## Lorina Daves Tornai March 13, 2014

# Friends of the Pinole Creek Watershed Case Statement

## Mission

The Mission of the Friends of the Pinole Creek Watershed is to assure the return of Pinole Creek to a natural riparian environment that can sustain native riparian wildlife including anadramous fish, waterfowl and migratory bird species.



**Map of Pinole Creek Watershed** 

#### Overview

A watershed is the area of land where all of the water that is under it or drains out it goes into the same place. John Welsey Powell, scientist geographer, put it best when he said that a watershed is:" that area of land bounded hydrologic system, within which all living things are inextricably linked by their common water course and where as humans settled, simple logic demanded that they become part of a community." 1

The City of Pinole is located twenty miles northeast of San Francisco and is on the upper portion of the San Francisco Bay, the San Pablo Bay. The City is nestled at the foot of the Coast Ranges and next to the Pinole Creek which flows through the valley. The Pinole Creek Watershed covers fifteen square miles; at the upper portion (headwaters) the channels are sharp and steep. The middle portion is gentle rolling hills with a downstream channel. The lower reaches of the creek meander through a broad floodplain. In 1956 and 1958 with extreme storm events the creek flooded beyond its shores and caused severe damage to neighborhoods. To mitigate this condition in 1965 the creek channel was straightened, which wiped out native plants and minimized habitat. The creek continues to flood, local residents recall the New Years Eve flood of 2005, and wading across Pinole Valley Road on New Year's morning. "Major storm" events still cause havoc on Pinole Creek.

The watershed is home to trees such as willow, alder and oak that provide habitat for a variety of birds from bald eagles, red tailed hawks, great horned owls, jays, robins and at the bay egrets, pelicans, cormorants and more. This environment provides protection for native fishes such as steelhead trout.

Within its expanse, the watershed is owned by private land owners and ranchettes, EDMUD owns a large portion of the upper and middle watershed and the remaining third is in the City of Pinole where it meanders through neighborhoods of private homes. It falls under the protection of a variety of agencies and groups including:

Contra Costa County Flood Control District
The City of Pinole
The City of Hercules
East Bay Municipal Utility District
Private Land and Ranch owners
The Friends of Pinole Creek Watershed
Contra Costa Resource Conservation District
Contra Costa Watershed Forum
California Coastal Conservancy
San Francisco Bay Regional Water Quality Control Board
And others...

## History of the Friends of the Pinole Creek Watershed

The Friends of the Pinole Creek Watershed (FOPCW) was formed in 2001 by Dr J. Marriotti and Carol Arnold to be a volunteer, citizen based group that could work together to support cooperation for the creek's conservation and stewardship. Now the FOPCW has a diverse board, representing an expansive array of technical knowledge with a small group of active volunteers all committed to supporting the life and health of Pinole Creek and the community in which we live. The group is passionate about collaboration and cooperation within the community. The group originally chose to maintain their organization status under the umbrella of the Watershed Project of Richmond.

Later that year the Urban Creeks Council, the Friends of the Pinole Creek, the County and City began exploring the possibility of a grant to develop a Vision Plan for the Pinole Creek. In 2002, the California Coastal Conservancy granted \$150,000 to create a Pinole Creek Watershed Vision Plan and a preliminary design for restoration of the flood control channel. The Vision Plan was created through a consensus building approach by The Restoration Design Group. Multiple mailings and public meetings were held to get community involvement. The continued public dialogue was a priority of the project and created a spirit of cooperation throughout the community and within the agencies involved.



1958 Flood of Downtown Pinole
Courtesy of Contra Costa County Historical Society

#### Need

In June of 2004 the Pinole Creek Watershed Vision Plan was published. The major goals which were developed through the Vision Planning process included Water Quality, Habitat Restoration, Education, Private Property, Public Landscape and Flood Management.

Specific elements of the 2004 Vision Plan were as follows:

Water Quality is affected by a number of different factors. Pollution from storm water is common. If residents use pesticides in their yards, that material sits there until a winter storm comes through. Then given the hilly landscape of the valley, all of that "Round Up" rolls through the gutters, to the storm drains, into the creek and ultimately into the Bay and later to the Pacific. Everything rolls down hill through the creek to the Bay. Trash dumped along valley streets ultimately get washed off into the creek. Local ranches have animal waste to contend with and this too could get washed into the creek. And finally, the natural geologic process of gravity and erosion creates sediment as the hills tend to wash away toward the creek and Bay.

