GUADALUPE - COYOTE
RESOURCE CONSERVATION DISTRICT

888 NORTH FIRST STREET RM. 204, SAN JOSE, CA 95112-6314
OFFICE (408) 288-5888 FAX (408) 993-8798 email: gcrcd@pacbell.net

June 22, 2007

Mr. Darryl Boyd
Department of Planning, Building & Code Enforcement
200 East Santa Clara Street
San Jose, CA 95113-1905

Subject: Draft Environmental Impact Report for Coyote Valley Specific Plan, File No. GP 06-02-04 (SCH# 2005062017)

Dear Mr. Boyd,

Attached are the Guadalupe Coyote Resource Conservation District's comments on the subject DEIR. Thank you for extending the time period for review and comment on this important document.

Cordially,

Lawrence Johmann

Lawrence M. Johmann, P.E.

June 22, 2007

COYOTE VALLEY SPECIFIC PLAN
Draft EIR Comments

The Guadalupe Coyote Resource Conservation District (GCRCD) has reviewed the subject document and has many questions, concerns and comments. We found parts of the document to contain many misleading, illogical, conflicting and/or inaccurate statements and to be woefully inadequate, as many critical issues are not addressed and not enough information is provided on many of the topics that are discussed. We request that all of our comments be addressed, that all misleading, inaccurate and conflicting statements be corrected and that more information be provided in the areas where issues are not addressed or there is insufficient information to adequately cover the topic. Our detailed comments, concerns and questions are provided below:

GENERAL

San Jose has been blessed with two outstanding resources, the Guadalupe and Coyote Rivers. These two resources were the very reason that the Spanish decided to establish their 1st pueblo in California in San Jose, between these two perennial flowing waterways. According to historic accountings the rivers provided the area with the most abundant amount of fresh water the explorers had observed in their excursions from Mexico to San Francisco. (Neve to Bucareli, Monterey, June 6, 1777, Archivo General de Indias, Guadalajara, 515).

Unfortunately, over the years, both the Guadalupe and Coyote Rivers have been severely degraded by all sorts of human impacts. These impacts include massive water impoundments and diversions, destruction of riparian areas, channelization and construction all along and right next to the top of their banks. Fortunately, the Coyote River the longest waterway and largest watershed in the County, now classified as a creek on most maps, has faired much better than the Guadalupe. The upper segments of Coyote Creek are still natural, the mid section is still in a quasi rural area and there are numerous parks all along the valley floor portions of the creek. With some exceptions in the downtown area, Coyote Creek still has a fair amount of wiggle room to function in a more natural manner, if only it was permitted to do so. The destruction of the Guadalupe River and the problems it has caused has been well documented. Although hundreds of millions of dollars have been spent on trying to tame and control the Guadalupe River, the risk of damaging flooding is as high as ever. In the early 1990's a battle was commenced to preserve the little remaining quasi natural habitat along the Guadalupe and to force the rehabilitation of as much of this lost resource as possible. This battle has been exceedingly costly to date and it is far from over. Authorities cannot permit Coyote Creek to suffer the same fate as the Guadalupe, to do so would be totally irresponsible and negligent. The costs of attempting to tame the Guadalupe and the efforts to protect and rehabilitate it will be pale by comparison to the costs associated with attempts to control and protect the Coyote. If San Jose is to remain a sustainable and desirable place to live, we must all learn to live in harmony with nature and our environment and not build on or pave environmentally sensitive areas.

The Coyote Creek corridor is one of the most environmentally sensitive and important areas in Santa Clara County. Creeks and creek corridors provide essential habitat for native birds and wildlife and properly functioning creek channels are essential for native aquatic species and they provide humans with clean water and associated beneficial uses. We have one last chance to get it right and provide Coyote Creek with a fair and essential amount of needed protection upstream of Coyote Narrows, in the proposed project area. It is critical that no further development be permitted from the outer west side of the creek's riparian zone to Monterey Hwy. This entire area is either in the creek's natural flow regime flood zone or its flood hazard zone, so any development in this area will likely be flooded in moderate and high flow storm events. Filling in this floodplain or flood hazard area, as the CVSP proposes, to permit development is contrary to prudent watershed management. It is contrary to Santa Clara County's Water Resource Protection Collaborative's Guidelines and Standards (G&S III. Encroachment Between the Top of Bank), contrary to the Santa Clara Basin Watershed Management Initiative's Watershed Action Plan (Chapter 8, Preserving and Enhancing Stream Function), which addresses protecting floodplains, and contrary to San Clara County's Habitat Conservation Plan/Natural Community Conservation Plan goals. It is also contrary to a San Francisco RWQCB Watershed Protection Initiative and a draft San Francisco Bay Basin Plan amendment, which will require better protection of stream floodplains and proper channel function.

The Santa Clara County Parks Dept. is in the process of improving and expanding its Coyote Creek Parkway Park, which runs along the proposed project area. From maps provided in the CVSP DEIR and Coyote Creek Parkway Master Plan it seems like some of the proposed development will be inside the Park's management zone, which will likely cause conflicts and development right next to Park boundaries will detract from the park environment. In addition, the CVSP proposes to construct two new Hwy 101 interchanges with arterial routes crossing Coyote Creek and Parkway Park land. It also proposes to realign the northbound lanes of Monterey Road using Park land according to the Parkway Master Plan. This will have negative impacts on both the creek and the park!

No development should be permitted in the Laguna Seca Area. This is a natural wetland and a flood flow retention area for both Fisher and Coyote Creeks. It is an area that provides a significant degree of "natural flood protection" for the downtown San Jose area, as it has the ability to capture peak flood flows and thus lower the peak storm flow hydrograph. A higher post development hydrograph would threaten San Jose more today than ever before, since improper flow and land management along Coyote Creek in the downtown area over the years has resulted in a reduction in the creek's channel and corridor size and capacity. Laguna Seca is also a unique environmental jewel. The Coyote Creek Watershed Historical Ecology Study, performed by the San Francisco Estuary Institute, May 2006 states: "In Coyote Valley, Laguna Seca offers a rare opportunity to restore natural wetland functions and a diverse wetland habitat mosaic. Laguna Seca restoration would link to existing buffers and have regional significance as a large, natural, valley floor wetland. Successful wetland restoration at Laguna Seca could support a wide range of valued species, including rare plants, amphibians and water birds." The report contains numerous historic photos of the wetland and indicates that it covered at least 1000 acres. Water in Laguna Seca was used for irrigation as early as 1830 when a canal was built to route flows north around Tulare Hill through the Coyote Narrows. In 1916 a large canal was built to drain the Laguna. The report states: "that the water in the lake was between 4 and 5 ft deep prior to the project" and photos show this to be the case. In the 1960's there was still another project to drain the area but despite the construction of extensive drainage systems, groundwater seepage still supports surface water, even during the summer months and an accompanying photo shows this. Development in a natural and persistent wetland and flood flow retention area is contrary to common sense and cannot be justified. Planning to use as small portion of this area as a runoff detention area for the building of a new city in the remained of the area, which will provide more than double the amount of flash runoff is contrary to logic and common sense.

4.6 BIOLOGICAL RESOURCES

4.6.2 Existing Biological Resources

This section of the DEIR addresses the different types of habitats in the CVSP area but it doesn't acknowledge the importance of the Laguna Seca Wetland and flood retention area. Despite all attempts to drain the area over the years a portion of it still retains its wetlands characteristics during the wet months and even during a portion of the drier months, ref. the above discussion and the Coyote Creek Watershed Historical Ecology Study and photos.

The DEIR talks about the wildlife movement corridors. It states that: "although some north-south movement within the CVSP area may enable access to other undeveloped areas on the east and west sides of the valley, these developed areas prevent the CVSP area from functioning as a significant north-south wildlife corridor on a regional scale." This makes no sense and appears to be double talk. The Coyote Creek corridor is fairly intact from the upper watershed area to the downtown area in the vicinity of William St. although it is far too narrow in some places. It does provide a minimal and essential corridor for the north-south movement of wildlife. About the only available east-west wildlife movement areas left in the Santa Clara County area are in the proposed project area. The area serves as a critical east-west linkage between the Santa Cruz Mountains and the Diablo, Mt. Hamilton Range. The DEIR correctly indicates that Hwy 101 and Monterey Road pose major barriers to east-west migration in the area and it references a Fig. 4.6-4 map, which is a tree survey map. The Migration Barrier Map is actually Fig. 4.6-18. It clearly shows the barriers posed by the major highways but it also shows the potential passages. It is known that some of these passages are being used today but they need to be significantly improved. It clearly shows that the most open space for migration lies between the Santa Teresa and Tulare Hills to the north and Palm Ave. to the south, the heart of the proposed CVSP development zone.

The map clearly shows the area the CVSP is calling a Greenbelt buffer area, south of Palm Ave. between the proposed project and the City of Morgan Hill, at least to the west of Monterey Hwy., is far more developed than the areas to the north, where the major development is slated to take place. How can an area that already has a fair amount of development be legitimately classified as a Greenbelt area or buffer zone?

The DEIR address some barriers to anadromous fish passage but it does not state that there are many undersized road/trail crossing culverts or that the entire length of Coyote Creek in the project area is or should be prime spawning and rearing habitat for salmonids. It is not merely a migration corridor! It does not state that channel instability has severely degraded salmonid habitat over the years and that the planned development will cause further degradation of the creek and salmonid habitat. It states: "there is often no difference between core habitat areas and movement corridors for fully aquatic species." Most often there are significant and critical differences. Anadromous fish can migrate through very inhospitable areas that provide no habitat but they need good habitat to survive and reproduce. Because of all the urbanization and channel degradation in the lower part of Coyote Creek, along with excessive water diversions and the construction of dams blocking access to the upper parts of the creek, the only viable spawning and rearing habitat left for the fish are the few segments upstream of Coyote Narrows not impacted by culverts, bridges and instream pond areas. The fish have already lost over 85 percent of what was once was prime habitat, so the loss of even fraction of what is left will have a significant negative impact on the fish.

4.6.4.1 Mitigation for Impacts to Biological Resources

Mitigation Measures for Impacts to Wetland and Open Water Communities

The DEIR states that on-site creation of wetlands at a 1:1 (replacement:impact) ratio shall be required as part of the CVSP RMP. How will this be possible? The Laguna Seca area once encompassed over 1000 acres and all efforts to drain it have been less than successful. At least portions of it are still wet most of the time and it still retains its flood water retention characteristics. If over 3000 rural acres will be turned into urban useage by the project, where will the new wetland areas be created to replace what I being lost, which will accommodate and retain much higher flood waters?

