bear Creek

By Ryan Sabalow, Record Searchlight
December 17, 2005

ANDERSON — For most, going outside in an icy fog, sliding into a pair of nearly frozen chest waders and hopping into a frigid stream in the middle of December would be something to avoid.

But for a group of biologists, landowners and conservationists who did just that Friday morning, the discomfort was a small price to pay to help a small run of salmon in their neighborhood watershed.

Four volunteers and two fisheries biologists with the U.S. Fish and Wildlife Service scoured the last three miles of Bear Creek, a year-round stream that pours into the Sacramento River near Parkville Road in Anderson. They were hunting for salmon and their nesting sites, called redds.

"There's no dam. There's nice gravel. It's perfect," said Carl Weidert, as he leaned on a walking stick in hip-deep water. "But there's no salmon."

Weidert, a biologist who lives in Inwood, is a member of the Bear Creek Watershed Group. The organization of landowners advocates responsible use of water and resources in the Bear and Ash creek stream system, which begins above Shingletown.

The group did find some evidence on Friday of former salmon spawning sites, the makers of which had long-since died after laying eggs.

They tallied six spawning beds and counted one salmon carcass along the creek. In a similar search last fall, volunteers found four redds, two live fish and two carcasses.

That's a lot fewer fish than Dave DuBose remembers seeing when he first purchased property in the Parkville Road area in the late 1960s.

"There used to be thousands that would make their way up here," he said.

DuBose, a retired natural resources and rangeland management instructor at Shasta College, is one of the founders of the Bear Creek group. He let the volunteers use his house as a starting point and access the creek through his land.

DuBose said it wasn't until four years ago that he and other residents living in the watershed decided to do something to protect fish and conserve streambeds.

At that point, the U.S. Fish and Wildlife service hadn't realized the stream's significance.

"They didn't think it was an important stream, even though it runs all year," DuBose said. "Most streams around here don't."

A year-round stream is better for young salmon, DuBose said, because they're less likely to be trapped in land-locked, stagnant pools when temperatures rise in the spring and summer. That's the time when the tiny fish are making their way to the Pacific Ocean, where they will grow to adulthood.

The group's adviser, James Moller, is watershed coordinator for the Western Shasta Resource Conservation District. He said the group is trying to improve all aspects of the watershed, including preserving fish habitat and creating fuel breaks for fire season, while balancing landowner needs.

Before the group started, no one had any idea how many fish used the creek or its biological or economic health, he said.

When it comes to its wild salmon population, Weidert said Bear Creek is in critical condition.

Years of unregulated well-drilling and siphoning water directly from the creek by area landowners have dropped the stream to dangerously low levels. Low water means warmer temperatures and fewer fish.

Having less water also causes a natural gravel bar to form at Bear Creek's mouth. When water levels don't rise enough, the returning fish become stranded in the Sacramento River away from their natural spawning beds. There, they may die without reproducing.

The watershed group believes that human assistance is needed to keep the creek's fish population healthy.

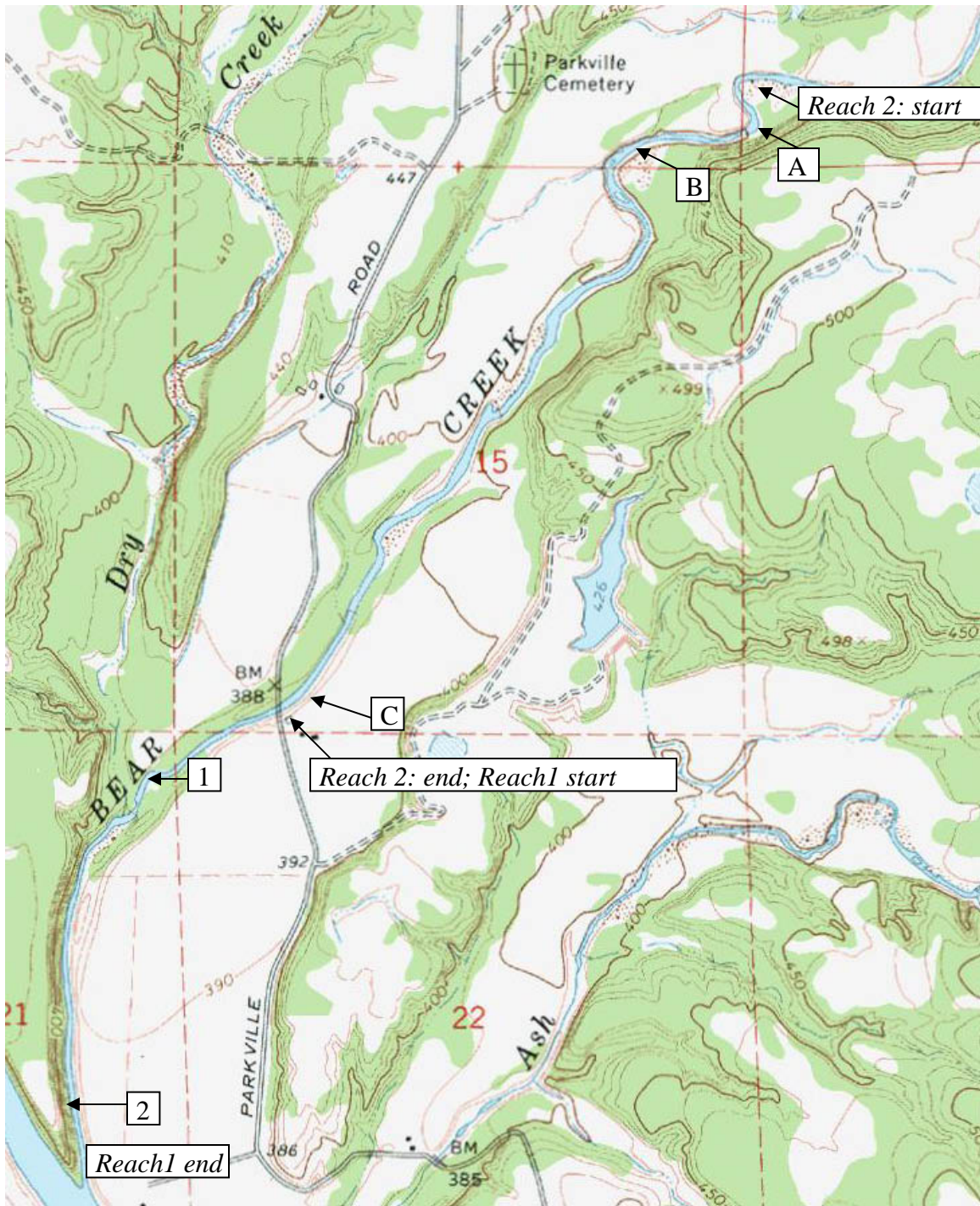
For one member of Friday's salmon hunting party, that assistance is already on its way.

"(Joining the watershed group) was a way to be involved and stay educated," said Shingletown resident Roland Weidenkeller. "Hopefully, that will make a better watershed."

Reporter Ryan Sabalow can be reached at 225-8344 or at rsabalow@redding.com.

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2005 Bear Ck Salmon Survey



Reach One: bridge to confluence:

1. One redd (several practice redds also in vicinity)
2. Male carcass, unclipped (i.e. with adipose fin), fresh/clear eye, approx 38"

Reach Two: Parkville Cemetery (vicinity) to bridge

- A. 3 redds
- B. 1 redd
- C. 1 redd