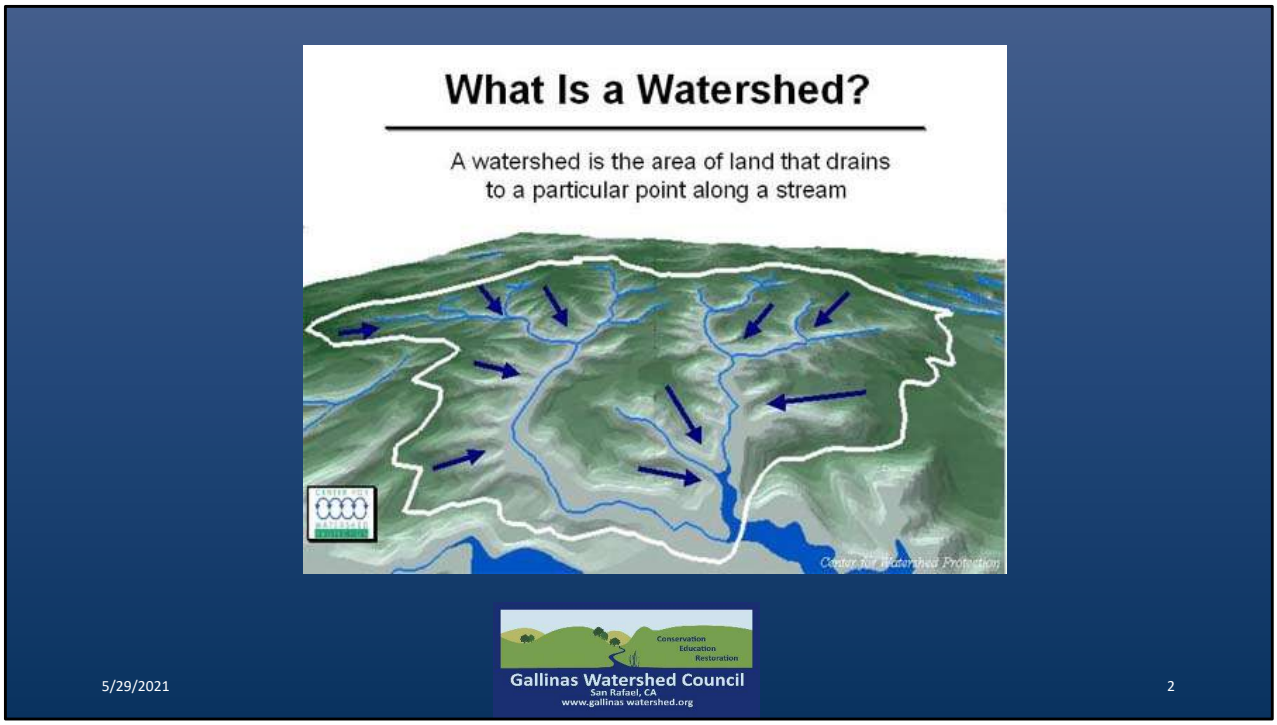
A Tour of Gallinas Creek Watershed

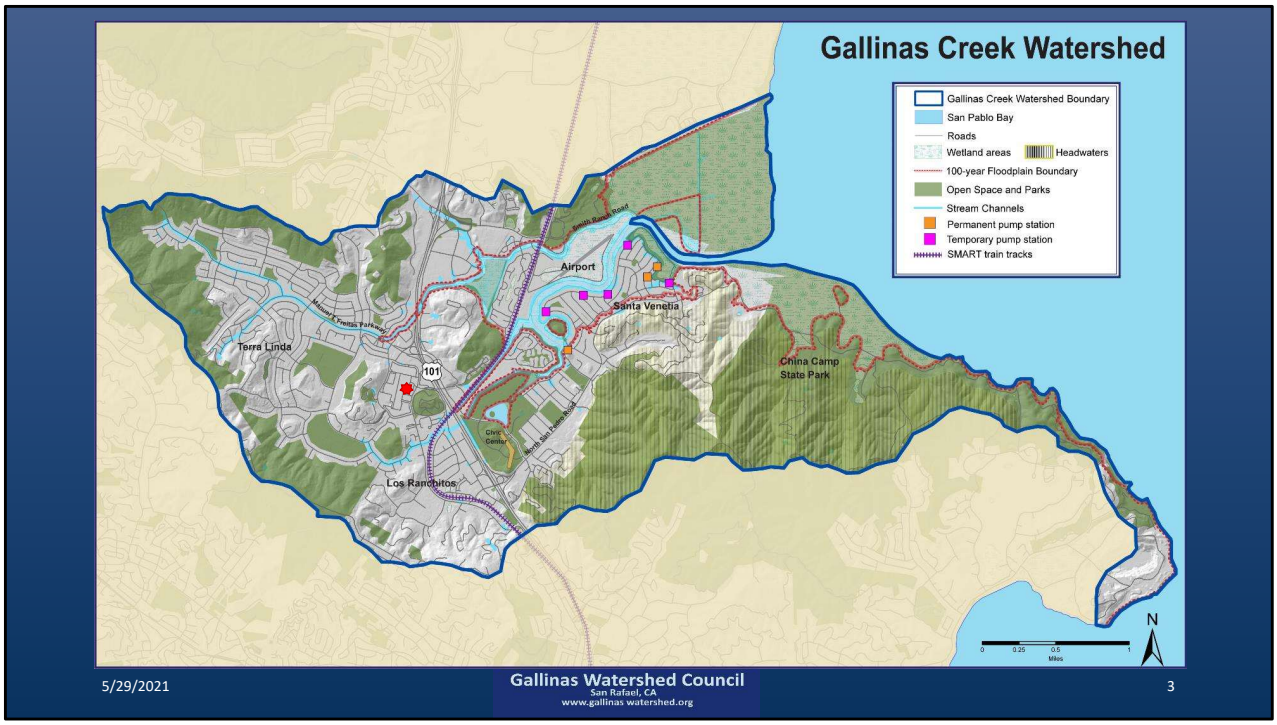
(and a little history)