Mitigation Measures for Impacts to Riparian Communities

The DEIR states that mitigation for impacts to riparian habitat at a minimum of a 1:1 ratio for restoration impacts and 3:1 for development impacts shall be required as part of the CVSP. What is a restoration impact? It states if all necessary riparian mitigation cannot be accomplished within the CVSP area, impacted riparian habitat will be replaced at a 4:1 ratio in an off-site preserve. This is useless with respect to creek stability, water quality and other water based beneficial use issues. It is useless for fish and aquatic species that depend on a properly functioning riparian corridor to provide shade and hide cover and food sources. Fish and aquatic species can't just move to an off-site preserve area.

4.6.4.3 Mitigation for Impacts to Special Status Species

Mitigation Measures for Impacts to Central California Coastal Steelhead

The DEIR talks about what will be done during construction to mitigate impacts, as a result of two Highway 101 connections. It does not discuss the permanent negative impacts these connections would have on proper creek function in the area. It does not address what negative impacts the loss of riparian vegetation would have on water quality or salmonid fish habitat as a result of the connections. It states that work shall be performed between July and October, when migrating and spawning adults are not present. While migrating and spawning adult steelhead may not be present in the months cited, adult and juvenile steelhead living, holding or rearing in the area may be present. Steelhead and other native fish have been documented living in the project area.

The DEIR does not address the possible presence of Chinook salmon in the project area. Adult migrating salmon may also be present in the system anytime after mid August and spawning salmon may occur anytime after mid September until January. Juvenile and out-migrating salmon may be found in the creek anytime from February through June.

4.6.4.5 Mitigation for Impacts to Wildlife Movement

The DEIR states: the project shall include appropriate measures to facilitate wildlife movement through the CVSP area. It subsequently uses all kinds of weasel words to indicate what could be done. Examples include: "facilities **should, where possible**, remove existing obstacles to wildlife movement, incorporate design elements to promote, **where possible**, wildlife movement through the Tulare Hill area and the Greenbelt, improvements and modifications, **can include** enlargement of culverts, etc. Even if all of the above measures were incorporated, the DEIR does not address the severity of the impact the proposed project will have on east-west migration, as urban development will encompass most of the entire area that is now most open to migration.

The DEIR states: the project shall include a minimum 100-foot buffer on either side of Coyote Creek and Fisher creek that will be maintained with natural vegetation to promote the movement of wildlife along the creek. This statement is very vague. What are the creek side boundaries of the buffer? According to San Jose's Riparian Corridor Policy, there needs to be a 100 foot setback from the outer edge of the riparian zone, not the edge of the creek. This policy was instituted, as a minimum requirement for the urban San Jose area. A one hundred foot buffer is a bare minimum to proved limited habitat but it is not adequate to serve as a migration corridor. Because Coyote Creek is still rural in the project area, the creek channel is unstable and perched above its westerly floodplain, is grossly undersized, as a result of excessive water diversions and is in a park setting, a minimum setback of 300 feet from the outer edge of the riparian zone should be required, especially along the western, downslope side of the corridor. This is more in line with County stream protection buffer zone policies and the minimum buffer zone distance recommended by most scientific studies on adequate riparian zones and buffers.

4.6.5 Conclusions Regarding Impacts to Biological Resources

Impact BIO-2

The DEIR states that the proposed project would result in the loss of Approx.163 acres of wetlands, streams and ponds but the planned mitigation measures described would reduce the impacts to a less than significant level.

As stated in 4.6.2 above, the DEIR does not satisfactorily address the loss of a major segment of the extensive Laguna Seca wetland and flood retention area. It does not address the environmental significance of this area. The mitigation measures it does describe will not even come close to reducing the impacts the proposed CVSP project will have on wetlands. This impact should be listed as a **[Very Significant Impact].**

Impact BIO-5

The DEIR states that approximately 28 acres of riparian habitat would be impacted by the proposed project but planned mitigation would reduce these impacts to a less than significant level.

As pointed out in 4.6.2 above, the proposed mitigation will not reduce the impacts the loss of riparian vegetation would have on stream stability, water quality and native fish and aquatic species. This impact should be listed as a **[Significant Impact].**

Impact BIO-9

The DEIR states the proposed construction of two bridges over Coyote Creek would result in significant short and long term impacts to steelhead but the planned mitigation measures described would reduce these impacts to a less than significant level.

As stated in 4.6.4.3 above, the proposed mitigation does not address the resident fish, it does not address the permanent impacts the loss of riparian vegetation would have on proper channel function, water quality and fish habitat. It does not address how the described activities will impact Chinook salmon or what will be done to protect them. This impact should be listed as a **[Significant Impact].**

Impact BIO-26

The DEIR states: "the proposed project **could not** result in significant impacts to existing terrestrial wildlife migration routes and planned mitigation measures would reduce these impacts to less than significant."

If the proposed project could not result in significant impacts to wildlife migration why is mitigation necessary? The fact is the proposed project plans to construct a city urban environment in a very large portion of the only remaining rural area that can be used by wildlife to migrate from the Santa Cruz Mountains to the Mt. Hamilton Range. How could it not have a major impact? As discussed in 4.6.4.5 above, the proposed mitigation does not state what will be done to mitigate for the impacts of the proposed project and to guarantee that useful east-west migration corridors are maintained for wildlife. This impact should be listed as a **[Very Significant Impact].**

4.7 GEOLOGY

4.7.1.3 Seismicity and Seismic hazards Conditions within the CVSP Area

The DEIR states and map, Fig 4.7-2, shows various faults in the project area. The map shows the Shannon Fault running diagonally right through the center of the urban reserve area. Map 4.7-3 shows that most of the proposed project area to also be in a moderate to very high susceptibility area for ground liquefaction. It is known that wet unconsolidated soils are more subject to liquefaction. The DEIR points out that Coyote Valley is a primary water storage area, with a very high water table, that runs close to the surface. History tell us that most of the northern part of the valley was a wetland and despite all efforts to drain the area it still is quite saturated in all but the driest periods. In view of this, it is hard to believe that the entire area is not even more susceptible to liquefaction than is indicated by the map.

The DEIR indicates that all of the potential negative impacts that could be caused by shaking, ground rupture or landslides would be addressed by mitigation measures, so the impacts caused by these events would be less than significant. It does not address the problems that could be caused by liquefaction. It sure doesn't make any sense to plan to construct multi story buildings in an area that is highly susceptible to rupture or severe shaking.

The DEIR does not address the problems that are sure to arise regarding the construction of large multi story buildings, as the project proposes in an a wetland area or in an area where the ground water table is very close to the surface.

4.8 HYDROLOGY AND WATER QUALITY

Hydromodification Management Plan

The Draft EIR states that the size and location of the CSVP project renders it subject to the requirements of the HMP Policy. It states that; "the control theory behind the HMP is that downstream watercourses will not undergo any additional increased erosion potential if the 'flow-duration' curve of stormwater runoff from the site is identical to the curve under existing conditions." It also states: "the HMP standard is met if either the stream channel is determined to be geomorphologically stable or if post project stormwater discharge rates and durations match pre-project discharge rates and durations from 10% of the pre-project two-year flow up to the pre-project 10-year peak flow." There are major flaws in the above theories. Present flow management on Coyote Creek is causing severe channel instability, so even if the proposed project's runoff from the site is identical to existing conditions, instability will continue. The existing condition flows are severely restricted and the 2 and 10 year flows are only a fraction of what they historically were or what they should be to maintain a properly functioning channel. If significantly better flow management is not instituted on Coyote Creek, channel degradation will continue along with the increasing potential for severe out of corridor flooding. The DEIR never addresses the above HMP issues in detail. It does not address how the entire flow regime in Coyote Creek will be impacted in the proposed project area, as well as downstream.

4.8.2 Existing Hydrologic Conditions

The DEIR states "As it flows through the CVSP Area, Coyote Creek is an incised natural channel of sands and gravels that is somewhat perched above its westerly floodplain. In its present form, the creek is able to contain the majority of its discharge, even under estimated 100-year flooding conditions." While the creek is generally perched above its westerly floodplain, it does not and cannot contain the majority of its high flow discharge. A stable "natural creek channel" will only contain about a 1-year storm flow. Even most incised channels will not contain moderate size flows. Most natural creeks flood on average at least once a year, (water exceeds the active channel's capacity and begins to overflow onto the creek's floodplain). In order for most streams to have any chance of being stable, flows above a properly dimensioned bankfull channel elevation must be able to access some sort of floodplain. Flooding serves to control or buffer what would otherwise be the rapidly increasing depth, velocity and shear stress in a confined channel, which causes excessive erosion. Many sections of the Coyote Creek corridor (the active channel and floodplain width at twice the bankfull depth) will not even contain a 20-year flood for reasons discussed in the following paragraphs. The most recent example is the out of corridor flooding and resulting residential, road and property damage caused along the creek by the January 1997 storms, which were only moderately sized. The January 25-26, 1997 storm only generated about 2.8 inches of rain in a 72 hour period, although another storm several days earlier also produced a little over two inches of rainfall. Stream gage records show that the peak flow produced was about 6,280 cfs, which is only a moderate flow.

Since the creek is perched above its westerly floodplain and the land slopes to the northwest, more prominently towards the Coyote Narrows, Coyote Creek's out of corridor flood flows, especially downstream of Ogier Ponds, will spread out in the northwesterly direction. Monterey Highway and/or the railroad tracks will likely prevent the northwest migration of the flows but they will pass through any openings or low areas in the highway/railroad, such as at intersections, and then will likely be captured by Fisher Creek. Eventually they will reach the Laguna Seca area where they will be retained for some period. Laguna Seca was a seasonal wetland that provided a large natural floodwater retention area and thus significantly reduced the downstream flood damage potential on Coyote Creek, in moderate and large storm events. Pre dam gage station records from the Madrone gage, just upstream of the project area, and the Edenvale gage, downstream of the project area, shows high flows at Edenvale to usually be several thousand cfs lower than at the Madrone gage. Flows normally increase with the size of the drainage area, not decrease, unless there is significant out of corridor flooding and flood water retention. Since the Coyote Creek corridor cannot contain large stormwater flows, especially downstream of the Ogier pond area, high flows would have escaped the corridor and flowed northwest, downslope toward Laguna Seca. This would explain the lower peak flow readings at the Edenvale gage. Although there have been several attempts to drain it over the years, the Laguna Seca area still becomes a true wetland in wet years and provides natural flood protection for downtown San Jose. Appendix J of the DEIR states that the long term average spring condition shows groundwater to be at the surface (0 depth) in Laguna Seca.

