

THE WILLOW GLEN NEIGHBORHOOD ASSOCIATION'S
LOS GATOS CREEK URBAN STREAM RESTORATION PROJECT¹

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ABSTRACT: The Willow Glen Neighborhood Association (WGNA) has successfully completed a creek restoration project, having organized members, friends, and neighbors to plant hundreds of native trees and shrubs, and to install a drip irrigation system to help establish the plants. The purpose of the project is to reduce overbank erosion along a half-mile of the Los Gatos Creek in central San Jose, restore a riparian habitat, and create an urban open-space greenway. In the process, we were instrumental in changing state regulations by establishing a precedent for “advance mitigation”, and we also energized our community, helped the city win funds to extend a popular recreational trail, and more.

INTRODUCTION

Members of the Willow Glen Neighborhood Association (WGNA), along with friends and neighbors, planted hundreds of native trees and shrubs to help restore a half-mile section of one side of the Los Gatos Creek in San Jose. The project was funded in large part by a grant from the California Department of Water Resources (DWR), and was cosponsored by Santa Clara County and the Santa Clara Valley Water District (SCVWD).

While the main purpose of the project was to control overbank erosion, it also had numerous important secondary purposes:

- to restore a native riparian habitat;
- to create a public openspace “greenway” or passive linear park;
- to increase awareness of the creek trail system in the city; and
- to change the state regulations that had forced the land to remain barren.

That last item is what made this project so complicated, taking up 2-1/2 years of this three-year project.

This paper will describe the project on three levels: technical, political, and community. But first, some background.

BACKGROUND

The Los Gatos Creek

The Los Gatos Creek runs from the Santa Cruz mountains northward to its confluence with the Guadalupe River in downtown San Jose. The water is controlled by a series of dams, and is

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used by the SCVWD to recharge the underground aquifers by means of a chain of percolation ponds. In the project site, the water often (but not always) flows year round, usually 2' deep, in a 30' deep, steeply-banked channel with highly erodible banks. The channel is relatively new, cut during the flood of 1867 through an orchard—in places, we introduced a native riparian habit rather than restored one. Houses were built on the right bank of the creek decades ago, and townhomes are behind the project site on the other side.

The SCVWD owns the creek, the left bank, and a level, roughly 50' wide, top-of-bank plane behind the townhomes that had once been a walnut orchard. About a decade ago, most of the trees were removed.

The SCVWD kept the lands as a “mitigation reserve”. Regulations had caused them to keep the land barren, so it would remain available for mitigation that would be required as compensation for environmental impacts from future construction projects elsewhere in the valley. The District disced the site annually and sprayed herbicide for fire control. This project then has set a statewide precedent for “advance mitigation”—plant and enjoy the trees now, and then count them later as needed to meet mitigation requirements.

The Los Gatos Creek Trail

The Los Gatos Creek Trail is a beautiful and very popular recreational trail. It is a regional trail, running continuously from the Santa Cruz Mountains, through the towns of Los Gatos and Campbell, to the edge of San Jose. It will eventually join the Guadalupe River Trail in downtown San Jose, and thus connect to the San Francisco Bay Trail. It is enjoyed by upwards of 500 users an hour at times: bicyclists, joggers, skaters, strollers, people with dogs, babies in carriages, and all permutations thereof.

Despite, or actually because of, the trail near the creek, the creek habitat has noticeably improved over the years. The Los Gatos Creek had once been an ignored and unappreciated ditch through an industrial section of town. Now it is the cleanest of streams, free of shopping carts and dumped rubbish, as people don't trash their own playground. A lush riparian habitat has grown up along the creek, especially in the section with busiest trails on both sides. In contrast, the project site, which has remained closed to the public, has had mattresses, shopping carts, disposable diapers, and other trash tossed over the fence and onto the banks.

In 1985, San Jose adopted a Master Plan for its portion of the trail. The Plan calls for the trail to extend through a linear park at the project site. A few parts of the Master Plan have been implemented over the years, but progress seemed to have slowed. One of the purposes of this project was to rejuvenate interest in the Master Plan.

The Willow Glen Neighborhood Association (WGNA)

WGNA was founded 23 years ago to oppose city plans to cut an expressway through the community, but it is not a NIMBY (“not in my back yard”) organization. WGNA has worked to preserve and enhance the community by working with developers and city planners, and has taken a proactive role in combating graffiti and in supporting the revitalization of the local business district. WGNA is one of the largest (~500 member households) and oldest neighborhood associations in San Jose. We have actively supported the Los Gatos Creek Trail for literally decades, and this project gave us an opportunity to do more than just lobby for it.