Issues and Opportunities



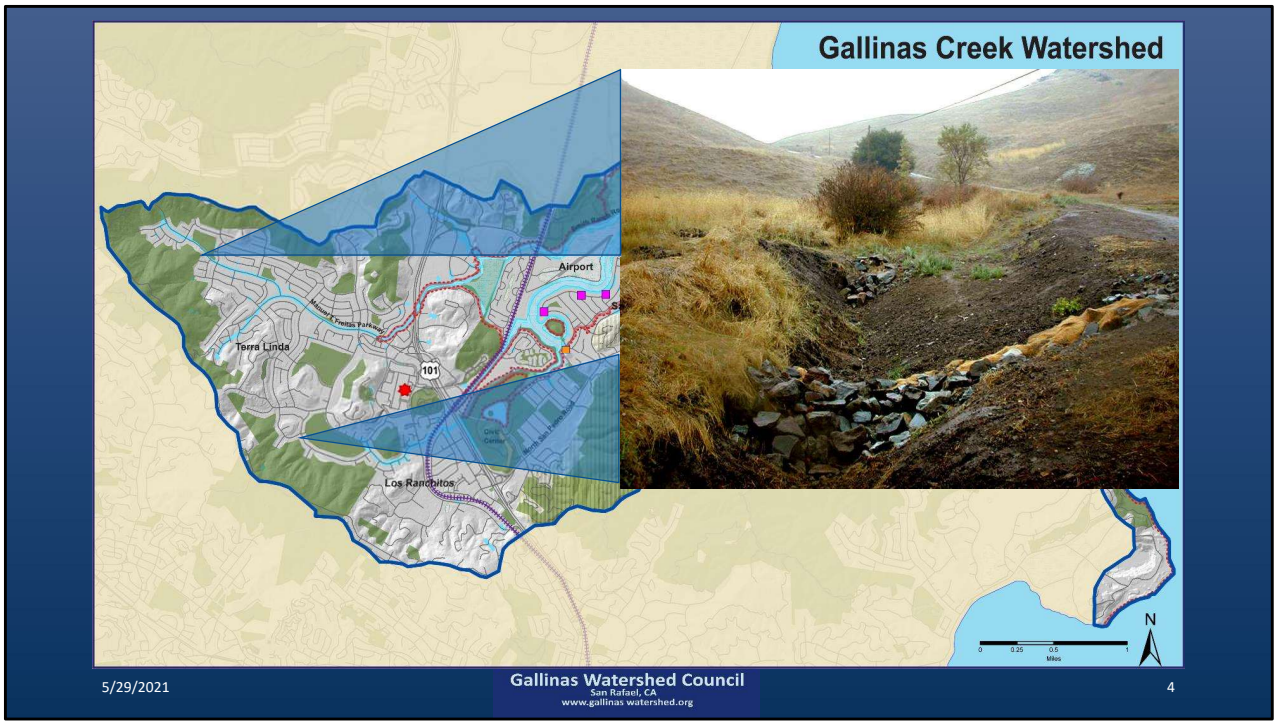
By now I hope we all know what a watershed is, but just in case, here is the concept.

Taking a watershed approach often requires working with multiple jurisdictions, agencies and interest groups



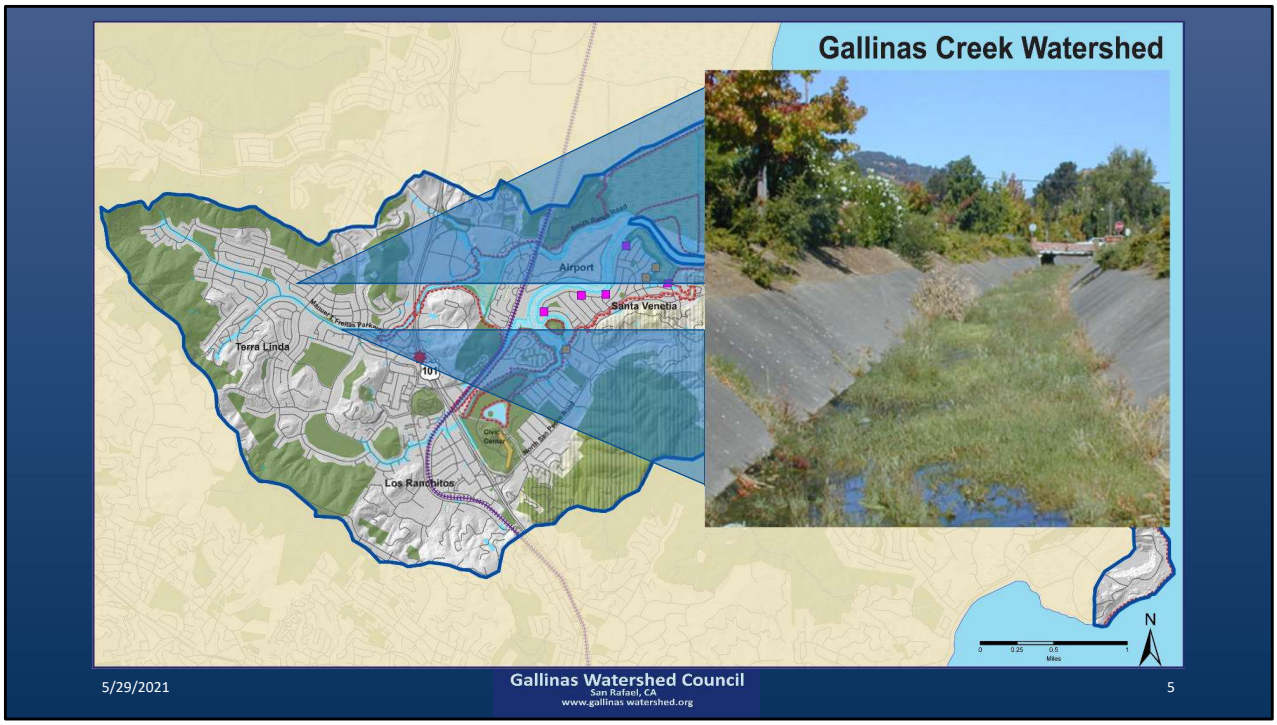
The Gallinas Creek watershed is rather evenly split between City of San Rafael and Marin County jurisdictions.

The red star is placed at North gate mall to help you orient in the watershed. It would also be where we were meeting if we were meeting in person.



The headwaters of Gallinas Creek are the hills surrounding Terra Linda and Santa Venetia, and are primarily County Open Space lands or part of China Camp State Park.

Erosion control and management of invasive species are concerns.



This slide shows the channel of the upper part of the North Fork of Gallinas Creek which was channelized into a concrete ditch in the middle of Freitas Parkway in the 1950s. Santa Margarita Creek was similarly channelized into the middle of Del Ganado Road. This area has been a major concern to GWC since its formation.