All natural creeks tend to meander across their floodplain, depositing their sediment as they go. This is the process that constructed Coyote Valley and its sub-basin, as the DEIR points out. Since the creek is perched above its westerly floodplain and that floodplain slopes down to the west, towards Fisher Creek through the project area, Coyote Creek will tend to migrate in that direction over time. There is evidence that this is happening based on channel locations shown on historic maps and today's maps. This process may be accelerated in the future, as the Diablo Hills, which Coyote Creek runs along, are in an active geological area and they are still being uplifted by plate tectonic activity, (Ref. D. Sloan, Geology of the San Francisco Bay Region, 2006). As the hills are pushed upward, Coyote Creek is more likely to migrate to the west, down-slope, and into the project area and its overflows will surely continue to flow to the northwest, into the proposed project area.

The DEIR states that the "SCVWD does not list this reach of Coyote Creek as one prone to streambed degradation." While this statement may be true, the notion that the creek is not subject to degradation in the area is contrary to fact. It is very obvious to any observer with a basic knowledge of how streams function, that most sections of Coyote creek, down through the project area, are very unstable. In most areas the stream is degrading but in some areas it is temporarily aggrading. In other areas it alternately degrades and aggrades at different times, as it migrates and changes configuration trying to reach stability, ref. Attachment I photos. Unfortunately the creek has virtually no chance of reaching stability due to extensive human impacts, which began at least several hundred years ago and are still continuing today. For at least the past 75 years, the creek has been deprived of the flows needed to maintain a stable channel. Flows have been severely mismanaged with little or no consideration given to the creek's health or for maintaining proper stream function.

The primary purposes of streams are to carry water and sediment from the higher elevations of the watershed to its lower elevations. Nature constructs creek channels to transport that amount of water and sediment supplied to them by their watersheds in the most efficient manner possible. Channel and corridor width and depth are largely determined by the amount of water and size and quantity of sediment carried at that particular location in the watershed. The type of valley, its geology, vegetation and slope also play a large roll in stream channel formation. Natural streams meander across valley floors depositing sediment and creating fertile land and building gravel beds, which then serve as underground water storage areas. This process helped form both the Coyote and Santa Clara Valleys and their sub-basins.

Historic accountings tell us that area natives used to live near streams. They lived in structures made of vegetation, which were not long lasting. At least the framework for the structures was most often made from willow cuttings, which are easily bent to form the structure's curved shape. When the structure started to deteriorate or became too dirty they simply moved and built a new structure in a different location. Entire villages would often relocate at least several times a year. Villages would be situated near a stream's active channel in dry months and would then move to higher ground in the wet months, to avoid being washed away. Historical accountings also indicate natives used fire for cooking, as well as land/vegetation management. It is well documented that riparian vegetation removal can significantly destabilize a stream, so it is likely that natives had a negative impact on area streams well before European settlers arrived.

Historic records also tell us that the Spanish selected San Jose as the location for the 1st Pueblo in California because the area had an abundant supply of water The accountings state that the first thing the Spanish settlers did when they arrived in the area was to dam and divert area streams to obtain water for their use. They did this even before they constructed their own housing. The accountings tell how the pueblo had to be moved several times, as it was built too close to the Guadalupe River and flooded.

As the area population grew, so did the negative impacts on streams. Trees were removed for structural use and fuel for cooking and heating. Land was cleared for farming right up to stream banks, extensive cattle and sheep grazing destroyed riparian vegetation and animals trampled stream beds and banks. Many roads crossed streams without bridges (low flow crossings) and when bridges were built they were almost always undersized. There were a lot of in-stream gravel and sand mining operations and the number of stream diversions increased. There was extensive agriculture in the project area in the mid 1800's and by the late 1800's there were orchards throughout the entire area as irrigation was readily available. By the late 1800's most area streams including the Coyote River and its tributaries were unstable and degrading. Because creek channels were being modified, moved/straightened, their riparian vegetation removed and there were extensive water diversions, many of the streams dried out during the summer months. Subsequently ground water was tapped and when it stopped freely flowing, it was pumped. So much ground water was used and wasted that the land actually subsided, up to 14 feet in some areas of downtown San Jose. More bridges and culverts were built to replace the low flow crossings but they were also undersized and pinched the streams. All these activities had enormous negative impacts on our streams and caused them to degrade, downcut and headcut. More stream segments were armored, straightened, rerouted or filled in to some degree in an attempt to gain more useable land for development. This further impacted the streams and the negative impacts from all of the above practices are still being felt today all along our streams, including the proposed project area.

The construction of the Coyote and Anderson Reservoir's and the subsequent mismanagement of water flows have likely caused the largest negative impacts to the creek in the project area. Since the reservoirs, especially Anderson Reservoir, have been built, Coyote Creek has been deprived of the water and sediment nature constructed it to transport. As a result, the channel has decreased in size and is continuing to do so. This trend will only continue into the future unless corrective measures are taken to reverse the actions causing these problems. Because the sediment the creek needs to transport is being trapped by the reservoirs and is no longer available downstream of the reservoirs, the water flowing below them is sediment hungry. The creek, therefore, actively seeks to pick up sediment and does so via bed and bank erosion. Because the sediment being moved out of the area is not replaced by new sediment, which is trapped above the dams, the creek channel is degrading. Any one can clearly see evidence of this just by looking at the eroding creek channel below Anderson Reservoir, ref. Attachment I, 1st 3 photos.

Fortunately there are two long time stream gage stations along Coyote Creek near the project area. The Madrone gage, not too far upstream of the project area, has been in operation since 1903 and the Edenvale gage has been in operation, not far downstream of the project area, since 1917. Analysis of the Madrone gage data from 1903 to 1950, prior to construction of Anderson Dam, shows that the bankfull flow of the creek to be about 2000 cfs (the creek constructed its active channel to carry a flow of about 2,000 cfs before it would flood). In order to carry a 2,000 cfs flow, while remaining relatively stable, a channel cross section of about 400 ft^2 (about 80 ft. wide and 5 ft. deep) would be needed. Analysis of the Madrone gage data from 1903 to 2006 shows that the bankfull flow to be about 180 cfs. A channel cross section of about 40 to 50 ft^2 would be needed to carry this flow. The significant reduction in the gage projected bankfull flow is a direct result of the detention of high flows by Anderson Dam. Analysis of the Madrone gage data from 1951 to 2006 shows that the bankfull flow, using only post dam data is about 90 cfs. A channel cross-section of less than 25 ft^2 (20 ft wide and 1.2 ft deep) would be necessary to contain this bankfull flow. Analysis of the Edenvale gage data shows even lower peak and bankfull flows, although the station monitors a 33 mi^2 larger drainage area. The lower readings downstream are almost assuredly caused by out of channel flood flows and instream water impoundments or diversions between the two gage stations. There is ample evidence along Coyote Creek, in the project area, that the bankfull channel cross section dimension is no where near 400 ft^2. It is much closer to 50 ft^2 and in some cases even smaller. The bankfull channel dimensions are also greatly varied. In some locations the channel is quite wide but not very deep (50 ft wide and 1 ft deep) and in other areas is much narrower but deeper (25 ft wide and 2 ft deep). The above is a clear indicator that the channel is unstable and decreasing in size, as a result of being deprived of adequate channel forming and maintenance flows and a proper sediment regime. Unless something is done to correct this situation, the creek will continue to decrease its channel size. Because the creek channel has significantly reduced its size since the construction of Anderson Reservoir, it is currently unable to handle even small storm event flows without major out of channel and out of corridor flooding. Not only are inadequate flows seriously degrading the channel, its riparian corridor and fish/aquatic habitat, they have and will continue to greatly increase the risk of damaging flooding downstream from increasingly smaller events, as the channel continues to decreases in size. When larger storms hit, neither the channel nor its corridor (floodplain area), will have the capacity to handle the high flows, so they will overflow to the northwest and inundate the project area. They will eventually end up detained or confined in the Laguna Seca natural wetland area, ref, Attachment I photos and Attachments II & III, gage station peak flow information/return interval analysis.

The DEIR states that "towards the northwest end of the valley, discontinuous basin deposits of clay tend to keep ponds, including the Metcalf Percolation Ponds and other low areas filled with perched groundwater, above the main saturated aquifer." The Santa Clara Valley Water District's, Water Supply Availability Analysis for the Coyote Valley Specific Plan dated April 2005 states: "the Coyote Sub-basin is generally unconfined and has no significant, laterally extensive clay layers." Which is correct? Where are the Metcalf Percolation Ponds and who operates them? Maps 4.8.2 and 4.9.1 show them to be in different locations. If the location shown on map 4.8.2 is to be believed, the ponds are not in Coyote Valley. They are shown to be north of the Coyote Valley Area, north of the Narrows, in the Santa Clara Valley area, so they would recharge that sub-basin, not the Coyote Valley sub-basin. If the 4.9.1 map is to be believed, it is unclear who operates the ponds, as the SCVWD does not list them as part of their perk pond system. It is very unclear why percolation ponds would be built and operated in an area where there are deposits of clay that keep water from percolating, as the DEIR indicates. It makes no sense to construct and operate percolation ponds in an area that doesn't percolate well. These inconstancies and conflicts need to be explained.

Actually, sediment is deposited in areas of slower moving or still water. The size of sediment transported and deposited is largely proportional to the velocity of the water. This is why sediment fills reservoirs, lakes, wetland areas and is deposited on floodplains. It is why fine sediment and possibly clay have been deposited in the Laguna Seca area, which may now be limiting percolation in that area. It is why in-stream percolation pond areas become less effective with time, as fine sediments are deposited in them. Properly functioning stream channels keep themselves clear of fine and small size sediment and thus maintain themselves as highly effective percolation zones. Were the percolation ponds north of Coyote Narrows actually constructed in an area that had poor percolation or has fine deposition since their construction limited their percolating ability? The in-stream Percolation Ponds north of Coyote Narrows actually result in serious negative impacts on proper channel function and degrade many beneficial uses. They disrupt channel flows, trap sediment, elevate water temperature, block native fish passage, eliminate native fish and aquatic habitat, and provide an environment for non-native and predatory fish species. In order to correct the above problems, the ponds need to be disconnected from the creek channel and there is mounting pressure to make this happen.