TECHNICAL DETAILS

The project's purpose is to control overbank erosion. Most of the effort has been in planting native plants on the level top-of-bank plane. This will help retain rain water so as to reduce surface runoff. Some of the plants are at the edge of the bank, so their roots will hold the soil. We plan on doing additional planting this winter, planting willows down at the water's edge. We have also contracted to have an unstable escarpment graded and seeded.

The soil at the project site is clay: hard as a brick during the summer, stickier than peanut butter after winter rains. The SCVWD had used the area to store gravel, so there were numerous rocks remaining even after the piles were removed. As the climate is semi-arid with warm, dry summers, we installed a drip-irrigation system to help establish the plantings. A local construction company donated trenching and augering: digging a 2' deep trench for the water supply line and numerous holes for the plants.

Water is supplied the length of the project via a 1-1/2" diameter PVC supply line. Sprinkler controller wires were placed with the supply line, along with a pair of 10-gage wires. There are automatic valves (and water faucets) located at intervals along this line, from which 3/4" diameter PVC pipes run in the same trench at a depth of about 9". Half-inch drip lines branch off from this spine, with drippers and 1/4" lines for watering the individual plants.

The system incorporates several tricks that seem to have worked. By using the same trench for the supply line and the spine branches, we reduced the amount of trenching needed. The numerous short 1/2" branches are too much work for vandals to find fun or profitable to pull up. And the branch lines also serve to mark the location of the supply line so it can be found under the mulch and groundcover.

The sprinkler controller system is powered by a 50 watt solar panel (roughly 2' by 4') that is mounted on the roof of an informational kiosk. The kiosk houses a voltage regulator, a couple 12 volt lead-acid batteries, and a small DC-AC power inverter.³ A transformer provides the 24 volt AC for the irrigation controllers. The kiosk also serves as a supply cabinet and houses several of the irrigation controllers. Additional controllers are a quarter mile away, inside a plastic case and powered via the 10-gage wires. By running only low-voltage (24 V) power, no special conduits or permits were needed for the underground cables. The solid-state controllers draw negligible power for standby operation, and about a half amp (12 W) to open a valve, quarter amp (6 W) to keep it open. The controllers are synchronized so that only one valve operates at a time.

One other lesson learned: our inverter does not have an accurate frequency generator (it's not exactly 60 Hz), so the clocks of the irrigation controllers drift by several hours a week. This caused a puzzling situation: some plants would suddenly wilt or die for no apparent reason. More confusing: some would recover, meaning that it wasn't soil contaminants, over/under watering, or fungus. We suspect the culprit is the electrical system: the plants would thrive when watered at evening, night, or morning, but once in a while they'd be watered mid afternoons. The water sitting in the black half-inch drip lines on the surface would become scalding hot, stressing those plants that had the drippers aimed directly at them. If the water puddled first and mixed with cooler water, most of the plants were fine. If a stressed plant survived, it would recover when

³ The "Pocket Socket" is more than adequate to run the controllers, but a slightly more powerful inverter could have been handy during the construction and assembly of the kiosk.

watered with cooler water the next week, as the clock would have drifted some more. The solution is to cover the drip lines with mulch to shade the pipes.

The planting list was selected by our consultant, Habitat Restoration Group. We planted a hundred-some oaks (coast live oak and valley oak), which are doing well. We planted over a hundred of each coyote brush and sticky monkey flowers, both of which have thrived. (Some of the sticky monkey flowers were very small when planted and did not survive the transplant, others were scalded. Nursery-stock coyote brush plants have thrived, but the shrubs transplanted from the wild all died.) Ground covers, yerba buena and strawberries, didn't do well at all—they were too exposed. Some maples are doing okay, others were scalded. The buckeye and bay are fine. The willows we planted were too small and too far from the water's edge to survive their first year without irrigation: we will extend a drip line to the bottom of the bank and try again this fall.

POLITICAL

This project was funded mainly by a \$66,500 grant from the California Department of Water Resources. The Urban Stream Restoration grant program is aimed towards neighborhood groups proposing novel flood or erosion-control projects, with the official cosponsorship of one or more official agencies. As the Los Gatos Creek Trail is a regional trail originally proposed by a county supervisor, and lands adjacent to the project site are county, the County was willing to cosponsor our project.

The grants are reimbursed in arrears: the money is first spent, and once an expense is approved, it is then reimbursed. This creates difficulties for a neighborhood association with a relatively modest bank account. Even if we spent our entire capital and we were reimbursed within a month, we would not have been able to spend all of the grant before its three-year ending date. A \$500 cash grant from the California Trails & Greenways Foundation improved the cash-flow situation some. And then the County agreed to be our financial agent as well as our cosponsor, allowing us to have suppliers and contractors bill the county directly without us first fronting the money.