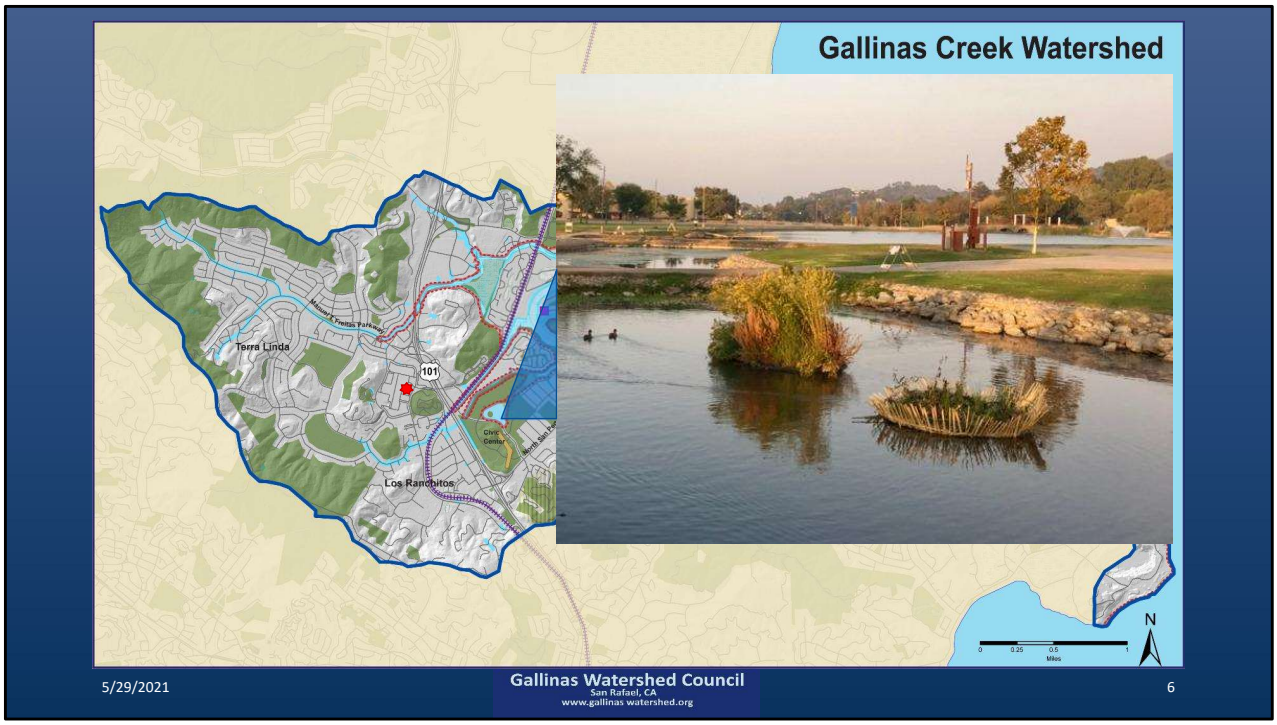
The Ditch is of concern to GWC for several reasons:

- The dearth of habitat
- Poor water quality
- Aesthetically unpleasing

Water quality concerns include:

- Trash
- High temperature (no shade)
- High pH (basic, like bleach)

We will continue to tour the watershed, but then ***come back to more discussion about this part of the watershed.***



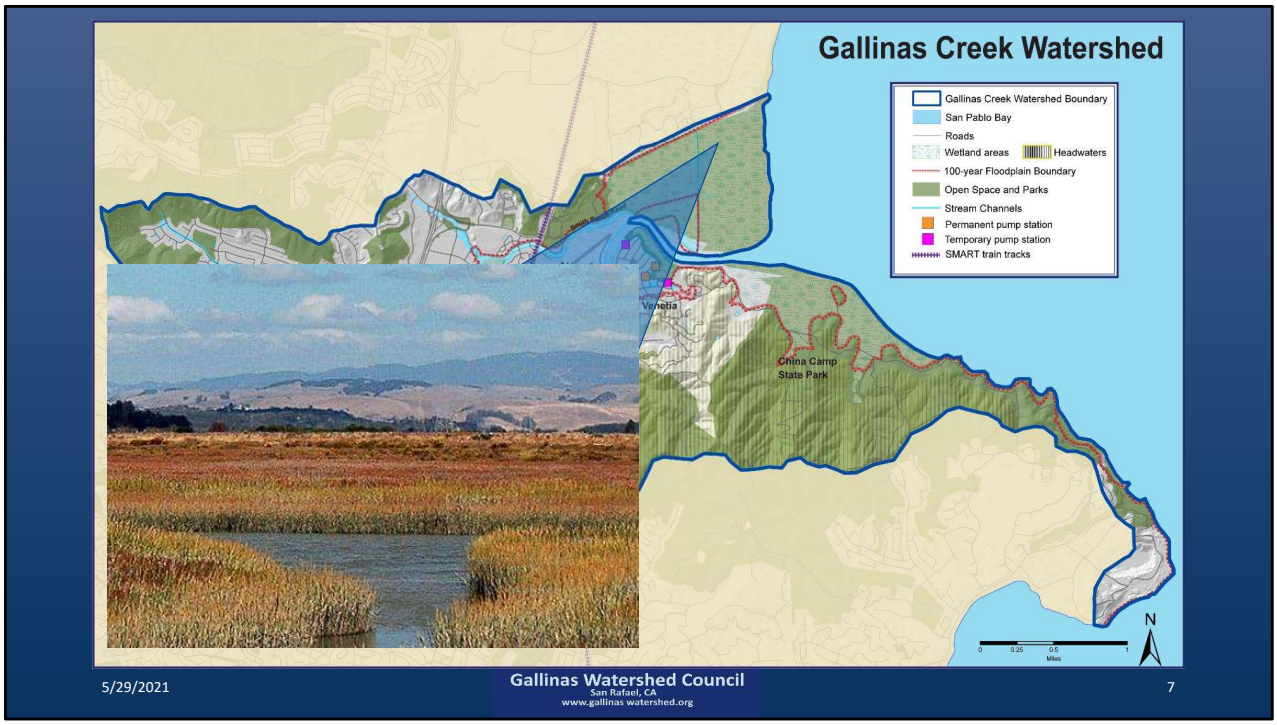
GWC has also been concerned with water quality in the Lagoon. While this is a concern throughout the watershed, we have focused much of our efforts at improving water quality in the Civic Center Lagoon.

The Civic Center Lagoon is within the City limits, but is County property and therefore the County has primary responsibility for dealing with it. While we understand that the City cannot implement water quality solutions in the Lagoon, we hope the City will be supportive of our efforts there.

Runoff from the surrounding Civic Center grounds, and in particular, goose droppings have led to the water quality in the lagoon being unsuitable for any contact, and has led to the cancelling of activities such as the sunrise ceremony that native Americans previously conducted on the lagoon as part of the Bioneers conference.

Several years ago, GWC members launched 2 experimental floating islands in the Lagoon. Floating Islands provide a biofilter that can remove the nutrients and other pollutants that create the water quality problems. This is a proven technology, and we have demonstrated that these islands can be used there. Since that time GWC members have done further experimentation with using natural materials, sought out partnership, and developed estimates of the size of project that would be needed to actually clean up the Lagoon, and its cost.

The GWC has worked with Marin County Staff, agencies with jurisdiction over the lagoon, local advocates, indigenous cultural practitioners, Traditional Ecological Knowledge (TEK) experts, and neighborhood groups. All the constituents agree that floating ecosystems at scale, with an appropriate selection of native hydrophytes, can provide the biological filtration needed to regenerate the health, well-being, and beauty of the Marin Lagoon and Lagoon Park. With help from the Indigenous Youth Foundation a new design was developed to replace the plastic structure that holds the plants with all natural materials. Islands would need to cover 2%, or over 9000 square feet of surface area, in order to do the job adequately. GWC will be presenting its findings to the Marin County Board of Supervisors in order to move this project forward to scale.



