



Mill Valley StreamKeepers
P.O. Box 2531
Mill Valley, CA 94942
415 388-4187
www.millvalleystreamkeepers.org
Meetings: 10am
2nd Saturday
Sewerage Agency of
Southern Marin.

Mill Valley Flood Management and Salmon Restoration: Natural Partners?

Mill Valley's stream system, eight-square-mile Arroyo Corte Madera del Presido watershed including Old Mill Creek, hosted a run of coho salmon into the 1960s. The last good record of coho was made by federal biologist Rob Leidy in 1983. A second Pacific salmon, steelhead, or sea going rainbow trout, has managed to hang on in our creeks to this day.

Conservation through Cultivation, Watershed Tending in Your Own Back Yard

Tuesday, January 22, 2008
7-9pm MV Community Center.
Sponsored by Sierra Club &
MV StreamKeepers

The speakers are:

Brock Dolman, Director of
Watershed Advocacy,
Training, Education &
Research Institute at
Occidental Arts & Ecology
Center;

Dylan Coleman, President
Wonderwater, a rain
catchment and purification
company, member of US
Green Building Council.

Michael Thilgen, Four
Dimensions Landscaping,
ecological public and private
landscaping.

Dan Carney, MMWD, Water
Conservation Manager

Fish and Music

A partnership between
MVSK and the Mill Valley
Philharmonic is in the works
for this June's "Take a River
Trip with Mill Valley
Philharmonic". In 2006 they
received one of three awards
for community engagement,
from the American
Symphony Orchestra
League, and Ms. Laurie
Cohen, Musical Director,
received a Milley Award for
community service. For
information go to:

www.millvalleyphilharmonic.org

A 2002 County survey identified several culverts in Mill Valley that are clearly impassible to salmon as they try to reach the good quality stream habitat. MVSK hired Bay area restoration engineer Roger Leventhal to conduct a hydraulic examination in 2004 to see how to create roily conditions inside the culverts to give salmon a watery "foothold" boost during flood flows aiding their upstream journey. His work made clear that the Locust Avenue culvert could be renovated and the Cascade Drive culvert in Old Mill Park replaced with a bridge.

Mr. Leventhal was stumped on how salmon passage could be provided at those culverts in downtown with a history of flooding. He has envisioned a device for providing roughness which could swing quickly out of harm's way when flows become violent, dubbed a "variable roughness element" (VRE). MVSK has been funded to enable Mr. Leventhal's VRE research and development. He has been able to consult with experts and design a prototype, fabricate and begin testing at U.C.'s Richmond Field Station hydraulic lab.

So what does this have to do with Mill Valley's flood management issues?

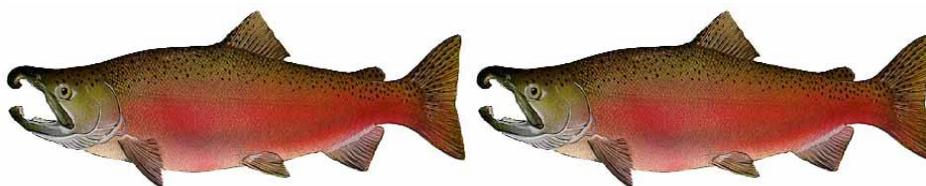
Mill Valley got a cold, nasty wet wake-up call early on December 31, 2005 when our creek overflowed its bank following heavy downpours during both preceding nights. Stetson Engineers of San Rafael's "Appraisal-Level Flood Study" confirms what the Sycamore neighborhood knows full well – that we have constrained the creek. Even modest floods are likely to overflow the creek's banks and take to the streets.

The Stetson study recommends the replacement of the low-slung La Goma Street bridge. It suggests that the peak of Warner Canyon Creek's flood flows could be slowed by a low dam creating a temporary "detention" pool on the MV Golf Course. It also recommends removing a foot and a half of gravel in the channel beside the Marin Theater Co. – where juvenile steelhead thrive in summer.

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MVSK 2007 Grants

Marin County, Fish Barrier relief, Thanks to Supervisor Charles McGlashan
Marin Wildlife & Fisheries Advisory Committee, Education



How Clean Are Mill Valley's Creeks?