As mentioned above, the project is on land owned by the Santa Clara Valley Water District. The DWR legal department decided that the land-owner also had to officially cosponsor the project. The District has been quite supportive of recreational uses, working with the various local agencies for trails, parks, and open spaces. When we proposed our project, the District was quite supportive, if we could overcome the complications from the mitigation reserve.

We contacted the responsible regulatory agency, the state Department of Fish & Game (F&G). The local agent was disturbed by the interpretation of the regulation, but found upon examination that, yes, the rules to protect the habitat did require that the land be kept barren until mitigation was mandated. We then checked with the regional office and finally the state office, and were told that, while that wasn't the intent of the regulation, that is what it said.

We worked with the SCVWD and the F&G to change the regulation or its interpretation. With support from DWR and others, they worked very hard and came up with the protocol for advance mitigation. The "before value" of the habitat is evaluated. Later, when some construction project somewhere in the valley requires this site for mitigation, the "current value" of the habitat will be evaluated, and some or all of the difference will be used as mitigation for that project. The SCVWD has to reimburse the DWR grant on a prorated basis for the habitat value claimed, either

in cash or in kind. The benefit to the community is that we have a green open space to enjoy now, rather than having to wait an unspecified number of years before the mitigation is mandated.

The process of working out the details of advanced mitigation took nearly two and a half years. The process was complicated by a locking circle: the DWR wouldn't sign the contract until SCVWD formally signed on as cosponsor; SCVWD wouldn't sign until F&G agreed to mitigation credit; F&G wouldn't agree until they had examined plans drawn up by a certified habitat restoration consultant; WGNA couldn't hire the consultant until Santa Clara County would provide funding; and the County wouldn't provide funding until the DWR signed the contract. The circle was finally broken when the F&G agreed to give tentative approval based on preliminary designs we had developed, and then SCVWD agreed to cosponsor the grant while withholding the required permits until final approval from F&G. The designs were drawn, F&G was satisfied and worked out a Memo of Understanding (MOU) with SCVWD, and we received the permits. Now that it's been done once, the advance mitigation process should be easier next time.

This project has received considerable political support. Our grant application had two dozen endorsements, including from neighbors, townhome associations, the local school, our councilmember, recreational and environmental groups, the water district, county supervisors, state congressmembers, and even the National Park Service. We included a petition signed by virtually all of the property owners facing the project site. We met several times with the townhome association board, and kept their management office apprised of the plans and schedules. When we were planting, numerous officials, including County Supervisors and a US Congressman, came out to help, not for photo-ops but to actually plumb and plant.

COMMUNITY

When we won the grant, we made preliminary designs based on the city's original Master Plan, and then held a community meeting to which all interested parties and nearby residents were invited to give comment and input. We arranged with SCVWD to hold a ground-breaking ceremony prior to final overall approval, and received a permit to plant five trees. We had a county supervisor plant one, and a city representative plant another. A SCVWD board member planted a third, the president of the townhomes association a fourth, with the WGNA president planting the last. All the other hundreds of trees had to await final permits, which had to await the MOU on the advanced mitigation.

We kept our membership informed about the project through newsletter articles and presentations at annual meetings. The long wait for approval was difficult on our volunteers—they were anxious to get started. The San Jose Mercury News ran an article on our project when we first won the grant, and another as we began planting. Local weeklies (the Willow Glen Resident and the WG Times) regularly reported on the project's progress. Planting schedules/invitations/status reports were mailed to all on our mailing list.

The DWR grant was for three years from the date of the award, and not the date the contract was finally signed: we had only eight months to design, procure, and install everything. We held our first planting the first week of December '95, then paused for Christmas and the rainy season. Starting in Feb., we held six biweekly plantings, ending on "Earth Day" (April 20th). We developed a 400-name project mailing list, comprised of WGNA members interested in trees or parks, community meeting attendees, adjacent property owners and the townhouse management company, various officials, and all those who had come to previous planting events. People heard

about the project by word-of-mouth: a member of a walking club came one time, and the next time invited a half-dozen colleagues. A kindergarten class came out and planted willow twigs at the water's edge. A member of a high school science club heard about the project and came once, and the next time brought a dozen classmates. We registered our project with the "Keep California Beautiful" program. We also worked with a local group called "ChariTech", which organized an "extraordinary day of community". This last group matched interested volunteers with worthwhile projects, and arranged for two dozen volunteers from a local high-tech company to come help us plumb and plant. All total, 160 different people attended at least one event, and many came to several or most of the events. They are honored members of the "Muddy Hands Club", and all are listed in the program notes that were distributed at the completion ceremony. We gave volunteers souvenir tee shirts, water bottles, and refreshments. Together, we installed a third of a mile of irrigation line, plus probably twice that length in branch lines and drippers. We planted roughly 650 plants. Many died, from the shock of being transplanted, scalding, or just too much sun, but several hundred still grow and thrive. (And they won't be required to be plowed under, either!)