Tidal Wetlands

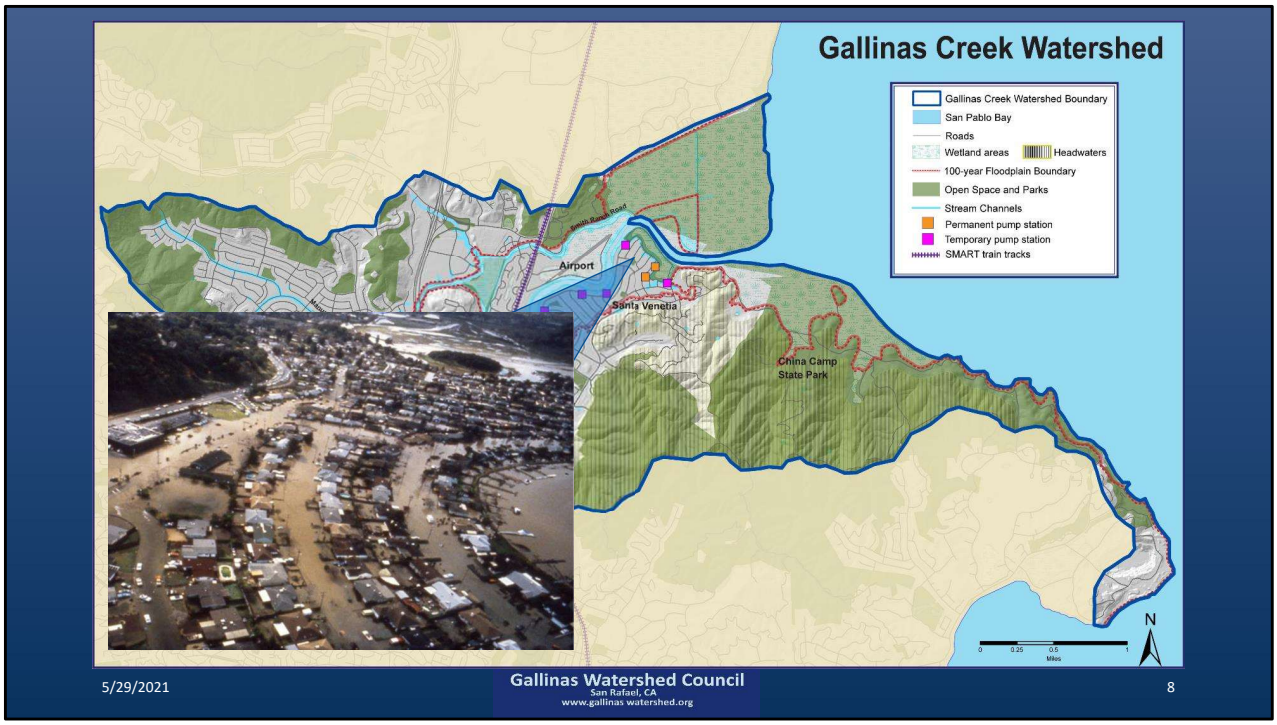
There are very valuable tidal wetlands at the mouth of the creek and Bayward in China Camp State Park. North of the Creek Mouth wetlands have been diked.

Removing levees and allowing natural marshes to rebuild will help protect low-lying communities from rising seas. Tidal wetlands that result from this kind of restoration store carbon and provide habitat for many important species.

They also help protect against sea level rise and flooding.

GWC has supported the wetlands restoration project at McGinnis Park and promotes tidal wetlands restoration wherever it can occur in the watershed.

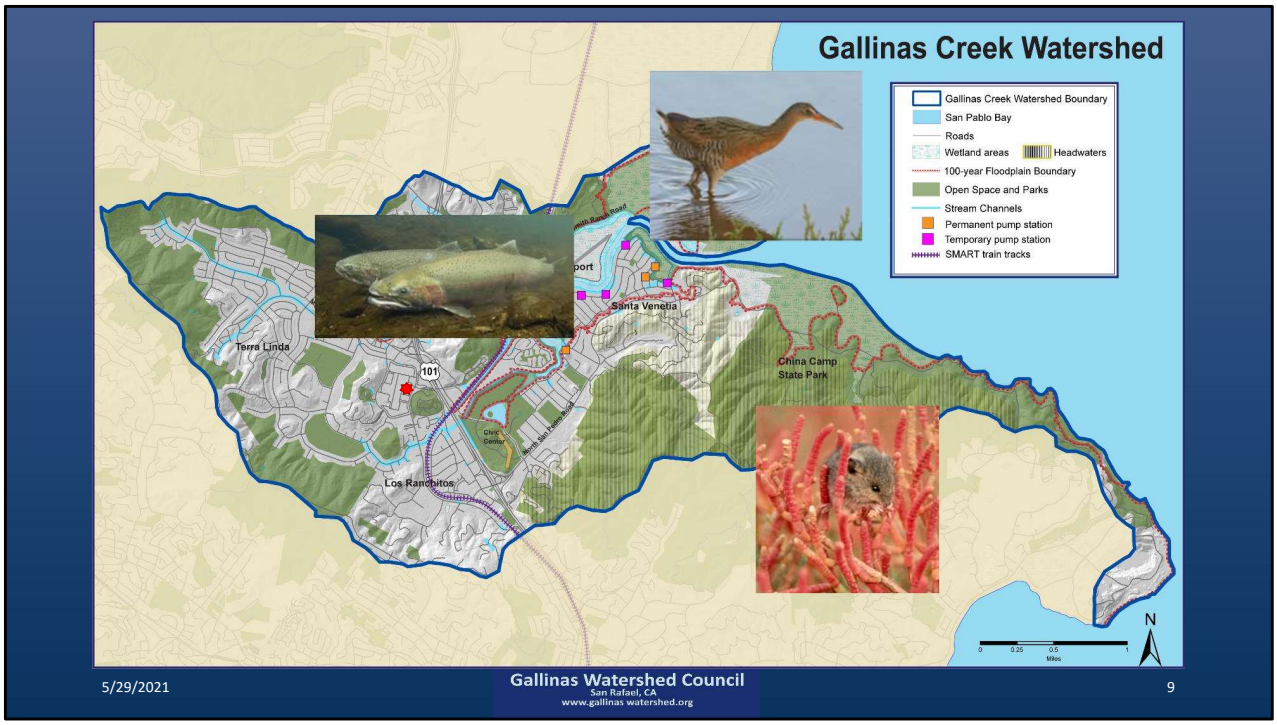
GWC has also partnered with the National Estuarine Research Reserve and Friends of China Camp, as the China Camp wetlands are part of the Gallinas Creek Watershed.



Flooding in low-lying Santa Venetia has also been a focus. Initially we were concerned about the impacts of runoff from the upstream channelized portion of the creek, and whether restoring the creek bed would adversely impact downstream flooding. The hydrology study conducted by Kamman Hydrology with funding from the North Bay Watershed Association showed that stream restoration can be done without increasing downstream flooding, and possibly ameliorating it somewhat. Other county studies as part of the watershed program indicate that the flood risk in Santa Venetia is primarily one of tidal storm surge and the treat of breaching or overtopping the levees.

GWC worked with the County and Flood Zone 7 on efforts to improve the levees in this area. We supported measure A, which unfortunately very narrowly failed to get a 66 2/3 majority needed to fund the effort.