This summer Mill Valley StreamKeepers began a volunteer collection of surface water samples from the Arroyo Corte Madera del Presidio and Old Mill Creek to determine the presence and concentration of bacteria including total coliform, E.coli and enterococcus. Determining the presence and quantity of bacteria in our creeks ensures the safe use of these waters for full body contact, recreational uses, and healthy wildlife.

E.coli is a major type of fecal coliform bacteria. Both E.coli and enterococci are produced only in the digestive tracts of warm-blooded animals including birds. Studies have shown that these bacteria, while not necessarily pathogenic themselves, correlate well with gastrointestinal illness in individuals that ingest contaminated water. Because of this strong correlation with pathogens, E.coli and enterococci are called indicators. Identifying the many different pathogenic organisms potentially in creek water would require costly laboratory test procedures. E.coli and enterococci tests are relatively easy and inexpensive.

Either bacteria can be used as indicators in fresh water, but only enterococci can tolerate saline conditions and is used as the indicator in our creeks that receive salt water from the Richardson Bay during high tides.

If high concentrations of E.coli and enterococci have been determined, their source and point of release can be identified; and finally, corrective action can be taken to prevent further bacterial release. Typically, sources of bacterial contamination come from ruptured sewer lines, leaking septic systems, wildlife wastes, and domestic pet waste. If extremely low concentrations are found, the cause might be from drainage of swimming pools or tap water "pollution".

Keeping our creek waters in balance supports our continued efforts to restore our salmonid populations as well as providing clean water for wildlife and the occasional human "fall-in".

Mill Valley StreamKeepers will be conducting seasonal sampling for one year – summer, "first flush" (e.g. - creek flows following the first major rainstorm), and winter in order to capture the impact of variations in water volume on bacteria levels. Although one year of bacterial data is not enough to establish a trend, it does add to our knowledge of how our watershed functions and the possible impacts of bacterial contamination in our watershed.

This study is funded by San Francisco Estuary Project for one year. Sampling was conducted by Betsy Bikle with help by Steve Waldron. The U.S. EPA, Region 9, Richmond Lab. provided sampling materials and did the analyses.

Mill Valley Flood Management and Salmon Restoration: Natural Partners? Continued

Measures such as these can be carried out in ways that benefit Arroyo Corte Madera's salmon population as we resolve our community's flooding issues.

Mill Valley is well positioned for flood management funds from the state's water resources management grant program. (Prop 50, Prop 84 and 1E of 2006). The State is looking for projects which integrate water management (like flood control) and watershed restoration. The integration of our flood issues and restoration of salmon to our watershed will boost the City's case for grant funds. The La Goma Bridge now contributes to potential flooding in one out of four years, according to the Stetson Report. Clearly something will have to be done. It would be an easy matter to modify the floor of the nearby Locust Ave. culvert to resolve the fish passage problem at the same time. MVSK wishes to help the City and our neighbors achieve not only a safer watershed, but one with our salmon resource back in our midst.

MV StreamKeepers 2007 Donations

Michela & Alan Abrams
Annabella's Flowers
Leonore Awner & Quinn Collor
Harold Ball & Amy Zimpfer
Douglas & Elizabeth Berg
Daniel & Betsy Bikle
John & Liz Bolton
Joan Boessenecker
Joyce Britt
CADP Associates
Laura Chariton
Suzanne Childress & Todd Trinko
Paul Chuljian
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Neil Rudolph
Anthony Shiff & Susan McCrae
Meryl Sundove
Ken & Leslie Wachtel
Whole Foods Market
Douglas Wallace
Periann Wood

Please Support Mill Valley StreamKeepers

MVSK is a 100% volunteer non-profit organization working to protect and restore our watersheds. Your help is urgently needed as a volunteer and/or donor. Please return this form so that we might contact you.

Please include your address label.

I am enclosing a check made out to
Mill Valley StreamKeepers in the
amount of \$25 ___ \$50 ___ \$100 ___
Other \$ _____

Name _____

Phone _____

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