Ensuring Healthy **Habitat** for fish and other wildlife is of high interest in the community. Historically, Pinole Creek has provided spawning sites for steelhead/ rainbow trout and remnants of this native stock still remain today. Their spawning is blocked by Interstate 80, and during typical flows they are not able to jump over the culvert to get to the natural creek bed upstream where they could spawn. The Pinole Creek primarily is a natural creek bottom channel that provides habitat opportunity for a host of ducks, coots, mallards, canvasback, gadwall and possibly wood ducks. Fortunately, banks of the Pinole creek are a bit wider than some urban areas, providing natural habitat to California Oak, Willow, Elder, and Bay Laurel these provide bird sanctuary. If not crowded out by invasive non natives, such as scotch broom, star thistle or poison oak the native plants will attract native birds!

**Education** is needed through out the community to alert residents and property owners to NOT dump their used motor oil down the drain, spray pesticides on their landscaping, limit toxic car wash materials, or dump trash along the road or creek. Children get excited when they see ducks in the creek or a trout swimming upstream. They are happy to help us remember to keep our creek clean, for them!

**Private Property** owners appreciate the value of a clean watershed and appreciate all of us not trespassing to pollute, dump or monitor their land. The vision plan calls for inclusion of the ranch owners in the upper watershed.

**Development** for future Pinole projects could take the Pinole Creek into account and build into their designs the creek as a place of beauty, rest and solace. At the time of the Vision Plan the Pinole Valley Shopping Center with an old Lucky Supermarket was being considered for redevelopment. The creek could become a focal point of this mini mall.

**Flood Management** is a primary concern of the Pinole Creek Watershed Vision Plan. Urbanization with increased hardscapes and the straightening of the lower Creek Channel in 1975 actually increased the

speed, flow and capacity of the lower creek area during major storm events. This also eliminated natural foliage and thus natural habitat for fish and fowl.

**Social consideration and Recreation** is important to the Vision Plan. The plan calls for consensus, and a cooperative spirit within the Pinole to create a lifestyle that everyone in Pinole can enjoy. The natural beauty of the Creek can be part of a recreation destination and the city and a respite for all.



Pinole Creek in its Natural State!

### Vision

This Vision for the Pinole Creek established in 2004 reflected stewardship of a community resource; it is a consensus, collaboration for what might be. Each element contributes to the whole.... the water quality, brings habitat, which provides education, which protects property and creates landscape. Flood management brings maintenance and healing and the creek brings the community together.

Water brings life, healing, renewal, balance and harmony. Come sit beside the creek rest in its flow, refresh and renew yourself here in our corner of the Bay, in Pinole, California.

#### **Success To-Date**

By the spring of 2014 the community of individuals and agencies surrounding Pinole Creek has made tremendous strides in the preservation and renewal of our watershed.

**Water Quality** in the Pinole Creek has improved in the last ten years due to a number of contributing elements. The County Clean Water Program and City of Pinole have put in place clean water guidelines for businesses and residents in Pinole. These are publicized through multiple websites, on Pinole TV and significant signage. Scattered along the creek are bright green "Pinole Creek Watershed" signs

produced by the Contra Costa Resource Conservation District. Every storm drain in the city now has plastic emblems stating "No dumping, Drains to Bay." Fines for illegal dumping have increased and the county is vigilant about picking up any items "accidentally" dumped.



Watershed signs creekside

Sediment inputs to the creek have been reduced significantly with the construction of Sediment ponds in the Upper Watershed at Pavon Creek by East Bay Municipal Utility District.

In the Lower Watershed the City of Pinole in Partnership with the Contra Costa Flood Control District, the Restoration Design Group and the Friends of Pinole Creek Watershed implemented a redesign of the flood control channel below San Pablo Avenue. This reduced risk from large storm events and provided a better channel for any residual sediment.

**Habitat** has improved to date particularly in the upper watershed with the Pavon Creeks Restoration project. This provided a sediment detention basin, red legged frog ponds and restored wetlands for the California red legged frog and the endangered Alameda whipsnake.