The DEIR states the Coyote Canal is located to the east of Coyote Creek and was built to convey water around Coyote Creek's recharge area between Hwy 101 and the Coyote Creek Golf Course. It states; "by diverting water from the recharge area during storm events or discharges from Anderson Reservoir, high groundwater levels in Coyote Valley were minimized." This highlights a major conundrum. The Coyote Valley is a major water aquifer and a wetland/floodwater retention basin for both the Santa Clara Valley and San Jose area. Keeping the aquifer well charged maximizes the amount of water available for use. Keeping the wetland area functional provides the greatest amount of natural flood protection possible. These are two major benefits most everyone claims they want to maximize. Lowering the water table to permit development decreases the amount of water available for human use even without development. Turning a good portion of the rural landscape over the aquifer into urban usage will degrade and reduce the water supply and water quality. It will greatly increase the risk of downstream flooding because, not only will the natural floodwater retention areas be lost but the greatly increased amount of impervious surfaces will, significantly increase the amount of surplus surface water that needs to be dealt with and this substantially increases the risk of groundwater contamination.

In previous paragraphs, the DEIR states the Coyote Valley Aquifer feeds the Santa Clara Valley Aquifer, so it should be desirable to percolate water into the aquifer instead of diverting it around the aquifer where much more water would be lost to evaporation. The DEIR further states that; "historically the canal also provided a way to prevent the loss of water supplies upstream of the Metcalf Percolation Ponds and the aquifer it recharges." This statement is inconsistent with previous statements. According to the previous DEIR statements referenced above, the Metcalf percolation ponds do not percolate water well and the Coyote Valley percolation area feeds the Santa Clara Valley sub-basin. Since evaporation loss is a component of all surface water storage or transport, especially large, open, sun baked/wind swept areas, percolating water into the ground aquifer, as soon as possible would save water, not waste it. Routing water around a good percolation area into an area that doesn't percolate well would cause water loss, not prevent it. The DEIR needs to address this conflict.

The Coyote Canal is another human impact that significantly contributed to degrading the Coyote Creek channel during its operation. It may still be negatively impacting the creek today, even though it is reportedly no longer in operation. As the DEIR indicates, the canal was used to divert storm water flows or dam discharges out of the creek channel and around the area from Hwy 101 to downstream of the Golf Course. This additional dewatering of the channel caused it to further degrade and destabilize. In the late 1990's the channel was migrating all over a wide area, downstream of its most southerly Hwy. 101 crossing during storm events, eroding its bed/banks and causing damage, ref. photos Attachment I, pages 2 to 6. In addition to diverting water out of the creek channel and into the canal upstream of Hwy 101, the canal also interrupted the flows of dozens of small streams flowing down the Diablo Hills, which normally supplied water directly to the creek during storms and indirectly via subsurface flows in the dry season. Historic maps show dozens of small streams east of the creek directly feeding Coyote Creek in the past. The 1980 photo revised USGS topo map shows all of the streams, once shown as feeding the creek, terminating at the canal, so it is unclear if they are still feeding the canal or not. But Hwy 101 now lies between the canal and the creek further preventing tributary flows from reaching the creek.

4.8.2.2 Fisher Creek

The DEIR states that Fisher Creek is believed to have been located along the base of the Santa Cruz Mountains in the vicinity of the CVSP Development Area, terminating at Laguna Seca. It states that in 1916, the creek was realigned as part of a project designed to improve flood control and drainage in northern Coyote Valley. According to mid and late 1800's maps, Fisher Creek is shown running along the base of the mountains on the west side of the valley, then flowing to the east along the base of the hills on the north side, swinging south, then east and northeast following the base of Tulare Hill before empting into Coyote Creek. In 1916, historic accountings and photos show there was a large dredging project to construct a channel through Laguna Seca in order to drain it so the land could be used for agricultural purposes. It is unclear how this "improved flood control." It drained a natural wetland and floodwater retention area and routed the water far more quickly into Coyote Creek. This elevated storm flows downstream of Coyote Narrows, thus increasing the potential for downstream flood damage, not decreasing it. Ref. maps and photos contained in the San Francisco Estuary Institute's, Coyote Creek

Watershed Historical Ecology Study, dated May 2006. The DEIR subsequently describes additional modifications made to Fisher Creek in the 1963 time frame, virtually turning it into nothing but a drainage ditch. However, the area still gets and stays very wet during the wet months, especially during wet years.

4.8.2.3 Flooding Conditions

The DEIR states: "that during **extreme stormwater runoff events**, Coyote Valley is prone to flooding along both Coyote Creek and Fisher Creek. The most recent flood occurred in 1997 when Anderson reservoir spilled at its dam and Coyote Creek overflowed its banks." The late January 1997 storm event was not an extreme event. It was not even a very large event. It was actually a series of very moderate storms according to stream flow and rainfall data recorded by area gage stations. Gages show about 5 inches of rain fell in the area between Jan. 22nd and Jan 26th with the largest storm hitting on the Jan 26th when a stream flow of about 6,280 cfs caused out of corridor flooding.

It is extremely difficult to believe that the 100-year floodplain area shown in Fig. 4.8.2 for Coyote Creek is anywhere close to accurate in many areas. As the DEIR states, Coyote Creek is perched above its westerly floodplain. As a result, all out of corridor flood flows will flow down slope, northwest toward Laguna Seca. It is known that severe water deprivation over the years has caused Coyote Creek's channel to significantly decrease in size making it far more prone to out of corridor flooding. It is unclear why the map shows the floodplain area extending upslope, to the east, in many areas or shows an extremely narrow flood zone in many areas. The flood flows from a 100-year storm would never be contained in such a narrow area. It is also known that in a number of locations along Coyote Creek, in the project area, there are grossly inadequate culverts, under road crossings, which will back up water and cause out of corridor flooding from even small storm events, ref. Attachment I photos, pages 1, & 5-11. The DEIR does not discuss how much of the moderate to large storm event flows or the 100-year flood flow from Coyote Creek would flow through the proposed project and into Laguna Seca, where they would be confined/retained for some period of time.

Coyote Valley Sub-basin Drainage Patterns

This section discusses the drainage pattern of the Coyote Valley sub-basin but doesn't mention that the boundary between the Coyote Valley and Llagas sub-basins has been known to shift north to south up to a mile or more, ref. Appendix J. What drives this shifting? How could plate tectonic activity affect the drainage of the basins, what is the probability that it could be affected and what would be the likely impact on water storage and supply both north and south of the Coyote Valley/Llagas divide?

4.8.2.4 Groundwater Resources

The DEIR states that the SCVWD estimates that the operational storage capacity of the Coyote Valley sub-basin to be between 23,000 to 33,000 acre-feet of water. It further states that the current rate of withdrawal is 8,000 acre-feet per year. The SCVWD Water Supply Availability Analysis for the Coyote Valley Specific Plan, dated April 2005 states: "the Coyote Valley sub-basin storage capacity is only about 25,000 af." What is the correct figure?

4.8.3 Hydrologic Impacts

The DEIR states 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. It states that urban uses will result in an increase in stormwater runoff, less groundwater recharge, increased water demand and changes in water quality. It does not state that the northern part of the project area was once a large natural wetland and floodwater retention area, which has been significantly altered over the years, reducing its effectiveness for providing stormwater retention. It does not state that this area still serves as a critical stormwater and flood flow retention area for Coyote Creek and that the proposed project will modify the floodplain west of Coyote Creek and try to attempt to contain out of corridor flood flows and prevent flood flows from reaching Laguna Seca.

The DEIR states that "based on hydrological modeling, the project includes a drainage and flood control system that would mitigate the project's hydrologic impacts to a less than significant level." However, no specific information or details are provided. Unfortunately hydrologic models, or most any model, can readily give those using the model predetermined and/or erroneous results, if the inputs are manipulated or if they are inaccurate. Where are the data? It further states: "these components are described in detail in Section 2.7 of this EIR." It is unclear what "these components" are and Section 2.7 of the EIR could not be located. The missing section needs to be provided.

4.8.3.2 Flooding Impacts within the Development Area

The DEIR states: "Development in or near a natural floodplain has the potential to change that floodplain and affect flooding further downstream." Development in a floodplain is guaranteed to alter the characteristics of the floodplain and its ability to function and thus the proper functioning of the stream. It will significantly affect and raise flood elevations downstream. Development near a floodplain has the potential for changing that floodplain and affecting flooding further downstream.

Fisher Creek

The DEIR shows the 10 and 100-year design flows for various locations along Fisher Creek in table 4.8.1. It shows the 10 and 100-year flows to be 1,620 and 2,890 cfs at Bailey Ave. but show they are greatly reduced to 960 and 1,250 cfs downstream at Santa Teresa Blvd. It then shows the flows to substantially increase again to 1,420 and 1,830 cfs at the Coyote Creek Confluence. More information needs to be provided on how these figures were determined. The DEIR states: the existing channel north of Bailey Ave. will remain in its existing location and configuration. It states: a bypass channel will be constructed between Bailey Ave. and Santa Teresa Blvd. in the historic alignment along the western hills. The map in Fig 4.8.2 is very unclear regarding the creek alignment and routing. It shows several blue lines snaking down to about Laguna Ave. then several relatively straight lines down to Bailey Ave. It shows a straight line channel from Bailey Ave to Tulare Hill. A very fine line can be seen following the western industrial boundary line. Which is the bypass channel? The DEIR seems to indicate the natural channel alignment will be the bypass channel and the constructed ditch will be the main channel. If this is the case, the channel will likely become nothing but an enormous maintenance problem and will never function normally.

The DEIR states: "the proposed CVSP project would have no more impervious surfaces or runoff than the previously approved CVRP project." How is this possible? According to the DEIR and map (Fig. 4.1.1), the CVRP was contained in a less than a quarter of the area identified as the Urban Service Boundary Area. The proposed project plans to develop not only the remainder of this area but also the entire Urban Growth Boundary Area, about 3,000 more acres. It is known that urban development significantly increases runoff, especially flash runoff, and significantly decreases infiltration. Data published by the Natural Resource Conservation Service show that in areas with 10-20% impervious surface, storm runoff is about 20% and infiltration about 42%. In areas with 75% or greater impervious surface, runoff is over 55% and infiltration only about 15%. Exactly how much impervious surface exists in the proposed project area today and how much will exist in the project area after construction? Exactly how much flash runoff will be created in each segment of the project? How much infiltration will be lost as a result of the impervious surfaces that will be laid down? How will the loss of infiltration be replaced, since ground water recharge is a critical issue in the project area and there will not be enough local water supplies to support the project?