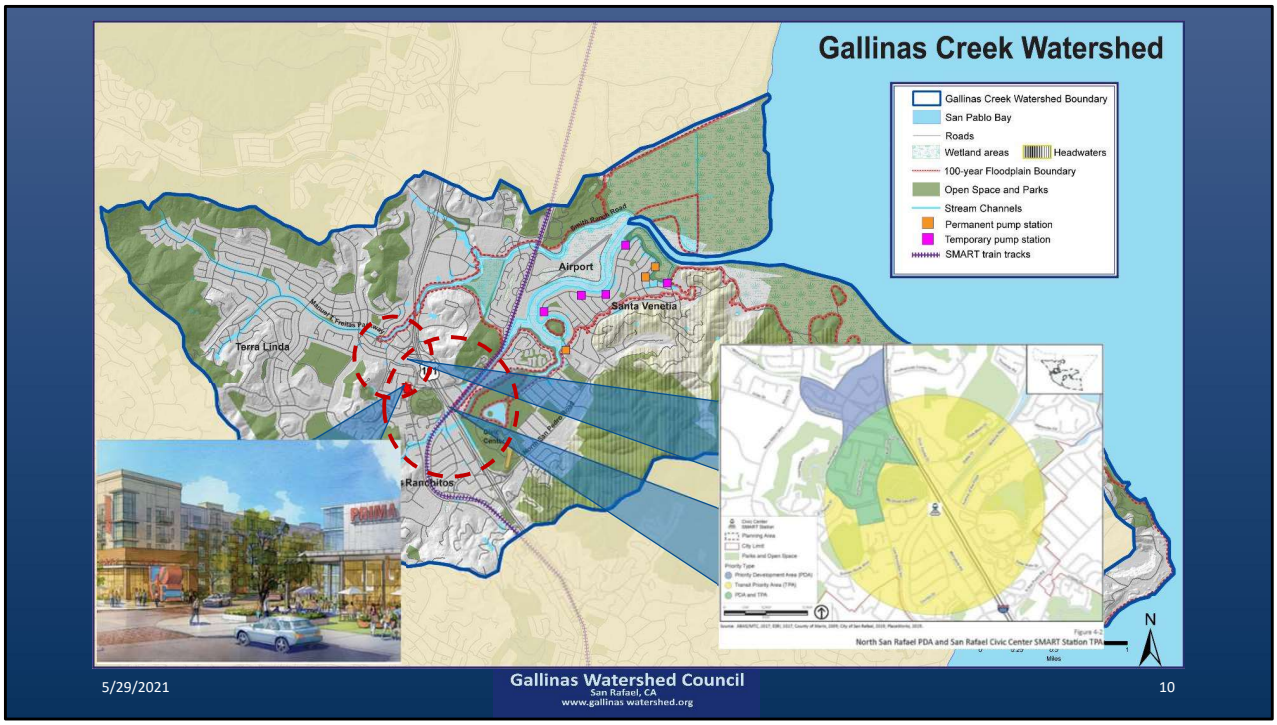
In addition to improving drainage and pumping, and improving levees for flood control, we urge the use of wetlands restoration or “horizontal levees” to slow the impacts of tidal flooding.



Endangered or threaten species inhabit our watershed. Contempo Marsh is major habitat area for Ridgeway Rail, heavily impacted by Smart Train and airport development. Development at San Rafael Airport also adversely affects Ridgeway Rail habitat. GWC opposed development of the soccer complex at the airport because of expected adverse effects on the Rail and because of the potential for flooding.

Steel head once spawned in Gallinas Creek, as far up as where St. Isabella's is now. It is possible that a steelhead run could be re-established if creek restoration creates sufficient habitat.

Salt marsh harvest mouse also inhabits our tidal marshes.



Development and Priority Development Areas are proposed in the Northgate area.

Redevelopment should support SR Vision's Promenade and Gallinas Creek Restoration

The Northgate area is now considered a priority development area by the City. While we don't object to redevelopment of the Mall or other Northgate areas, we will be concerned at how this development takes place. Where possible, redevelopment should help implement portions of the Promenade Plan and restoration of the creek, and also follow the **"Green Streets" approach** to preventing stormwater pollution.

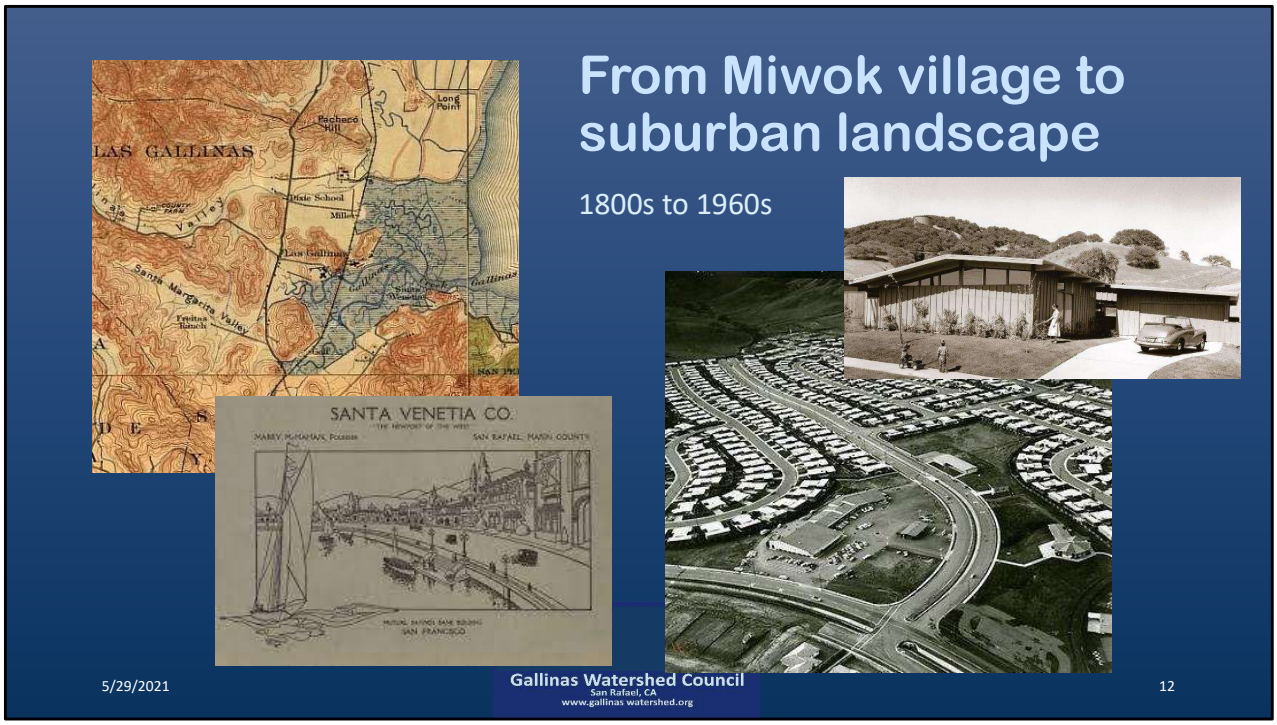
At the Mall, we were very concerned about the idea of additional gas stations and the traffic and potential for water pollution at Northgate, and much less concerned about residential development, but making sure that the development is consistent with the Promenade Plan, restoration of the creek, and preventing stormwater pollution is key.