Environmental/ plant improvements at the Demonstration Project provide native plant landscaping and habitat for waterfowl of all kinds, egrets, grebe, Ducks, geese, kingfisher, killdeer, Pelican and cormorants, to a name a few. The Friends of Pinole Creek Watershed's native plant garden has been created at the Pinole Library to educate and inspire the residents of Pinole on the possibility of more

drought tolerant landscaping with native plants which do not require pesticides to maintain. This encourages native species, fish and feathered through out the watershed.

**Education** on the importance of the Creek Watershed has inspired the young and older throughout Pinole. Children have participated in an Earth Day "Creek Fest" with live demonstrations of native creatures and plants, creative games to educate as parents stroll through a host of green exhibits. The community is aware of the creek from the multiple signs placed through out the watershed and every storm drain is making residents aware of what gets washed downhill.



On every storm drain in Pinole

**Private Property** owners have been involved in all phases of the planning and implementation of the Pinole Creek Vision plan and continue to be active in the Friends of the Pinole creek.

Some **recreational benefits** have been included adjacent to the creek: the East Bay Regional Parks District has linked the creek trail at the Demonstration Project to the **San Francisco Bay Trail** which will soon traverse Hercules and connect to the town of Rodeo. Eventually, the San Francisco Bay Trail will wind 500 miles around the Bay.

The Bay Area Ridge Council in collaboration with EBMUD added the Pinole Valley link to the **Bay Area Ridge Trail**. The Pinole Valley link connects the Sobrante Ridge Trail to the Fernandez Ranch trails in Franklin Canyon. The Vision Planning group had expressed an interest in this trail connection during their planning process.

**Flood Management** improvement is a significant area of progress for the Pinole Creek Watershed. In 2010, the City of Pinole in Partnership with the Contra Costa Flood Control District, the Restoration Design Group and the Friends of Pinole Creek Watershed and oversight from the US Army Corps of Engineers, implemented a redesign of the flood control channel below San Pablo Avenue. This has significantly reduced the risk of property damage to Pinole and Hercules properties and residents within that creek area. This project was funded by the State of California and the Federal EPA.



**Demonstration Project Sign** 

Today the Pinole Creek is a clearer stream meandering through rolling, green hills and valleys, under the natural canopy of Oak and Laurel or with the sun shinning on its natural banks. Providing shelter to jays, sparrows, swallows and robins. Closer to the bay it attracts bicyclists and hikers alike as they marvel at the marshy banks with an occasional egret, catching her lunch.

### Award winning...

In 2011, The Pinole Creek Restoration Project was awarded the Outstanding Creek Restoration Project in Contra Costa County by the County Watershed Forum. In 2013 the Pinole Creek received recognition by the County Board of Supervisors through an award to Carol Arnold for her outstanding contributions to the Pinole Creek Watershed on her retirement from the Contra Costa Resource Conservation District.

## **Program Descriptions**

Pavon Creek Restoration Project: In 2002, the Contra Costa Resource Conservation District hired the San Francisco Institute to work with them on studying the excessive sediment issue in Pinole Creek. They subsequently published the Pinole Creek Watershed Sediment Source Assessment and the Pavon Creeks Sediment Source Assessment which revealed that the majority of sediment in Pinole Creek was coming from the four Pavon Creeks tributaries. In the winter of 2012, EBMUD completed the Pavon Creeks Wetlands project. With the seismic upgrade of the nearby San Pablo Dam, habitat needed to be recreated for several species. The project created a sediment detention basin and several red legged frog ponds. These ponds were planted with native plants and created new seasonal wetlands. These wetlands now provide habitat for a number of sensitive species including two red legged frog breeding ponds. This project has greatly reduced the erosion and sediment in this area. In the next few years, wetland plants will develop and native wildlife will thrive at the site. Come see this dramatic transformation!



Pavon Creek Sign

**Need and Interest for a Pinole Creek Restoration Project:** The Pinole Creek Channel which had been constructed in the early 1960s by the US Army Corps of Engineers had reduced flood risk, but provided limited vegetative cover for habitat. Also, this project required dredging the stream channel on a regular basis to maintain flood protection, but Prop 13 eliminated funds for the maintenance dredging. The 2004 vision Plan laid out a new, vibrant vision for the creek including flood protection with a design that maintained an equilibrium channel rather than one that needed dredging. This vision also included native vegetation which would increase channel and stream side habitat.

