Patrick T. Ferraro, Retired Director
Santa Clara valley Water District
351 Brookwood Drive
San Jose, California 95116-2742
E-mail: PTFerraro@aol.com

May 22, 2007

Mr, Daryl Boyd, Principal Planner
City of San Jose
Department of Planning, Building and Code Enforcement
200 East Santa Clara Street
San Jose, CA 95113
Email only to: *darryl.boyd@sanjoseca.gov*

Dear Mr. Boyd:

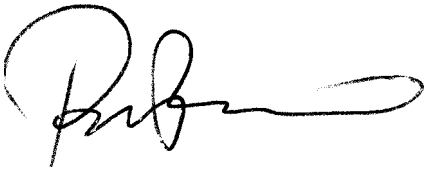
Attached, please find my comments to the Draft Environmental Impact Report on the Coyote Valley Specific Plan.

Thank you for extending the comment period for review of this document. This will allow additional time to coordinate comments between stakeholders.

I would be happy to meet and discuss these comments at any time that is convenient to you, your staff or any of the Council members.

I hope that this planning process will bring the City of San Jose to a policy position that places sustainability and resources protection above any short-term gains that the proposed CVSP might appear to offer. The loss of value of the region's natural resources cannot be justified and the proposed project should be replaced with an expanded open space plan that strives to maintain the quality and quantity of our water resources.

Never Thirst!



Patrick T. Ferraro, Former Director
Santa Clara Valley Water District *(1972-1995)*

Coyote Valley Specific Plan Build-out Environmental Impact Report

Comments on Draft released by the City of San Jose on April 11, 2007

The Draft environmental impact report (DEIR) addresses a myriad of interwoven issues. The ecosystem of the Coyote Valley is addressed from various perspectives in the subject document. I will focus on the water resources in this piece of the greater Coyote Creek Watershed. Since water is a fundamental resource enabling most human and other living activities, the train of impacts on water will be reflected back to every other aspect of concern to us as a community.

A negative impact on water is essentially a lessening of its value to both nature and the economic metrics of the human community. Assessing how a community values its water resources is a challenge that the Santa Clara Valley Water District is constantly measuring. Polls are in progress even during this review period for this DEIR. An existing measure of our community's value of water comes from reading the Water Board's Ends Policies that records their direction for operation of the Water District in order to achieve its mission. These policies should be incorporated into this Final EIR by reference to the SCVWD Website link:
http://www.valleywater.org/About_Us/Board_of_directors/Board_Policies/index.shtm

Protected water resources are more than a local value, as our own use of these resources impacts the state and the nation as a whole. Harming water resources harms the economic sustainability of the region that shares in our communities' natural wealth. Former New Jersey Governor and George W. Bush's head of EPA, Christine Whitman, stated the value quite clearly: ***"Some watershed land must not be developed. It's natural value in buffering, storing, filtering and recharging far exceeds whatever commercial value it may hold****."*

The following review of the Hydrology/Water Quality section of the Coyote Valley DEIR are my opinions alone, and are NOT necessarily the current Water Board's policy or CEO's interpretation, but I would argue that they should be. My comments are made with the intention of providing planners and decision makers with a clearer image of the impacts under discussion, and a stronger sense of the value of the water resources, which can be severely impacted by such a plan were it to be built.

Section 4.8.2 Existing Hydrologic Conditions:
From a hydrologic perspective the "natural" tendency of Coyote Valley is to gather, hold and store water in the ground. If we are to "Design with Nature" (ref: Ian McHarg) we should honor that tendency by protecting the most permeable areas as permanently preserved water shed and providing sufficient and appropriate storm water management to prevent unnatural elevations of groundwater.

Historically High Groundwater Levels Show Coyote Valley Unsuited to High-Density Hardscape Development

The 7000 acres (+/-) of the Coyote Valley are situated directly downstream of 200 square miles of watershed of Coyote Creek, which is somewhat controlled by two dams, named Andersen and Coyote. Together, these two dams can impound up to 115,000 ac.-ft. of runoff water from this portion of the Diablo Mountain Range, located east, southeast and northeast of the Coyote Valley.

In 1982 and 1983, when an El Nino condition gave the Coyote Watershed two back-to-back record (30 inches/year) rainfall years, late storms produced nearly 10,000 cubic feet per second flows over the spillways of the dams. The two years of exceptionally high runoff eventually raised the local groundwater levels to a condition closely resembling a wetland for the entire 10 miles downstream of Andersen Dam. This condition lasted for several years, and, in places today, the groundwater levels continue to be relatively high and close to the surface.