GWC believes that having improved pedestrian and bike access and the significant aesthetic values of creek restoration and the Promenade would greatly enhance the attraction of the Mall/Town Center to prospective tenants and shoppers.

All new development and re-development should incorporate the **Green Streets** approach.

The "complete streets" approached used in SMART planning and by San Rafael DPW *doesn't* include these considerations. This is a concern.

In addition to green streets, set backs from streams are also needed. The current setback is only 25 ft. This has mainly been a concern for the proposed Northgate Walk, particularly the building to be placed where Gateway Gas is now. This site immediately abuts the creek, and the stream bank is quite steep in that location.



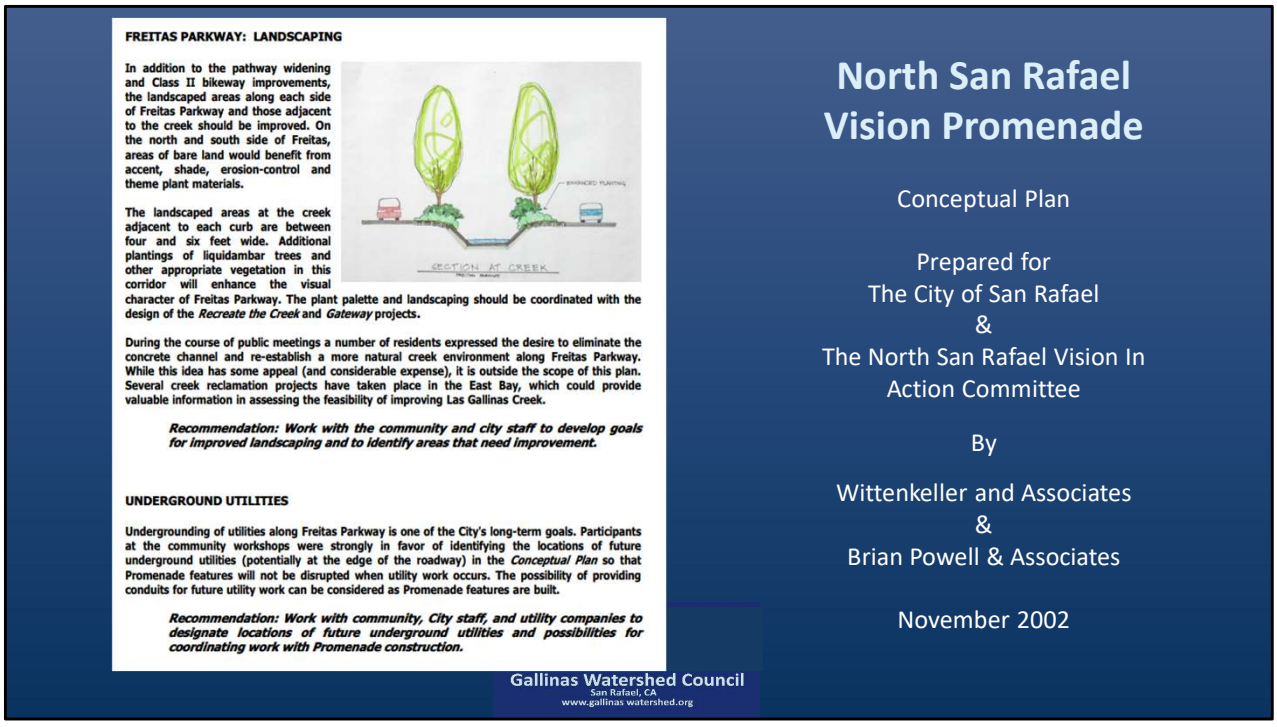
A bit of history:

Miwoks originally lived here.

The first land grant to Europeans came in 1844, and soon after cattle grazing began and altered the landscape.

Terra Linda Eichler homes were developed in the 1950s, and the channelization of the ditch occurred as result of that development. The area was later annexed by the City of San Rafael.

Santa Venetia is built on marshland that was filled in 1914. A “little Venice” plan was the original concept for the area, but abandoned in the 1960s.
Eventually the property was purchased by a developer who erected residential houses that were completed in 1987. Santa Ventia is in the county, and is not part of the City of San Rafael.

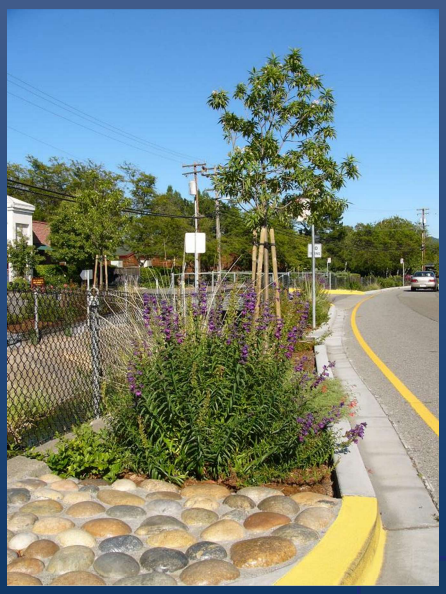


The North San Rafael Vision Plan and Promenade Plan

The North San Rafael Vision Plan called for a greenway connecting the Terra Linda Shopping Center and rec center to the Civic Center with a well landscaped walking and bicycling path.

The Promenade Plan made note of community interest in restoring the creek, but the city considered it "outside the scope of this plan.

The plan did call for improved walkways, bike paths, landscaping, undergrounding of utilities, and other amenities.



Recreate the Creek

2000-2004

The Santa Margarita Neighborhood Association raised over $100,000 and the City matched that amount to landscape along the Santa Margarita Creek.

The City agreed to maintain the landscaping.

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Recreate the Creek was an effort of the Santa Margarita Neighborhood Association (SMNA). This project focused on the Santa Margarita Creek tributary to Gallinas Creek which was channelized into the middle of Del Ganado Road. The Neighborhood raised over $100,000 to be matched by the City of San Rafael to provide improved landscaping of an area that had become an eyesore at the gateway to the Santa Margarita neighborhood.

Note that Las Gallinas Valley Sanitary District donated $7000 to the effort, to support the use of reclaimed water in the landscaping plan.

The neighborhood sought, but did not receive, funds to naturalize the creek channel, and therefore while the project had aesthetic benefits, it didn't have the habitat or water quality benefits originally envisioned. All native vegetation was also proposed. The City installed a combination of native and non-native plants, which has led to some difficulty in maintaining the vegetation, and the City has not done a very good job on maintenance.

SMNA had also asked that the purple pipes be extended under Las Raposas Road., so that reclaimed water would be available to water the next long block where the oleanders are in poor shape, but the City cut this out of the landscaping plan.