**Pinole Creek Demonstration Project:** The State River Parkways Grant for the Demonstration Project included funding for an interpretive element. A graphic design firm was hired to work with the FOPCW to develop interpretive panels to provide key information on the history and ecology of the project area. The FOPCW is also under contract to work with the Restoration Design Group for the City of Pinole to perform the vegetation and channel monitoring for 5 years as required by the various regulatory agencies which permitted the project.



**Building Creek Awareness at Demonstration Site** 



Creek Education at FOPCW Library Garden

California Native Plant Garden: FOPCW constructed a California Native Plant Garden adjacent to the Library to showcase the plants and wildlife of the Pinole Creek Watershed. The plaque placed in 2008 to commemorate the garden says it best: "By removing weeds, clearing trash, controlling soil erosion and planting appropriate California native we improve the water quality as well as provide food and shelter for local wildlife in the Pinole Corridor. Reducing our dependency upon chemical fertilizers, pesticides and irrigation water also helps maintain a healthy ecosystem thus sustaining the life or our creek, and making the Pinole Creek watershed enjoyable for everyone."

## **Programs in Progress**

## **Pinole Creek Fish Passage Improvement Project**

Pinole Creek supports a small population of steelhead and rainbow trout. The natural, earthen channel and relative ease of removing a few in stream fish passage barriers makes Pinole Creek an excellent fisheries restoration opportunity. In 2009 the Resource Conservation District in conjunction with EBMUD conducted spawning surveys and found the only major barrier to steelhead reaching spawning habitat upstream was the was the culvert under Interstate 80. The RCD has obtained funding from the US Fish and Wildlife Service and has designed a fish way notch for the fish to get through. The project is currently in the permitting phase with construction planned for 2014 or 2015.

#### **Chelsea Wetlands Restoration**

This project will restore the Chelsea Wetlands to reflect historic tidal marsh conditions and habitat, as well as provide flood storage benefits to the cities of Pinole and Hercules. A large portion of this site was filled approximately 100 years ago during the rapid urbanization of the Hercules/ Pinole area. The project will remove approximately four feet from the bottom of the wetland and a tidal channel will be constructed to allow the wetlands to experience tidal flows from Pinole Creek. The City of Hercules obtained grant funding, but has subsequently turned this project over to Ducks Unlimited. The project is currently in the permitting phase with construction scheduled for 2014 or 2015.

## **Budget**

The Friends of the Pinole Creek, is not a 501c3 Organization. The FOPCW has signed an agreement with the Watershed Project to have them act as fiscal agent for the group and any funds are held by The Watershed Project in Richmond.

### How a donor can help

We at the Friends of the Pinole Creek Watershed are excited about the progress made to date cleaning up our creek and watershed. With the two upcoming projects, the fish passage and Chelsea Wetlands, about to be completed we have an opportunity to refresh and renew the Creek preservation. We invite donors to contribute and celebrate with us the opening of the projects. These will be excellent times to invite the community to celebrate our progress and embark upon the next phase of the Pinole Creek Watershed upgrades.

The Friends of the Pinole Creek Watershed needs a watershed coordinator position to re establish the next priorities, organize the community, and write grants for funding.

We would like to extend the Pinole Creek restoration to Interstate 80 as was envisioned in the 2004 plan. Imagine being able to stroll or bike from the Bay to Interstate 80. We need grant funding to maintain the creek for habitat.

Community events and support are needed to maintain the native gardens and find major donors. Educational opportunities abound, for example residents could learn how to reduce pesticides and manage storm runoff water during winter storms to reduce sediment flow into the creek.

## **Event Ideas include:**

A grand opening Barbecue and Picnic

A walk a thon along the creek to get young people interested and excited.

A Boy Scout/ local churches clean up and replant the creek day

Grant writing in conjunction with the City of Pinole

### **Board of Directors**

The current Board of Directors of the Friends of Pinole Creek Watershed is: Bert Mulchaey, Supervising Fisheries, Wildlife Biologist EBMUD Ann Moriarty, Pinole Land owner and educator Carol Thompson, Educator Bill Voigt, GIS Analyst and Biologist Tim McDonough, Engineer and native plant specialist

#### Staff

In the past the Friends of the Pinole Creek have had a Watershed Coordinator; this is a part time position and is now vacant. It has been suggested by several Board members that hiring a coordinator who could excite the community about the next steps for the Creek as well as organize events and write grants for future projects would be a great benefit. Carol Arnold, co-founder of FOPCW and Contra Costa Resource Conservation District Executive Director, Retired, has been acting as point of contact until the group can hire a Watershed Coordinator.