The DEIR states: "with Fisher Creek flood flows confined to the creek's realigned and restored channel and existing channel (north of Bailey Ave.), CVSP development would not result in flooding within the CVSP Area." The DEIR does not discuss the extensive flooding in the CVSP area that will be caused by the flooding of Coyote Creek in large storm events. The proposed project is slated to be built in a natural wetland, flood hazard zone and a flood flow retention area for Coyote Creek. As the DEIR states: the Coyote Valley slopes to the northwest and Coyote Creek is perched above its westerly floodplain so when it floods in moderate to large storm events, flood flows will travel to the northwest towards the Laguna Seca area, where they will accumulate. This natural flood flow retention area significantly decreases downstream peak flows in Coyote Creek, thus decreasing out of corridor flood damage potential in the downtown San Jose Area. Any attempt to deprive Coyote Creek of its historic flood flow retention area will significantly increase peak flows during moderate and large storm events downstream and cause more extensive our of corridor flooding and flood damage in the downtown area of the City. This issue needs to be addressed in the DEIR.

The DEIR states: "the proposed focal lake and urban canal described in Section 2.7 of this EIR would also serve to provide additional flood storage during significant stormwater events." As previously stated, Section 2.7 of this EIR could not be located and needs to be provided!

Impact H/WQ-1

The DEIR states: The proposed project has been designed to include a flood control system that would reduce impacts associated with placing urban uses within the Fisher Creek floodplain to a less than significant level. [Less than Significant Impact]

The above statement is vague, misleading and invalid, so its conclusion is equally invalid. The placement of urban uses within the Fisher Creek floodplain is guaranteed to have a significant negative impact on the creek and groundwater recharge. It will increase flood damage potential in the local area, as well as downstream along Coyote Creek. It is unclear how the proposed project will be able to violate the policies and guidelines and standards that state development on floodplains is not permitted. **Impact H/WQ-1** needs to be listed as a **[Significant Impact]**

First of all, placing urban uses in a floodplain is guaranteed to cause significant negative impacts to the creeks and to taxpayers. It has been well documented that development on floodplains destabilizes streams and cause enormous problems. When this happens taxpayers will be stuck paying for the resulting damages. Floodplains along properly functioning streams flood with regular frequency, at least once a year, the degree of flooding depends on the size and characteristics of the storm event, so any development on an active floodplain will regularly flood to some degree.

Floodplains are normally riparian areas. San Jose's Riparian Corridor Policy not only states there should be no development in riparian areas but it requires a 100 foot development setback from the outer edge of the riparian area. In addition, the Santa Clara County Water Resources Protection Collaborative's (WRPC's), Guidelines and Standards, which San Jose helped to develop and agreed to abide by, states that development between the top of floodplain banks is not permitted. The DEIR must discuss how the proposed project intends to obtain approval for violating the above Policy and Guidelines and Standards and how such a violation can be justified.

The DEIR must describe the impacts the project will have as a result of urban development in the immediate area as well as downstream, including the Laguna Seca wetland and flood flow retention area for Coyote Creek.

Coyote Creek

The DEIR states: While the proposed project includes a 100-foot riparian corridor setback from Coyote Creek, some development is proposed within the 100-year floodplain of Coyote Creek. The section makes references to flood levels, models and analysis but no specific information or data are provided. The DEIR uses the term 100-year floodplain but this is a vague undefined term and an undefined level. A stream's floodplain normally consists of the land area adjacent to the stream's active channel, which becomes inundated by flows exceeding the active channel's capacity. Floodplains are normally riparian areas that are partially inundated, as the active channel's capacity is exceeded, on average at least once a year. The floodplain will normally be completely inundated to a depth of several feet or more by moderate to moderately large storms, up to 40 or 50-year events. Any development on the active floodplain will not only be regularly flooded but will cause severe negative impacts to the stream channel and its stability. When the active channel and it floodplain capacity is exceeded, floodwaters start to spill out into the flood terrace (abandoned floodplains or low terraces are also known as flood hazard zones). On properly functioning streams, flooding in flood hazard areas only happens during large to very large storm events, 40-50 year or larger events. Development in the flood hazard zone as proposed is risky, as the area will flood to some degree in large to very large storm events but as long as the development is not extensive and flood flows are allowed to pass through the area, proper stream function is not likely to be impacted. However, the DEIR states: "development within the floodplain (actually flood hazard zone) would be required to be placed on fill" and "the proposed CVSP floodplain encroachment increases base flood water surface elevations in Coyote Creek by up to 0.8 feet." This is guaranteed to cause significant negative impacts to the creek's stability, its hydrograph and the movement of floodwaters. It is guaranteed to increase the potential of out of corridor flooding downstream and it is, therefore, unacceptable.

The DEIR states: "because Coyote Creek is a perched channel (banks are higher than surrounding ground surface), some measure of freeboard (one or two feet) would be provided above the 100-year water surface. This section of the DEIR does not state what the 100-year surface would be. It is unclear what "its banks are higher than surrounding ground surface means." As previously stated in the DEIR, the creek is perched above the valley floor so its westerly floodplain generally slopes downward in the northwesterly direction. Out of corridor, large storm event flows would normally flow through the proposed project area into the Laguna Seca area where they would be retained. This currently provides peak flow reduction downstream and thus a significant degree of **natural flood protection** for downtown San Jose. Any attempt to reduce or prevent these out of corridor flood flows or immediately return them to the Coyote Creek channel will significantly increase the chance of out of corridor flooding and thus flood damages downstream in the City of San Jose.

Appendix J, Figure 2-8, of the DEIR shows what is claimed to be the 72 hour, 100-year discharge hydrograph for Coyote Creek downstream of the Fisher Creek confluence. It shows the discharge to be about 16,590 cfs pre project and about 16,000 cfs post project. These figures are completely unbelievable. There is no way the urbanization of over 3,000 acres of rural land will actually reduce the 100-year flow by close to 600 cfs, as urbanization increases runoff significantly. The Madrone gage station actually recorded a 25,000 cfs and a 15,000 cfs flow at that station within the past hundred years and gage station data analysis shows that the 100-year event at that station, a 196 mi^2 drainage area to be about 28,000 cfs. Coyote Creek will overflow its corridor during high flow events especially downstream of Hwy 101. These out of corridor flows will flow northwest to the Laguna Seca area, so peak flood flows in Coyote Creek at Coyote Narrows could conceivably be significantly lower than at the Madrone gage before the CVSP project, with "out of corridor overflow." However, there is no way that flows will be lower post project, after over 3000 acres of rural farm and wetland are turned into a city. There is absolutely no way that over 16,000 cfs of flow in Coyote Creek will simply evaporate in a hundred year event and that Fisher Creek will provide zero flow to Coyote Creek after CVSP development.

Coyote Creek's channel has been severely degraded by a wide range of previous and ongoing human impacts. It has been deprived of the essential flow and sediment regimes needed to maintain both channel and corridor capacity to handle even moderate storm flows, so it currently has no chance of being stable. In some areas adjacent to the proposed project, the creek channel changes form and location during moderate storm events, so its active channel and floodplain (riparian corridor width) are constantly changing. Most likely the creek will migrate to the west, down slope, in the future, so it is absolutely critical that any new development be set back at least several hundred yards from the outer western edge of the current creek corridor.

Impact H/WQ-2

The DEIR states: The proposed project would not result in significant flooding impacts associated with development within the Coyote Creek floodplain. [Less than Significant Impact]

The above statement is vague, unsupported and invalid, therefore, the conclusion cannot be valid. What is the published 100-year discharge and who published it? If it is 16,590 cfs, as shown in Appendix J, Figure 2-8, it is not in concert with recorded gage station data or reality. As stated under the Fisher Creek discussion, any development on a floodplain is guaranteed to cause severe negative impacts to the creek, as well as frequent and costly property damage. It also violates San Jose's Riparian Corridor Policy and the WRPC's Guidelines and Standards. The DEIR must discuss how the project intends to obtain approval for violating the above Policy and Guidelines and Standards and how such a violation can be justified. The DEIR must discuss how filling in a floodplain or flood prone area can be justified. It must discuss what will happen to the out of corridor flood flows from large events that now flow northwest and into the Laguna Seca retention area. It must discuss and justify development in a wetland and natural flood flow storage area and the negative impacts that will result. It must accurately describe and discuss the severe negative impacts to the local channel, as well as the downstream channel, if large storm event flows are prevented from exiting the corridor and are either confined to an overly narrow corridor or are quickly returned to it. It must address the significantly increased risk of damaging out of corridor flooding downstream, if the natural floodwater retention area is lost. In view of the above, **Impact H/WQ-2** needs to be listed as a **[Significant Impact]**

4.8.3.3 Flooding Impacts Outside of the CVSP Area

The DEIR states: Hydrologic modeling shows post project flows downstream of the project would be very similar to existing conditions and there is very little impact to the Coyote Creek's downstream hydrograph. It references Fig. 2-8 of Appendix J to support its claim. Appendix J, Fig. 2.8 is supposed to show the hydrograph for a simulated "72 hr. 100-year design storm and the resulting 100-year discharge downstream of Fisher Creek." There is no indication how much rainfall the simulated 100-year storm would produce. However, it is extremely unlikely it could have been close to a 100-year storm. It is known that a large storm or series of large storms the beginning of March in 1911 produced about 7 inches of rain in a week, with about 4.3 inches falling in a 72 hr. period. It produced a record peak flow on Coyote Creek of 25,000 cfs at the Madrone gage. The

Edenvale gage was not in operation at that time so it is not known what the flow downstream of Fisher Creek would have been. But, it was likely several thousand cfs lower than at the Madrone gage because there would have been out of corridor flooding into the Laguna Seca area. The Madrone gage also recorded yearly peak flows of 15,000 cfs and several flows in excess of 10,000 cfs before the reservoirs were built. It is known that there have been much larger storms, to hit the area both before and after the reservoirs were built. A storm in mid Dec.1907 produced about 6.5 inches of rain in 72 hrs., resulting in a 8,210 cfs discharge at the Madrone gage. A late Feb. storm in 1917 produced about 6 inches of rain in 72 hrs., resulting in a 10,100 cfs discharge at the Madrone gage. The most likely reason a higher discharge was not realized at the gage during these storms is that the ground was likely not saturated by earlier storms and the feeder creeks were either dry of flowing low, reducing the amount of flash runoff. In March of 1995 two storms, one on March 9th and one on March 21st produced over 4.0 and 5.1 inches of rain in 72 hrs respectively and these were not record events. The biggest storm to hit the area in the past 100 years was the Dec.1955 storm. That storm dumped about 11 inches of rain on the area in 48 hours. Fortunately, the storm hit early in the water year when the ground was dry and the reservoirs were relatively empty, so virtually all of the runoff in the upper watershed was captured by the ground, dry stream beds and reservoirs. Virtually none of the runoff from the upper watershed made it downstream of the reservoirs according to the Madrone stream gage but the Edenvale gage recorded a flow of 1610 cfs.