GWC formed to connect interested citizens from the upper watershed (Terra Linda) with those working on flooding issues in the lower watershed (Santa Venetia)

GWC has

- Worked with high school students at Marin SEL at TLHS helping with water quality testing, and Worked on the idea of a trash dam for the creek with Marin Academy.
- Spoken before Bd of Supervisors on issues of development in the watershed.
- Helped plant and launch the demonstration floating islands in Civic Center Lagoon
- Promoted public education through displays at the fair, bike tours of the watershed and kayak trips on the creek,
- Made City Council presentations,
- Conducted coastal cleanups,
- Sponsored the “Reflections on Water” art show at the Bay Model and
- Produced a CD of original watershed music by local artists.
- Obtained funds for and sponsored the outdoor classroom at Lucas Valley Elementary.
- Worked with the County watersheds program on studies of the watershed, and
- Served as members of the Steering Committee for the San Rafael General Plan 2040 plan update.

Lets return to the issue of restoring the creek channel in the upper watershed area along Freitas Parkway.

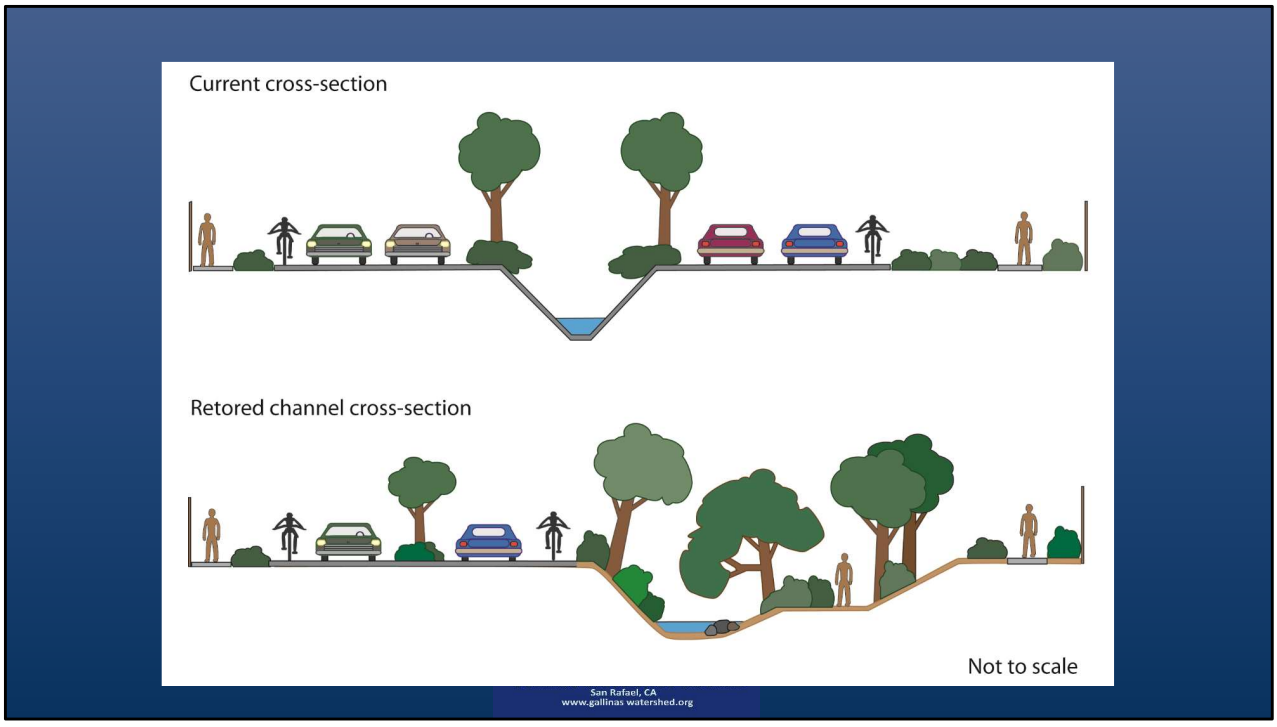
This slide shows the current configuration from the area just west of the intersection of Montecillo Road and Freitas Parkway to the 101 freeway.

- Concrete channel in median of road
- No floodplain area, small pocket parks
- Sidewalks next to road

Important Components of the GWC support restoration approach include

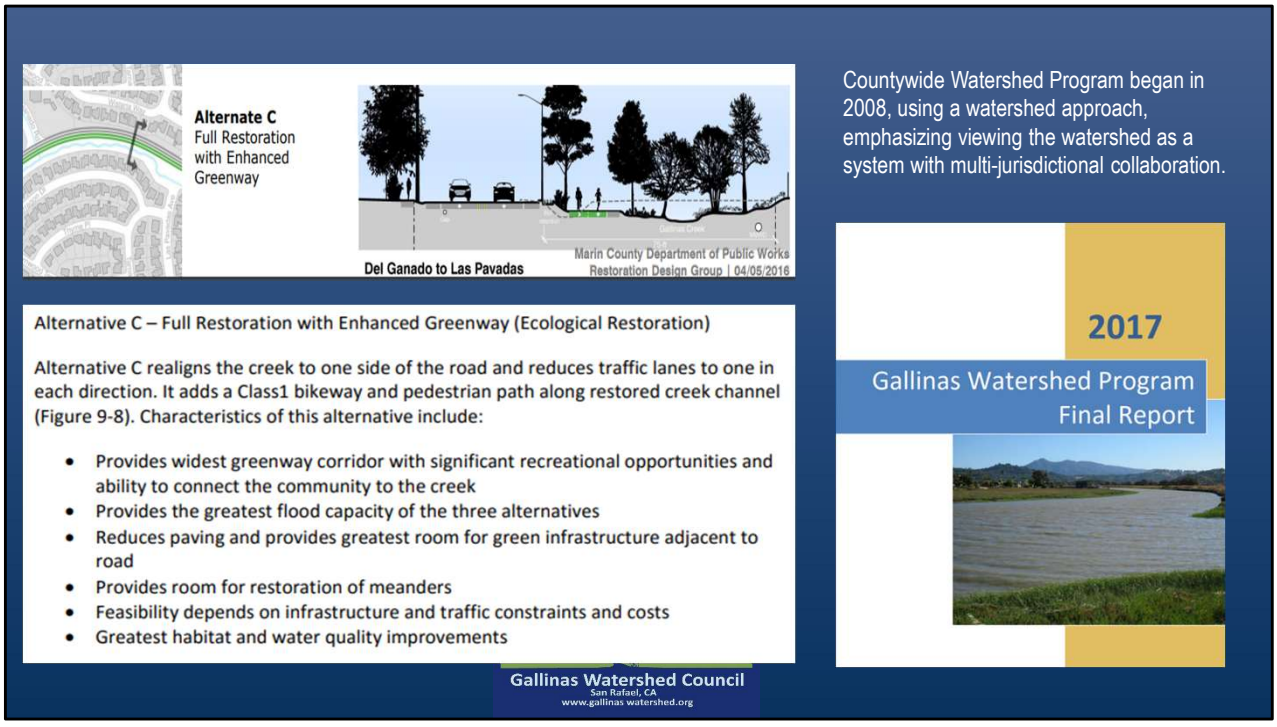
- Channel on one side of road and widens downstream
- Floodplain and park created within existing right of way
- New foot and bike pathway next to channel where space is sufficient

When one actually goes into the stream bed, below the level of the street, one gets the “feel” of walking along a peaceful stream. It would be possible to design a restoration project that included an idyllic walkway along the stream channel below the street level.