## **Footnotes:**

1. US EPA. "What is a Watershed." http://water.epa.gov/type/watersheds/whatis.cfm March 6, 2012

## **Sources:**

Contra Costa Clean Water Program.
<a href="http://www.cccleanwater.org/stormwater-c-3-guidebook/">http://www.cccleanwater.org/stormwater-c-3-guidebook/</a>
City of Pinole Document. "Storm Drains and V Ditches."
<a href="http://www.ci.pinole.ca.us/publicworks/stormdrains.html">http://www.ci.pinole.ca.us/publicworks/stormdrains.html</a>

Contra Costa County Illegal Dumping. http://www.co.contra-costa.ca.us/depart/cd/recycle/illegal-dumping.htm#Dumping in Creeks

Contra Costa County Flood Control District. Flood Zones <a href="http://www.cccounty.us/1449/Pinole-Creek---Zone-9">http://www.cccounty.us/1449/Pinole-Creek---Zone-9</a>

Urban Creeks Council of California, Restoration Design Group. "Pinole Creek Watershed Vision Plan, 2004" <a href="http://www.pinolecreek.org/index.php?option=com\_content&view=article&id=54:pinole-creek-watershed-vision-plan-&catid=34:past-projects&Itemid=55">http://www.pinolecreek.org/index.php?option=com\_content&view=article&id=54:pinole-creek-watershed-vision-plan-&catid=34:past-projects&Itemid=55</a>

Pinole Creek Habitat Restoration.

http://bairwmp.org/projects/pinole-creek-habitat-restoration-1135-project

Friends of the Pinole Creek		
Watershed		
Case Statement Appendix		
Vision Plan Progress		
2004 Vision Plan	2014 Progress	Source
Water Quality: Elements listed	Contra Costa Clean Water Program, updated guidelines to business and	Contra Costa County Clean
<b>Storm water Pollution</b> includes runoff from fert, pest, automotive,	residence county wide 2012.	Water program Website
residential, I-80 Measures: Infiltration of storm water, retention basin, vegetation,	City of Pinole Guidelines enforces clean water guidelines on website, Pinole TV, Metal Decals affixed to every storm drain.	City of Pinole Website.
stream culverts	"No dumping, Drains to Bay City of Pinole, 1-800-NO- Dumping"	Observation of Decals
	RCD Signage along major roadways located near the Creek "Pinole Creek Watershed, Ours to Protect," to inspire stewardship.	Observation
Dumping and Litter: dumping of	County wide: Illegal Dumping, if affecting	Contra Costa
furniture along the creek, street	creek picked up by Contra Costa County	County website
litter. Measures: more severe fines	Flood Control District.	
	County wide regulations for illegal dumping	
Animal waste: horse boarding in upper watershed. Need safe disposal of solid waste	Federally the EPA has guidelines. Several land owners from the upper watershed expressed some interest in this at early public meetings.	No data
	Contra Costa RCD has applied for grants to obtain funding for education and cost sharing assistance for manure management and other conservation programs for horse boarding facilities (no funding received yet).	
<b>Sediment</b> : Erosion Control on Private property, hardscape exacerbates	In the upper Watershed, in 2010 EBMUD created four sediment ponds for the four	Bert Mulchaey, EBMUD
	channels of the Pavon Creek which flow into Pinole Creek. Reducing sediment flow into Pinole Creek by 60% and reducing	
	erosion of the banks.	