The January 97 storms were only of moderate size but they hit back to back with only 1 day separation, after two wet years and a wet fall/early winter. They produced a rainfall of about 2.3 and 2.8 inches respectively and a flow at the Madrone gage on Jan 26th of either 5120 cfs or 6280 cfs according to SCVWD and USGS records, because the reservoir was full and reportedly spilling. It is unclear why there is a disparity in the records but it is believed that the 5,120 flow may be the daily average flow instead of the peak flow it was reported to be and the 6,280 flow was actually the peak flow. The Edenvale gage only recorded a 5,900 cfs flow.

The DEIR states: "the point of initial flooding on Coyote Creek between its confluence with Fisher Creek and the San Francisco Bay is located at William Street" and references Table 2-6 Appendix J, which reportedly shows the predicted 100-year discharge for Coyote Creek at Willaim St. with and without CVSP development. It further states: "the results show that development of the CVSP would not have an adverse impact on the 100-year discharges at the William St. location. While the table may show that the project will have no impact, it is not even close to being credible. It is absurd to think that the point of initial flooding along Coyote Creek is at William St. Coyote Creek will flood all along the length of the creek channel when the creek's active channel capacity is exceeded. This happens now along most of the channel anytime the creek flows exceed several hundred cfs. Coyote Creek will have out of corridor flood flows along many portions of the creek down to William St., and through the downtown area during moderate storm events. During the January 1997 storm events there was out of corridor flooding in Morgan Hill, in various areas along the project area and both at and downstream of William St.

Appendix J states: "at William St., the creek's bankfull capacity has been estimated to be approximately 9,500 cfs." This is another absolutely absurd figure and is a clear indication that the information in the Appendix J is grossly inaccurate and cannot be believed. Actually, the bankfull channel capacity at William St. should be about 2,500 cfs for the approximately 255 mi^2 drainage area. Before the reservoirs were constructed and the creek was functioning more normally, gage station data shows the bankfull flow at the Madrone gage, about a 196 $mi.^2$ drainage to be about 2,000 cfs, which is in the ballpark with published regional curve figures. Since the reservoirs have been built and the creek has been deprived of adequate channel maintenance flows, the channel has significantly decreased in size. Today the bankfull channel along most of the creek's length will handle no more than about 400 cfs. Post reservoir gage data shows the bankfull flow to now be less than 100 cfs at the Madrone gage and only about 70 cfs at the Edenvale gage. Unless adequate channel maintenance flows are restored, the channel will continue to decrease in size and the out of channel/corridor flood potential and damaging flood flow risk will continue to dramatically increase. The bankfull channel at William St., a 255 mi^2 drainage area, was actually measured to be about 95 ft^2 in Jan. 2007, which would give it a capacity of about 380 cfs at a velocity of 4 ft/sec., not 9,500 cfs, as the DEIR claims, ref. Attachment II, III and IV.

Table 2-6 entitled "CVSP Impact on 100-year William St. Flooding" contains 5 columns with different reservoir levels ranging from 10,000 af to 81,000 af. The 5 columns are divided into 2 parts, an existing column and a post project column. The table has 6 rows, the 1st three show discharge. The 1st row shows peak discharge downstream of Fisher Creek, the 2nd peak discharge below Edenvale and the 3rd peak discharge at William St. The 4th row indicates "spill at William St." It is unclear why higher levels of the reservoir would incrementally increase a storm's flow. Based on reservoir operation data, reservoirs have the ability to capture all upstream storm flows until they are full and overflow. Based on over 100-years of recorded stream gage and rainfall gage data, the 100-year storm flow in Coyote Creek downstream of Fisher Creek could be somewhere between 25,000 and 30,000 cfs. The Madrone gage recorded a 25,000 cfs and a 15,000 cfs peak flow within the past 100 years and the storms that produced those flows were far from the largest storms that have hit the area in the past 100-years. It is impossible to believe that the discharge from the undeveloped CVSP area will be higher than the post project flows since about 3,000 acres will be converted from wetland, agriculture or rural usage to impervious urban usage and documented studies show runoff increases by at least 40% when land use is converted from rural to urban usage. The 4th row indicates that there will be no spillage at William St. with peak discharge flows from 7,130 to 7, 770 cfs but there would be spill at 10,740 cfs and higher. This is known to be incorrect, as the area flooded in January 1997 with about a 6,000 cfs flow, recorded by the Madrone and Edenvale gage stations, ref. Attachment II and III and Appendix J, Fig. 2-9.

Impact H/WQ-3

The DEIR states: "the proposed project would not result in flooding impacts downstream of the CVSP Area. [Less than Significant Impact]

The above statement is inaccurate and totally unbelievable for the reasons stated above. The project will cause devastating flooding downstream of the project, especially in the

Downtown area of San Jose, downstream of William St. **Impact H/WQ-3,** therefore, needs to be listed as a **[Very Significant Impact]**

4.8.3.4 Impacts to Groundwater

This section of the DEIR describes the increased use of groundwater and the decreased infiltration of water that will be caused by the project. It states that 8,000 af of water have been historically extracted from the groundwater basin within the CVSP area and existing demands are for about 11,000 af per year, including recycled water. It is unclear how much recycled water is actually being used or where it is coming from. Is it 3,000 af per year? It is known that recycled water is available for use in the San Jose area up to the Metcalf Energy Center, at the Coyote Narrows but it is unclear if it is available for use in the project area. The DEIR states: that water demands with the proposed project are anticipated to be about 22,500 af per year, which is more than double existing demand. A Santa Clara Valley Water District, Water Supply Availability Analysis for the Coyote Valley Specific Plan dated April 2005 states: "the agreed to project demand will range between 16,000 and 20,000 af per year." The figures in the DEIR and the referenced report do not agree. What is the real number? The DEIR does not state where this water will come from. It states that the operational storage of the Coyote Valley sub-basin is thought to range between 23,000 to 33,000 af per year, so the sub-basin can only provide for three to five years of increased demand after the CVSP build-out. It is unclear how this figure was obtained. The above cited SCVWD Water Supply Availability Analysis states: "the Coyote Valley sub-basin storage capacity is only about 25,000 af." Which is correct? Is it assumed that the present demands are currently being replenished each year by recharge? If so, what happens after the proposed project is built and the groundwater recharge area is paved over and much of the infiltration area lost? Without recharge there would only be a little over a year of groundwater storage, and only if the storage estimates are correct and the full amount could be pumped without adverse impacts and then replenished.

The DEIR states: that declining groundwater elevations in Coyote Valley would decrease subsurface flow into the Santa Clara sub-basin which partially depends upon this flow for their groundwater recharge. It does not indicate how much the Santa Clara Valley relies on sub-basin water flowing from Coyote Valley and how this flow will be maintained or assured after the CVSP is built. The above cited SCVWD Water Supply Availability Analysis indicates that the average yearly flow into the Santa Clara sub-basin to be about 4,500 af. The DEIR also states that lower groundwater elevations would likely lower base flows in Fisher Creek. It indicates that based on a Water Supply evaluation prepared for the project, the CVSP would not create a demand for water that cannot be met through supplies that are projected to be available. It is unclear where the needed water supplies would be obtained, how reliable they would be and how ground water being drained from the sub-basin would be recharged. It has been reported that the boundary between the Coyote Valley and the Llagas sub-basins can move up to a mile or more north or south, ref. Appendix J. The DEIR does not address how this would affect the supply of water in the Coyote Valley, which is only about 7 miles long, or the flows into the Santa Clara Valley sub-basin. The DEIR does not address how much water the City of Morgan Hill is currently pumping from the Coyote Valley Sub-basin and how much they will be pumping from the area in the future, as the city grows. The above cited

SCVWD Water Supply Availability Analysis indicates that the City of Morgan Hill is currently pumping groundwater from the Coyote Valley sub-basin but it does not state how much. All of the above issues need to be satisfactorily addressed by the EIR.

It is further stated in the DEIR: that "the SCVWD has determined that **all water** used for groundwater recharge in the CVSP area must be advanced treated recycled water (reverse osmosis and ultraviolet disinfection)." It is very doubtful that this could be true, as it makes no sense. The SCVWD probably stated that all **recycled water** used for groundwater recharge in the CVSP area must be advanced treated recycled water. Even if this is true, it is a new policy and it is a process that has never have been tried, much less implemented, in Santa Clara County. How can the DEIR state that "for the above reason, the proposed project would not result in impacts associated with groundwater extraction?" Where would the treated water come from and how would it be recharged, since most of the area's recharge capabilities would be lost, as a result of urban impervious surfaces and the stated SCVWD policy?

Impact H/WQ-4

The DEIR states that: "through the proposed recharge, impacts to groundwater resources would be less than significant." [Less than Significant Impact]

As discussed above, it is unclear how the proposed recharge will take place due to the loss of pervious surfaces, as a result of the project. It is unclear how much water will need to be recharged, it is unclear if citizens will want to use recycled water, directly or indirectly for potable uses and it is unclear if or when advanced water use for groundwater recharge will be approved by citizens and regulatory agencies. **Impact H/WQ-4** needs to be listed as a **[Significant Impact]**

4.8.3.6 Long Term Water Quality Impacts from Development

This section states that "stormwater volume would be increased within the development area." It states: "it is difficult to estimate the effects of urban development on surface water quality because historic or current surface water quality data is not available to establish existing conditions." If water quality data were not collected historically it is unfortunate. However, that does not preclude the collection of water quality today to determine existing conditions. This should be a project requirement. The previously cited SCVWD Water Supply Availability Analysis for the Coyote Valley Specific Plan contains some water quality data but some important constituents are missing. It should not be that difficult to estimate the effects of urban development once existing conditions are known. There have been detailed studies of the effects of urban development conducted in various areas across the county. The results of these studies have been published by the Center for Watershed Protection, American Rivers and other organizations. The studies have shown that urban development has the following negative impacts on streams: increased runoff volume and velocity, increased peak discharge, increased frequency of bankfull flows, diminished baseflow, stream channel incisement, increased channel modification, loss of riparian cover and continuity, decline in stream habitat quality, changes in riffle/pool structure, reduced sinuosity, decline in streambed quality, increased stream temperature, increased nutrient load, changes in sediment load, increased metals and hydrocarbons, increased pesticide and herbicide levels, increased chloride levels, increased bacteria and pathogen levels, decline in aquatic insect diversity, decline in fish diversity, loss of coldwater fish species, reduced fish spawning, decline in wetland plant diversity, decline in amphibian community, increased phosphorus, increased endocrine disruptor levels, increased amounts of trash, garbage and junk, decreased infiltration, increased potential for out of corridor flooding. The EIR needs to address all of the above negative impacts and explain how they will be mitigated.