This is an illustration of how the cross section of the roadway and creek could be improved, largely within the current right of way.

In addition to restoring habitat, this approach would to provide a beautiful walkway with increased bicycle and pedestrian access, a more pleasant roadway and calmer traffic.



The Marin County Bd of Supervisors authorized the Dept of Public Works to implement a countywide Watershed Program in 2008, using a watershed approach, emphasizing viewing the watershed as a system with multi-jurisdictional collaboration.

County and City worked together on this plan, responding to community comments.

The Gallinas Watershed Program is a collaborative effort of Flood Control Zones No. 6 & 7. County Service Area 6, Las Gallinas Valley Sanitary Dist., and City of San Rafael, partnering with Marin County Dept. of Public Works and Marin County Parks.

One of the reports produced by that program examined Upper Gallinas Creek Restoration Opportunities
https://www.marinwatersheds.org/sites/default/files/2017-05/GWPUpperGallinasCreekRestorationOpportunities_FINAL_12.07.16.pdf

Alternative C aligns with what GWC was proposing and is the alternative we support.

How wonderful it would be to have a restored creek and beautiful greenway along Freitas Parkway!

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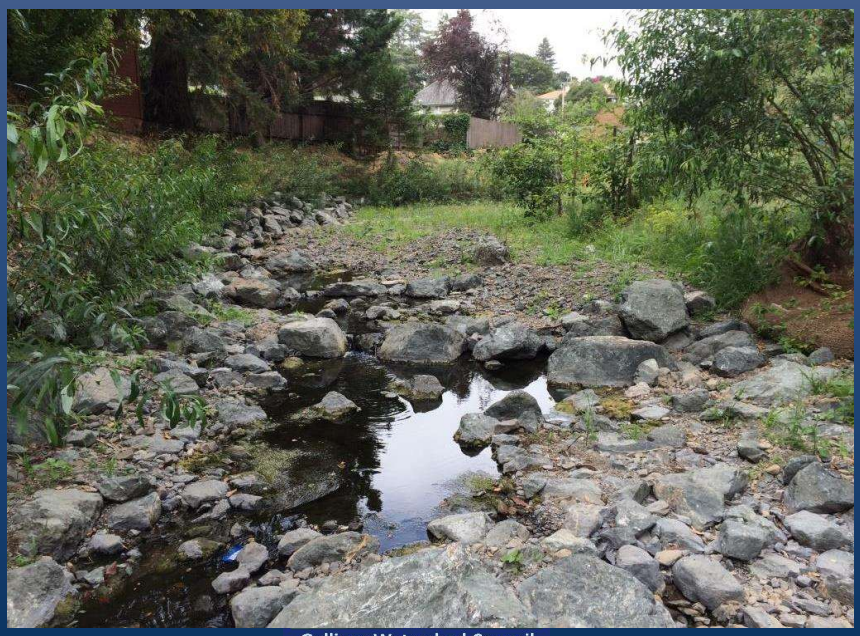
General Plan 2040

Working with the City of San Rafael as part of the Steering Committee for the General Plan 2040 update, GWC representatives were successful in having objectives added to the plan prioritizing the restoration of the Creek. The Plan is nearing final approval.

Now that the City recognizes the value of restoring the Gallinas Creek channel, how can we work to make that happen?



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Some examples of restored urban streams.....*(in ppt slide show the animation loops the next 4 slides)*

Beautification, improved water quality and habitat, calmed traffic, AND enhanced ECONOMIC VALUE

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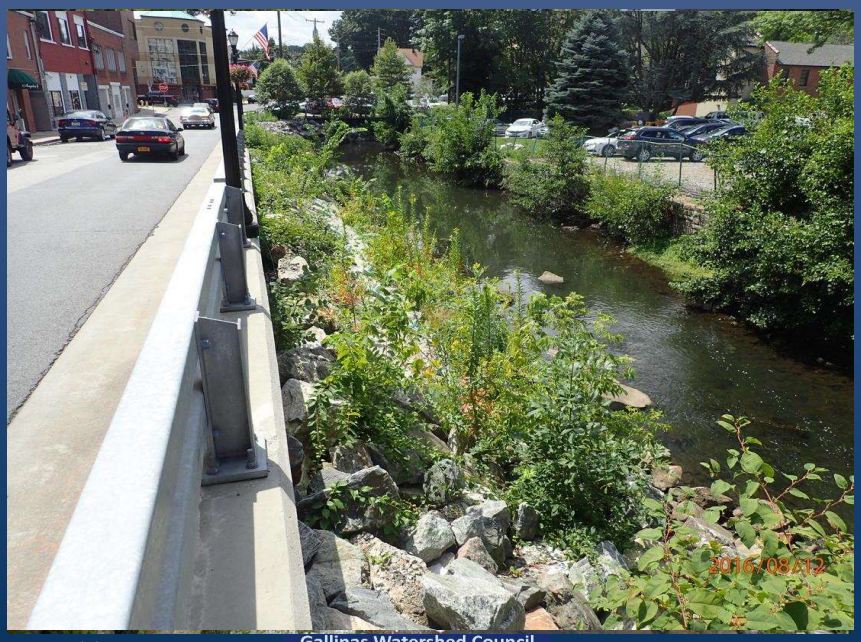

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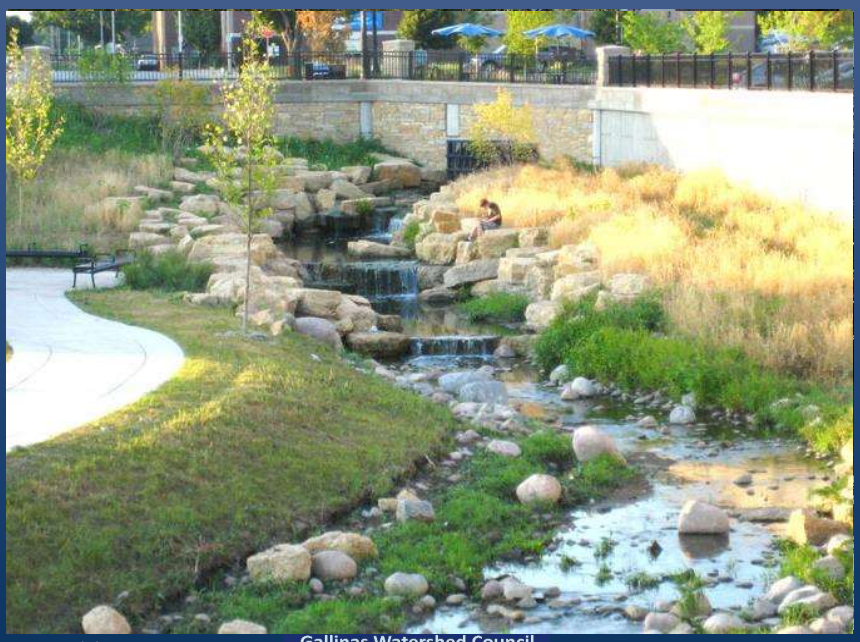

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