Mosquito Abatement: West Nile Virus, Stagnant water  Water Quality Monitoring: micro invertebrate sampling. 2002 EBMUD land area, best water quality. Continued monitoring.	In the Lower Watershed in 2010, the City of Pinole in partnership with the Contra Costa Flood Control District, the Restoration Design Group, and the Friends of Pinole Creek implemented a redesign of the flood control channel above the Railroad Bridge. This improved the creek for larger storm events, reduced sediment. Environmental improvements with Demonstration Project, Native plant landscaping, new walking trail and waterfowl habitat.  Opportunity to extend further up stream  Contra Costa Mosquito Vector Abatement District monitors and abates areas such as the Chelsea Wetlands and other wetlands near the Bay  Not Clear  EArthteam with the help of high school groups may be monitoring the creek for water quality and/ or fish sampling	Drew Goetting, RDG Design Group.  Carol Arnold, Friends of the Pinole Creek
Habitat Healthy Habitat for Fish, steelhead trout, native stock still exits. Possible limiting factors are sedimentation, fish passage impediments	In the Upper Watershed the Pavon Creek Restoration project restored wetlands providing habitat for sensitive species including the California red legged frog and the endangered Alameda whipsnake.  Planned: Contra Costa RCD Steelhead Trout Fish Passage Improvement Project. Steelhead may be able to return to historic spawning grounds with construction of fish passage culvert under I-80. Allowing trout to return to one of few spawning grounds in the Bay Area.	Bert Mulchaey, EBMUD  Bert Mulchaey, EBMUD
Invasive plant species: giant reed, scotch broom, yellow star thistle. Consume water and increase fire	Planned: Chelsea Wetlands Restoration to reflect historic tidal marsh conditions and habitat.  FOPCW Native Plant Garden Started at Pinole Library for Education of public on creek/ water friendly natives.	Carol Arnold

danger.		
	Opportunity to rebuild and highlight for community education, special events?	
Education Education of school children with a healthy watershed.	Pinole Creek Festival for children hosted by FOPCW once a year.	
Education about watershed health, pollution and water quality. A need exists to target property owners whose actions can affect creek health.	RCD Signage along major roadways located near the Creek "Pinole Creek Watershed, Ours to Protect" to inspire stewardship.	Observation
Private Property Landowners are concerned about trespassing, liability and privacy as monitoring and restoration goes forwarded. A need for improved communication	Unknown  Prior to the Vision Plans development the Restoration Design Group announced public meetings with two mailings totaling 11,000 and conducted 6 public meeting to develop a consensus	
Maintain rights to develop property consistent with planning and zoning and assistance to navigate multiple jurisdictions.	Leaders of the Pinole Creek Watershed Vision Planning program reached out to ranchers and other residents in the Upper Watershed to gain their support, participation and input into the process	
Development & Design Planning and development generally underutilizes the creek. Businesses could face the creek and residential could include it an amenity.	Pinole Valley Shopping Center does not to have been developed with the creek as a destination.  Opportunity	Observation
Aesthic and recreational benefits Pinole Valley Shopping center could incorporate the creek.	With the lower Flood Control Project Environmental improvements with Demonstration Project, Native plant landscaping, new walking trail and waterfowl habitat. Opportunity to extend further up stream	

Recreational benefits.	The San Francisco Bay Trail crosses the Creek at the Demonstration Project. Then it follows the shoreline and stops at Hercules. The trail will be continued through Hercules.	Jim Townsend East Bay Regional Park District
	The Bay Area Ridge Trail extension through the Pinole Creek Watershed was discussed during the Vision Planning process. A few years later, EBMUD created a trail head and opened this section of the ridge trail through their property which connects the Sobrante Hills with the Fernandez Ranch in the Rodeo Creek Watershed.	
	Opportunity lower, middle and upper watershed areas.	
In the upper watershed residents want to maintain the rural character	Current County Zoning provides for ranchettes of five acres or greater.	
Flood Management Minimizing flood damage and safety of the community is a primary concern.  Improvement of storm drains to prevent local street flooding.	In the Lower Watershed in 2010, of the City of Pinole in partnership Contra Costa Flood Control District, the Restoration Design Group, the Friends of Pinole Creek Watershed implemented a redesign of the flood control channel above the Railroad Bridge. This improved the creek for larger storm events, reduced sediment. Environmental improvements with Demonstration Project, Native plant landscaping, new walking trail and waterfowl habitat.  Opportunity to extend further up stream Unknown	
Social Screet flooding.	The Pinole Restoration Project was awarded the Outstanding Creek Restoration Project by the Contra Costa Watershed Forum for outstanding agency and community collaboration.  Opportunity for further community building	Nominated by Friends of the Pinole Creek
	around the creek.	