Section 4.8.3.5 above lists many of the negative impacts that will likely affect both Fisher and Coyote Creeks during the construction phase of bridges, roadways and the flood control system but this section does not address the negative impacts these facilities will have on the creeks post construction. Section 4.8.3.5 states that the storm drainage systems from the constructed facilities drain into Fisher and Coyote Creeks, so there will be a high potential for the continued degradation of these waterways, as well as water quality. These impacts need to be discussed in the EIR along with what will be done to mitigate the problem.

Impact H/WQ-6

The DEIR states: "the proposed project would result in the long-term degradation of the quality of existing and future surface water resources." [Significant Impact]

Not only will the proposed project result in the long term degradation of the quality of existing and future surface water resources, it will result in the long term degradation of most all existing beneficial uses. Coyote Creek is already listed as an impaired waterbody and further degradation of the water and its beneficial uses is not only unacceptable, it is prohibited by CEQA. If the proposed plan cannot guarantee that it will not further degrade water quality and beneficial uses, it is fatally flawed.

4.8.3.7 Water Quality Impacts to Future Development

This section of the DEIR addresses the perchlorate contamination in the Llagas Groundwater Sub-basin. It states that perchlorate has not been detected in the Coyote Valley Groundwater Sub-basin. Chapter 1, Appendix J states that "due to changes of conditions the actual location of the groundwater divide between Llagas and Coyote has historically been observed to move as much as a one mile to the north or south of the designated boundary at Cochrane Road. When the boundary moves north water from Coyote will flow into Llagas and when it moves south water from Llagas will flow into Coyote." The DEIR does not state when this boundary last moved. It does not discuss what would keep the perchlorate from moving to the north, when the boundary moves to the south. It does not discuss if the relative groundwater levels in each of the sub-basins have any impact or influence on the direction of flow between the sub-basins. It does not discuss how seismic activity in the area may affect the boundary location.

The DEIR does not mention the fact that United Technologies Corporation used to run a large rocket motor test site just to the north of Anderson Dam until at least the mid 1990's. Perchlorate is a know constituent or byproduct of rocket fuel, so it is most likely on or in the ground in high concentrations in areas surrounding the test site. Since the drainage pattern is to the west, if perchlorate exists around the site it would likely migrate downslope and into the Coyote Valley Sub-basin. The DEIR does not address whether areas around the UTC facility, especially downslope are being monitored for perchlorate or other known rocket fuel pollutants and it needs to do so.

Impact H/WQ-7

The DEIR states: "The proposed project includes the recharge of groundwater, which will preclude the intrusion of perchlorate into the Coyote sub-basin." [Less than Significant Impact]

As stated above, the recharge of ground water is not likely to prevent the movement of the ground water divide up to a mile north or south of its Cochrane Road location and such a movement would affect the water movement between the sub-basins regardless of recharge efforts. Therefore, it cannot be stated that recharge would preclude the intrusion of perchlorate from the LLagas into the Coyote Valley sub-basin. It would also not prevent the movement of any perchlorate or other rocket fuel contaminates from moving downslope from the UTC facility into the Coyote Valley sub-basin. **Impact H/WQ-7** needs to be listed as a **[Significant Impact]**

4.8.3.8 Impacts from Stream Erosion

The DEIR states that development in or near a natural floodplain has the potential to change that floodplain by increasing stream discharges and affecting the balance of sediment transport so that the bed or bank erosion within the stream begins to worsen. Current guidelines for HMP implementation require that pre- and post-urbanization flow-duration curves must match using continuous rainfall simulation and a threshold discharge for erosion in receiving waters. It states projects located in areas that drain to stream channel segments that are unlikely to erode or experience impacts from increased flows are exempt from HMP requirements.

Development in a floodplain will certainly change that floodplain and reduce its capacity to store and effectively carry flood flows. Since floodplains will flood to some degree or another at least once a year, any development in a floodplain will be regularly flooded to some degree. Development on floodplains also destabilizes waterway channels, as the floodplain area, which is critical for channel stability is reduced in size. San Jose's Riparian Corridor Policy and Santa Clara County's Water Resources Protection Collaborative Guidelines and Standards recognize this and do not permit development on floodplains. The DEIR does not address how the proposed project intends to circumvent the prohibitions of building on a floodplain or justify doing so. The deliberate placement of structures in harms way and the deliberate destabilization of waterway channels should be illegal. It is unclear what "threshold discharge for erosion in receiving waters" is supposed to mean. It is a fallacy to think that stable stream channels are unlikely to erode or experience impacts from increased flows as a result of development. Channels are formed and adjust themselves to efficiently carry the water and sediment available to them. If the quantity of water or sediment available to a stable stream is significantly altered, as a result of new development or any other human or natural impact the stream will adjust itself to effectively handle the new régimes. It will do so either by erosion or deposition. Some stream types are far more tolerant to changes than others, so assessing stream stability and susceptibility to changes needs to be done an a case by case basis. The amount of erosion that takes place in a stream it based on many factors including its bed and bank material, area geology, channel morphology, the width/depth ratio of the bankfull channel, corridor/channel entrenchment ratio, channel and valley slope, flow velocity, stream power, runoff quantity and method etc. Flash runoff will have a much higher impact than slow steady runoff. Exempting a stream from HMP requirement because it may be stable today will not be an effective way for preventing erosion problems as a result of new development.

Fisher Creek

The DEIR states the proposed project includes a storm drainage system that includes the realignment and restoration of Fisher Creek. It talks about the improvement made to the creek but provides no specific details. It states that because the project will be designed to provide a stable channel the post project discharges into Fisher Creek *would not increase erosion or cause other adverse effects downstream of the project site*. It does not state what the pre and post project sediment loads in the creek are. It does not discuss how the increased runoff from the urbanization of over 3,000 acres of rural land will be effectively dealt with. It does not address how overflow or flood runoff flowing overland into the project area from Coyote Creek will be dealt with.

Impact H/WQ-8

The DEIR states: "the proposed project would not increase erosion or cause adverse effects associated with post-project discharges into Fisher Creek." [Less than Significant Impact]

The above statement does not indicate that the proposed project will not negatively impact Coyote Creek downstream of the project site. Table 4.8-1 shows flows in Fisher Creek, at Bailey Ave., will be significantly higher than the flows at the Coyote Creek Confluence but it doesn't explain how this is possible. It does not show what the pre project flows are. It does not address what happens to the flood overflows from Coyote Creek and how they would affect the project area, Fisher Creek and Laguna Seca. Until these items are properly addressed, **Impact H/WQ-8** needs to be listed as a **[Significant Impact].**

Coyote Creek

This section of the DEIR discusses pre and post-development conditions and their effect on the Coyote Creek flow curve downstream of the project area. It states while the post-development conditions curve exceeds the pre-development curve by an average of only 2.5 percent (eight cfs); it occurs over more than 10 percent of the curve. This seems to be opposite what Appendix J indicates. It further states that releases from Anderson Reservoir dominate the low flow regime in Coyote Creek to the extent that the variance in reservoir releases is nearly double the post development variance in Coyote Creek flow expected to be generated by the proposed CVSP development." It is unclear what significance this has. The low flow regime has little to do with the stability of the channel. The higher flow events, which fill the bankfull channel over half full to the flows at and just above bankfull are the critical channel forming flows that need to addressed. Because so much water has been impounded and/or diverted out of Coyote Creek since the construction of Anderson Reservoir, the Coyote Creek channel has drastically decreased in size. It has become highly unstable and is incapable of handling the bankfull flows that a 196 - 229 mi^2 drainage area produces and its corridor is now incapable of containing moderate sized flood events. Yearly peak flows since the construction of Anderson Dam are now a fraction of what they should be and they occur most often during the dry season, ref. Attachment III.

The DEIR states that the San Francisco Estuary Institute indicates Coyote Creek is a relatively stable stream. While this may be true, it is contrary to fact. Field evidence shows that most segments of Coyote Creek are unstable as previously stated, ref. Attachment I photos. The DEIR states that "according to the SCVWD, there is a location on Coyote Creek downstream of the CVSP area that is experiencing substantial creek bank incising due to the construction of the Silicon Valley Boulevard Bridge over the creek. This is a clear indicator that the creek channel is unstable. Incredibly, the DEIR uses this example to support its claim that the creek is stable. In the mid 1990's, emergency work had to done on the Metcalf Ave. Bridge to keep it from being undermined and washed away. The creek changed course numerous times in numerous places from the Model Airplane Park to Ogier Ponds wiping out orchard banks and maintenance roads, it broke through into off channel percolation pond areas both upstream and downstream of Metcalf Rd. The GCRCD lost at least 8 temperature loggers, monitoring the creek between the Airplane Park and Downtown San Jose in the mid 1990's because they were either buried by a shifting channel or washed away by erosion. Upstream of the southern most Hwy 101 crossing there are two channels in some areas. The above are all clear indicators of an unstable channel, not a stable channel.

The DEIR does not discuss the impacts the proposed project will have from discharges directly to Coyote Creek, such as from the drainage outfall pipes from the new roads and bridges crossing the creek. It is unclear if all storm drains from the project area, even the proposed development on the east side of Monterey Highway will be routed to Fisher Creek or if some will be directly routed into Coyote Creek. The EIR needs to address these issues.