Section 4.8.2.1Coyote Creek/Coyote Canal
In 1950, when the Andersen dam was planned and constructed, the then-current landowners in the Coyote Valley brought suit against the SCVWD's predecessor agency to request relief from anticipated negative impacts of future operational releases through the dam into Coyote Creek for delivery of water to recharge the groundwater basins to the north. The land-owners claimed that high groundwater was already a constraint on using the lands of the Coyote Valley for farming and related uses, and, that additional releases of water into Coyote Creek would exacerbate that situation. While the suit was never litigated in court, the water conservation district constructed an isolated canal above the creek bed to deliver water through the Coyote Valley to groundwater recharge ponds near Metcalf Road and points further north. These ponds are used for augmenting the yield of the Santa Clara groundwater basin. The recharge capacity of these ponds are about 50,000 ac.-ft. per year, nearly half of the current annual draft by all the wells in north Santa Clara County.

Many high tech manufacturing firms, such as Apple Computer held options on much of the lands in the Coyote Valley in the early 1980's. They took heed from this extremely wet two-year event, and relinquished their options and abandoned plans to expand their facilities in the Coyote Valley. Engineers from the City of San Jose met with the Water District staff to explore methods of lowering the water table in the Coyote Valley, but no feasible alternative was ever developed or proposed.

Section 4.8.2.3 Flooding Conditions

Being a relatively flat, porous area, the flooding conditions are somewhat dependent on the groundwater table elevation. When the basin is nearly full or beyond, and the area becomes a wetland, the capacity for the land to store runoff is greatly diminished since less of the rainfall can enter and store in the basin, except when surcharging the Laguna Seca on Fisher Creek. This historic flood detention basin in the northern section of the Coyote Valley received surface flows from Fisher Creek, which nature did not connect to Coyote Creek as it does today. Overflows from the Laguna Seca reached Coyote Creek from sheet flows moving down gradient. Ponding of the waters of Fisher Creek resulted in fine clay deposits in and around the Laguna Seca, sealing off the porous alluvium and contributing to the long-term (sometime multi-year) detention of the floodwaters.

The two dams upstream are operated in a manner that often prevents the runoff of storm events from flowing through Coyote Valley. However, when the dams are both full and spilling, subsequent storms will flow through Coyote Valley and then through south San Jose, then downtown San Jose and finally along Alviso & Milpitas and finally discharges to the South San Francisco Bay. Suddenly, a valley that had virtually no upstream watershed will have 200 square miles, capable of generating five to ten thousand cubic feet per second from a storm dropping only an inch or two of water in the watershed above the dams.

In a winter with heavy rains that last for many months, dam releases or spillway overflows occur for extended periods of time, like the El Nino induced weather patters of 1982 and 1983. In those years, the water table in most of the Coyote Valley reached the ground surface and often above. This condition is not conducive to either growing orchards and vines or urban development and damages from rot would be proportional to the level of development. Damage claims from the '82-83 wet spell were not available, but many high tech companies with options on lands in the Coyote valley cancelled their plans for developing in this narrows. One company that had begun construction was ordered by EPA to cease construction and restore the site because they were in wetlands.

4.8.2.4 Coyote Valley Subbasins/Drainage Patterns &
4.8.2.5 Groundwater Resources

The soil material that constitutes the Coyote Valley is large alluvial gravel, deposited on the top of the bedrock valley during early geologic periods of Coyote Creek. It is these gravel deposits, often shaped into long, twisting lenses, that runoff water can recharge, be transmitted down gradient and then be easily extracted, where needed for human uses.

The Coyote Valley is directly upstream and tributary to the main Santa Clara Groundwater Basin that serves as the de facto largest water reservoir in our county. The Coyote Creek streambed, the adjacent Coyote Valley lands and the downstream percolation ponds combined have the capacity to recharge an average 50,000 ac.-ft. per year into the basin. Currently, 100,000 ac.-ft. per year (90 million gallons per day for one year) of water is produced by public and private pumpers from the main Santa Clara Basin, but well fields are operational, which can extract nearly 200,000 ac.-ft., if, and when, necessary.

In locations where gravel lenses intersect the surface, the SCVWD or its predecessor agency would ordinarily purchase the land and create a recharge pond. These ponds would then be seasonally filled with local runoff stored in reservoirs. After 1965, water imported from the lower Sacramento-San Joaquin Delta through state and federal aqueducts was also delivered to the recharge ponds. The federal San Felipe aqueduct, with a capacity for delivering 150,000 ac.-ft. of Delta water, terminates at the base of Andersen Dam, at the upstream end of Coyote Valley.