EPILOG

San Jose sought and won a federal grant to construct the Los Gatos Creek Trail through the project site next year. One of the criteria in the competition for funding was the level of community involvement, which we had in spades. The decision board knew of the involvement first-hand as one of the officials had personally planted trees there.

The townhome residents were at first hesitant about any project "in their backyard", but now they are quite supportive: some came out to help, and several have planted trees there in memorial to lost loved ones.

The City of San Jose adopted a "Riparian Corridor Policy" that establishes development setbacks along creeks. During the debate, this project was cited as an example of why stream setbacks are important, showing that not only pristine streams are worth protecting, and that there are groups out there who are willing to help re-establish riparian habitat along anything that isn't paved over. As a result, San Jose now seeks a generous 100' setback from top-of-bank on future developments. The city policy was then used as a model for a similar County policy.

Local officials became even more aware of the interest in the Los Gatos Creek Recreational Trail. What had been a Master Plan collecting dust is now still in force. The winning candidates for City Council and County Supervisor both made it a principal campaign promise to work with one another to finish the trail to downtown during their next term in office.

And this project has enlivened our Neighborhood Association. Our members are more aware of the creek in their back yard.

We ran out of time: we had wanted to do more. For example, we had plans of asking local school children to raise oak seedlings for planting. We were able to extend our project somewhat by signing contracts for future work: the California Conservation Corps will do some grading, the Our City Forest program will plant some trees (and train interested volunteers in urban forestry), and the Youth Science Institute will monitor the quality of the habitat annually for five years. WGNA officially "adopted" the creek through the SCVWD's "Adopt-a-Creek" program, and will be staging regular creek cleanups.

The project has been work, but it's also been interesting and rewarding, and we have something to show for it. We appreciate all the support and assistance we've received, both from the folks at the many agencies and departments involved, and from the community. We all look forward to walking through the trees along the beautiful Los Gatos Creek.



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UPDATE [SEPTEMBER, 2000]

The **City of San Jose**, using local, County, State and Federal funds, built a bridge over to the site and a paved trail the length of the project and up to Meridian Avenue, extending the Los Gatos Creek Trail by 3/4 mile. The City signed a Joint Use Agreement with the SCVWD, allowing them to open the area to the public. The City has also marked a bike lane on Willow Street, as per the Trail Master Plan, extending the trail up to Lincoln Avenue in downtown Willow Glen.

The City is now actively working on the remaining trail segment to downtown San Jose. They have acquired a number of easements and have won a number of grants. They posted a couple requests for "letters of support" on the WGNA electronic bulletin board, and later a representative for one of the grantors said that they'd never in their memory received so many supporting letters for any project in the state.

San Jose is also drafting a "Riparian Restoration Action Plan" to classify the habitat potential along all 136 miles of creeks and streams in the City and to prioritize their restoration.

Santa Clara County has adopted a Countywide Trails Master Plan, incorporating recreational trails along many of the creeks and streams in the valley.

The **Santa Clara Valley Water District** has become more environmentally aware. Their Board of Directors now talk of "land stewardship" and "recreational value", rather than just floods and water supply. They have a bond measure on the ballot this fall, and for the first time it includes a percentage for habitat restoration and creekside trails.

The **Willow Glen Neighborhood Association** continues to be enthused. Membership has grown by 30% in the past four years. We have since then undertaken a tree-planting project in a highway median strip, and we are now looking at possibly doing another planting or habitat-restoration project in the area. At a recent street festival, we displayed a map of the creek trail at our booth, and dozens (hundreds?) of members and other interested people came by to ask about the trail, the creek, and future plans.

And **the habitat** thrives. We ended up having a total of 200 volunteers, 1000 trees and shrubs, and a half mile of irrigation line (plus branch lines and drippers). The irrigation was discontinued year before last, and most of the plants have survived well on their own. Oak trees that were 1'-tall "tube-lings" (grown in pots that look like large test tubes) are now 8-12' tall. Blue elderberry plants are now stands of branches some 15' tall and covered with berries. The coyote brush are balls 8' in diameter, with little bushes sprouting in between those we planted. Grasses and wildflowers fill the area in between. Salmon have returned to the creek to spawn, and birds fly along the creek corridor and live within. People use the trail and keep the area clean: WGNA officially "adopted" the trail and agreed to have cleanups on an as-needed basis, but when we check we often find that there is not so much as a bottlecap on the ground.