Recently adopted stormwater regulations issued by the State of California now require most major new and redevelopment projects to mitigate the impacts of runoff from a "hardened" landscape. One of these impacts is in the form of increased flows from more frequent storms, causing bank erosion and sediment problems. The other impact of major concern is water quality impairment due to pollutant discharge into the creeks and groundwater basin.

The Coyote Valley is of exceptionally high value for recharging, filtering and transmitting surface water that enters the groundwater basin. In order to best protect the water quality and stream bed morphology, a regional urban stormwater plan should be developed as part of the San Jose general planning process to have clear knowledge of stormwater impacts and mitigation costs available for local decision-makers. Within this plan, stormwater treatment and export in an isolated facility should be considered to protect the regional groundwater resources of the County. Such a regional stormwater plans will also

be subject to review and approval of the State Regional Water Quality Control Board and the USEPA, Region 9 Administrator, under the Clean Water Act.

4.8.2.6 Groundwater Quality

Perchlorate: UTC used to operate a rocket test site on lands north of Andersen Lake about 1000 feet from the high water line. Unknown tons of perchlorate were generated during the testing of rockets as large as a Titan missile. These tests used to shake the entire Santa Clara Valley and send a plume of perchlorate and other chemicals for miles throughout the surrounding airsheds and watersheds.

4.8.3 Hydrologic Impacts
4.8.3.1 Thresh hold of significance
The paragraph after the bullets says it all. ***"The proposed project would result in the conversion of land that is currently vacant, fallow or in agricultural production to urban uses, thereby upsetting the existing hydrologic balance in Coyote Valley. Urban uses contain significantly more hardscape which are impermeable and result in an increase in stormwater runoff and less groundwater recharge. Other hydrologic impacts from urbanization include increased water demands and changes in*** **(Read: degrading)** ***water quality"***

4.8.3.2 Flooding Impacts within the Development Area
4.8.3.2.2 Fisher Creek, Coyote Creek
The explanation of the FEMA process documents the perverse process that allows land to be developed in floodways. Our math wizards claim this impact is only 0.8 feet, less than one foot of rise of the flood stage, which is precluded by the National Flood Insurance Act. After using a similar model in 1994, the City of San Jose received similar advice and declared 2000 cfs of discharge from the Evergreen Valley's development would be insignificant when it reached Coyote Creek. Those folks along Coyote Creek who were flooded in 1997 would argue that such large discharges are significant, if not within Coyote Valley, then certainly downstream. Mitigation capacity upstream exists only until the two reservoirs are full. Downstream landowners that receive damage from these increased flows are possibly involved in an inverse taking of their private property rights.

Impact H/WQ-3 The project will cause downstream flooding impacts due to the build out of the CVSP. (SIGNIFICANT IMPACT)

4.8.3.4 Groundwater impacts
From a community perspective, the greatest impact is to the downstream groundwater basin, which would be deprived of 10,000 to 20,000 acre-feet of water that currently flows through the subsurface from the Coyote Valley. What water did manage to escape around the local water pumps, would be degraded with the pollution loading, which enters the water through the new stormwater detention swales and porous pavement in roadways and open parking areas. Water quality in the groundwater in the Coyote Valley will continue to get worse as pollutants recycle through the basin or until connection to the basin for safe potable use is removed as a beneficial use.

Water demand of 22,500 ac.-ft. by the CVSP would use essentially all the storage capacity of the entire Coyote Valley sub-basin, which in some years would be

insufficient. Recycled water plans of the Santa Clara Valley Water District are in early stages of development and cannot be assumed to be available to close the gap in the water balance of the CVSP.

How will the SCVWD know how much water extraction will cause subsidence? Mostly, it is clay deposits that are the type of alluvial deposits to subside. The subsidence occurs when the floodwaters that deposited the clay seeps through it into lower aquifers. This process has been going on for centuries in the area of the Laguna Seca. Since there will be no urban development in this periodic wetland, ground surface subsidence should not be a concern. Any other areas in the Coyote Valley with thick deposits of clay that would be used for urbanscape would be in danger of subsidence.

Impact H/WQ-4: **Groundwater extraction will be a significant impact both within the Coyote Valley and in the downstream connected Santa Clara Basin. Impacts will be to both the quality and quantity of water available. Water in both the Coyote and the down gradient Santa Clara Basin will experience a continuous degradation of water quality. Ten to twenty thousand acre-feet of subsurface inflow to the Santa Clara Basin will be eliminated from the water balance of the northern basin. (SIGNIFICANT IMPACT)**

4.8.3.5 Water Quality Impacts to Surface Waters

All the water quality impacts prescribed for surface waters are potential impacts to the groundwater quality that is connected by the very porous alluvial materials on the creek bottoms and some banks.

4.8.3.8 Impacts from Stream Erosion

There seems to be even less scientific certainty about the impacts to stream erosion than the other impacts discussed in the draft report. If the proposed CVSP is built as described, the stability of all downstream banks and channel bottoms will be impacted due to increased flows. The proposed Fisher Creek realignment may attempt to create a stable channel, but this might not occur due to unforeseen consequences, which is often the case when trying to understand and reproduce complex natural mechanisms like stream geomorphology and riparian ecosystems.

The CVSP downstream erosion impacts on Coyote Creek, all the way to the South Bay, will add to the cumulative impacts of all the hardscape created in the watershed. When critical velocities are exceeded, banks will fail, and sediment transport will increase, changing the cross sections in downstream reaches, thereby reducing channel capacity and/or destroying spawning areas.

Impact H/WQ-9 **Higher flow duration caused by the proposed project will be a significant impact to downstream reaches of Coyote Creek. If implementation of Hydro Modification Plan basins is not feasible in the Coyote Valley, contributions to downstream in-stream improvements would be a futile ongoing and expensive effort for a problem that would exist in perpetuity. (SIGNIFICANT IMPACT)**

4.3.8.9 Dam Failure

While the discussion of Andersen Dam describes the probability of failure of the structure to be extremely remote, no mention is made of the stability of the upstream Coyote Dam. For over a decade, the California Division of Safety of Dams has required the SCVWD to keep the Coyote Reservoir at half full due to the west abutment of the dam being on a massive landslide that could cause the dam to fail when the landslide moved down gradient, as it is certain to do at some time in the future. Keeping the reservoir only half full reduces the risk that failure of the upper dam would cause the failure of Andersen Dam, causing a flood wave that would certainly cause death and destruction all the way to the Bay. Coyote Valley residents and businesses would have the least amount of time to evacuate and would suffer the most casualties if such a catastrophe were to occur.

Impact H/WQ –10: **The failure of Andersen Dam is a managed risk due to the instability of one abutment of the upstream Coyote Dam. Failure of either dam would cause a significant impact on the CVSP and everything downstream to the Bay. (SIGNIFICANT IMPACT)**

4.8.4 Mitigation and Avoidance Measures for Hydrology and Water Quality Impacts

4.8.4.2 Long-term Water Quality Mitigation Measures

This entire section of mitigation/avoidance measures omits the one crucial element by which mitigation can be measured: PERFORMANCE

Without knowing what removal rate of stormwater pollutants entering each type of drainage device, the discussion proceeds as if pollution was not occurring. If performance standards could be in place for each local drainage device, with operational and maintenance budgets secured, better assurance could be made that all these mitigations are maintaining the real value to the water resources of Coyote Creek watershed.

An honest evaluation of this approach would be that it probably would not achieve the satisfactory result of preventing water quality degradation in the Coyote Valley subbasin and the main Santa Clara Basin. Since the State's water policy is based on non-degradation of its water resources, it is doubtful that the San Francisco Bay Regional Water Quality Control Board would permit any stormwater management plan that allowed discharge of any of the usual stormwater detention devises within the unconfined alluvial material in the Coyote Valley or even some distance north of the valley.

The recreation of an isolated conveyance around the valley, like the original Coyote Canal, might be the only safe method of managing stormwater to protect the aquifers in the valley. The Coyote Canal was built by the Water District in 1950 to enable them to transport the water captured in Andersen and Coyote reservoirs through the Coyote valley without losing it all to the groundwater basin, as would be the case if they had used the Coyote Creek bed. Without using the Coyote Canal, the water table in the Coyote Valley would have steadily risen until the basin became a ten-mile long wetlands.

Collecting all the CVSP stormwater in watertight containers and pumping it through a suitable bypass conduit could conceivably be done, but the costs would be enormous and unlikely to be spent.

MM H/WQ 1.0.0.0 **Withdraw the proposed CVSP as an urbanization proposal and begin to fund and transfer the development rights to a local public open space agency. If agricultural leases are granted by the agency, organic and sustainable farming only will be allowed by actual family farmers, marketing all produce for consumption within the state.**