Impact H/WQ-9

The DEIR states there is no analytical or physical evidence that the proposed CVSP development would worsen Coyote Creek erosion. It states for these reasons, the project would not result in significant impacts associated with Coyote Creek erosion. [Less than Significant Impact]

The fact is, Coyote Creek is currently unstable and is suffering from severe erosion and deposition in various areas. Its channel is severely undersized for the size of it watershed and it is continuing to decrease in size due to the excessive water impoundments and diversions and the lack of an adequate flow regime to enable proper channel sizing and maintenance. Any additional flash flow discharges into Coyote Creek along the project reaches or from Fisher Creek will certainly exacerbate the instability and erosion problems current being experienced. In view of the above, **Impact H/WQ-9** needs to be listed as a **[Very Significant Impact].**

4.8.3.9 Dam Failure, Seiche, Tsunami, and Mudflow

The DEIR states that the project is being designed to provide protection against the 100-year flood in conformance with all National Flood Insurance Program requirements. It states nowhere in the development area would this flood protection rely upon an artificial levee or floodwall. The problem is the supposedly 100-year protection the project is promising to provide is not really protection from the 100-year flood event. According to stream gage station records, the 100-year storm event would produce flows in the neighborhood of 28,000 cfs in the project area. The Madrone Gage upstream of the propose project area recorded 15,000 and 25,000 cfs flows in the past 100 years, so stating the 100-year storm event would produce flows of 14,500 cfs is contrary to fact and even contrary to the hydrograph in Appendix J, Figure 2-8, which shows a 16,590 cfs flow. The worst case condition will exist when a large storm or series of moderate storms dumps rain on the watershed area when the reservoirs are full. The reservoirs have been full as early as January. They were full when a moderate size storm hit the area in January 1997 and it caused extensive flooding, even though the peak channel flow was only about 6,000 cfs. Last year the reservoirs were full and spilling in the spring and although it rained in March and April, the storms were very light so they didn't result in high flows. The gage station just upstream of Coyote Reservoir in Gilroy, a 109 mi^2 drainage, recorded a peak flow of 7,440 cfs on December 31st 2005, when a relatively moderate storm dumped about 2 inches of rain on the area in 72 hrs. The reservoirs were able to capture all of that flow. What would have happened if that storm hit in April when the reservoirs were spilling? Flows in the project area would have easily approached 10,000 cfs with only 2 inches of rain. What would the size of the flows be when the reservoirs are full and a storm or series of storms produce 5 or 7, of rain in 72 hours, as many major storms have? What would they have been if the reservoirs were full and the December 55 storm that dumped over 11 inches of rain in 48 hours had hit?

Large storms will hit when the reservoirs are full in the future, it is not a question of if it will occur, it is a question of when. When it does occur the entire project area will be under at least several feet of water. Gage station data analysis shows that a 50-year event will produce flows in the neighborhood of 15,000 to 18,000 cfs. The construction of Anderson Reservoir may capture some or all of the runoff of large storms when they are less than full so a very large storm may not result in a large flood event, but the reservoirs cannot control the size or frequency of storm events or when they occur.

The DEIR acknowledges that the CVSP area would be subject to deep inundation should Anderson Dam fail catastrophically. However, it states that the dam has been designed and constructed to withstand maximum credible earthquakes so failure is extremely remote and therefore it is not considered a significant hazard. It provides no objective evidence to support this conclusion. The Titanic was designed and built to be unsinkable but it sank anyway on its 1st voyage. There are many ways the dam could fail, just stating its failure is extremely remote because it was designed well is not sufficient to justify a less than significant impact. What technical evaluations were completed to support the conclusion and where are the supporting data located?

Both Anderson and Coyote Reservoirs are located in active fault zones. The Calaveras fault is very active slip/strike fault that runs right next to the southeastern end of Anderson Reservoir and right smack through the middle of Coyote Reservoir and its dam. The Calaveras fault also has a significant transpression component because the Hayward/Calaveras and other faults squeeze together in the area of the reservoirs. Significant bends or offsets in the Calavaras fault in the vicinity of both reservoirs amplify the Anticline/Syncline action (the uplifting and depression of land), which is the geologic action that created and continues to form the eastern hills, which border the reservoirs and which Coyote Creek is perched on. Many geologist's believe that the Hayward/Calaveras fault is long overdue for a major quake. The Silver Creek fault runs along the northwestern side of Anderson Reservoir and right up to, if not across the reservoir just to the east of the dam. The Silver Creek fault is thrust fault which causes vertical movement and tends to cause more infrastructure damage and tsunami/seiche action than a slip/strike fault. (D. Sloan, Geology of the San Francisco Bay Area, 2006).

Impact H/WQ-10

The DEIR states: The failure of Anderson Dam is considered extremely remote; therefore, impacts associated with dam failure would be less than significant. [Less than Significant Impact]

The DEIR does not provide any evidence to support its conclusion. It does not address the possibility of the failure of the Coyote Reservoir Dam. It does not address how the failure of Coyote Dam would impact Anderson Dam. It does not address the possibility of a terrorist attack on the structures, the damage such an attack may cause or what, if anything, is being done to prevent such an attack and reduce the consequences of any such attack. If Anderson Dam were to fail it would cause massive casualties, fatalities and damage downstream of the dam, through the project area and all the way to the bay. The area at most risk would be the area south of the Coyote Narrows, including the proposed CVSP area, as flows would be more concentrated, at higher velocity and laced with debris. People south of Coyote Narrows would have little, if any warning and virtually no time to evacuate. Because of all of the possible failure modes for both the Coyote and Anderson Dams and the severe consequences of such a failure, a detailed Failure Modes Effects and Criticality Analysis (FMECA) needs to be performed on all possible failure modes for both dams. The analysis must include how the failure of Coyote Dam may impact Anderson Dam, the risk and consequences of dam failure at both low and high water storage levels, the risk of dam failure via uplifting and/or slip/stike movement, the risk of failure by sudden overtopping of the dams, etc. The results of the FMECA analysis needs to be published so all of the risks and probabilities of failure are known by all potentially affected.

In view of the above, the failure of either Anderson or Coyote Dams cannot be considered remote. There seems to be a fair probability that one or both dams could fail in a major seismic event and the results of such an event would be catastrophic. **Impact H/WQ-10** must be listed as a **[Very Significant Impact].**

The DEIR states that earthquakes have the ability to generate seiches and tsunamis. It states should a seiche occur on Anderson Reservoir, it would be contained by the dam and any overflow would enter the spillway to Coyote Creek. It does not state how a seiche would affect Coyote Reservoir. It does not address how much water would overflow the reservoir in the event of a seiche. That would largely depend on the size and the type of quake to hit the area and the water level of the reservoir so various possibilities need to be modeled. Far more water would overflow the reservoir if there were a large seiche when the reservoirs were full. What would be the effects of a seiche overflow of both Coyote and Anderson Reservoirs? The threat of a seiche on either or both Anderson and Coyote Reservoirs is quite high. About 10 members of the Western Waters Canoe Club were standing on a point at the edge of Stevens Creek Reservoir in June of 2005 when the water level in the reservoir started to rise and fall about 10 inches. No one felt any kind of earth movement and there was no wind or boat action to cause the phenomena. The water level on both sides of the point rose and fell at the same time, like one would see in a pot of water, as it starts to boil. The members of the club commented on the event and moved away from the water's edge as the cause of the event was unknown. It wasn't until a half hour later, on the way home from the reservoir that members heard the news on the radio that a moderately large earthquake hit off of the northern California Coast about 10 minutes before the resulting seiche was observed on Stevens Creek Reservoir. The club reported its observation to the USGS. If a quake hundreds of miles away could cause the water in Stevens Creek Reservoir to move up to a foot, how much movement would be caused by a quake in the vicinity of the Coyote reservoirs?

The DEIR states the CVSP area lies below the 15% slope line that is not subject to seismically induced landsliding, therefore, people or structures would not be affected by mudflow as a result of earthquake. It does not address the potential impacts mudflows, as a result of storms or earthquakes, would have on the reservoirs. It has been reported that for over the past decade the California Division of Dam Safety has required the SCVWD to keep Coyote Reservoir no more than half full due to the fact that the west abutment of the dam is on a massive landslide. When the landslide becomes active again there is a good probability that it will cause the dam to fail as the debris moves down gradient. However, despite the above requirement, Coyote Reservoir is not always kept half full. During the latter part of March last year, at least thru the end of April, reservoir gages on both Coyote and Anderson Reservoir show them as being over 60% full, most of the time being over 90% full and over a dozen days they were over 100% full and spilling. What happens when a quake, seiche or mudslide hits when they are in the full state?

Impact H/WQ-11

The DEIR states: "the probability of a seiche, tsunami, or mudflow affecting Coyote Valley is considered remote; therefore, impacts associated with these seismically induced natural occurrences would be less than significant." [Less than Significant Impact]

Per the discussion above, although the probability that the CVSP will be affected by a tsunami is remote, the probability that it will be affected by a seiche and/or mudslide is quite high, contrary to the claims made by the DEIR.

As stated above, a FMECA needs to be performed to effectively document the risks of all of the potential causes of seiche and mudflow events on both Coyote and Anderson Reservoirs and on Coyote Creek and the potential consequences of such events need to be described. Because of the probability that such an event will occur and the consequences of the event, **Impact H/WQ-11** must be listed as a **[Very Significant Impact]**

5.0 ALTERNATIVES

This section of the DEIR lists five project alternatives: 1) No Project; 2)Reduced Scale Alternative 1: Development in NCCIA only; 3) Reduced Scale Alternative II: Development in NCCIA and Urban Reserve; 4) Getting it Right Plan; 5) Alternative Location in North San Jose.

Unfortunately the DEIR does not provide enough information on any of the alternative plans to allow a proper evaluation or comparison to the proposed plan and some of the critical information that is provided seems to be conflicting. For example: The DEIR states: "these Reduced Scale Alternative scenarios would not include the development of lands on the east side of Monterey Road, which are outside of the NCCIA area. Figure 1.0-4, however, seems to show the NCCIA area on both sides of Monterey Road. Much more information is required on the various alternatives, including a clear description of the alternative project boundaries so that the alternatives can be properly compared and their environmental impacts evaluated.

Lawrence M. Johmann

Lawrence M. Johmann, P.E.

ATTACHMENT I

Coyote Creek just Downstream of Anderson Dam, arrow points to failing culverts, Creek is downcutting and bank erosion can be seen on the right side of photo.

Coyote Creek just Downstream of Anderson Dam, arrows point to bank erosion, exposed tree roots and a downed tree.

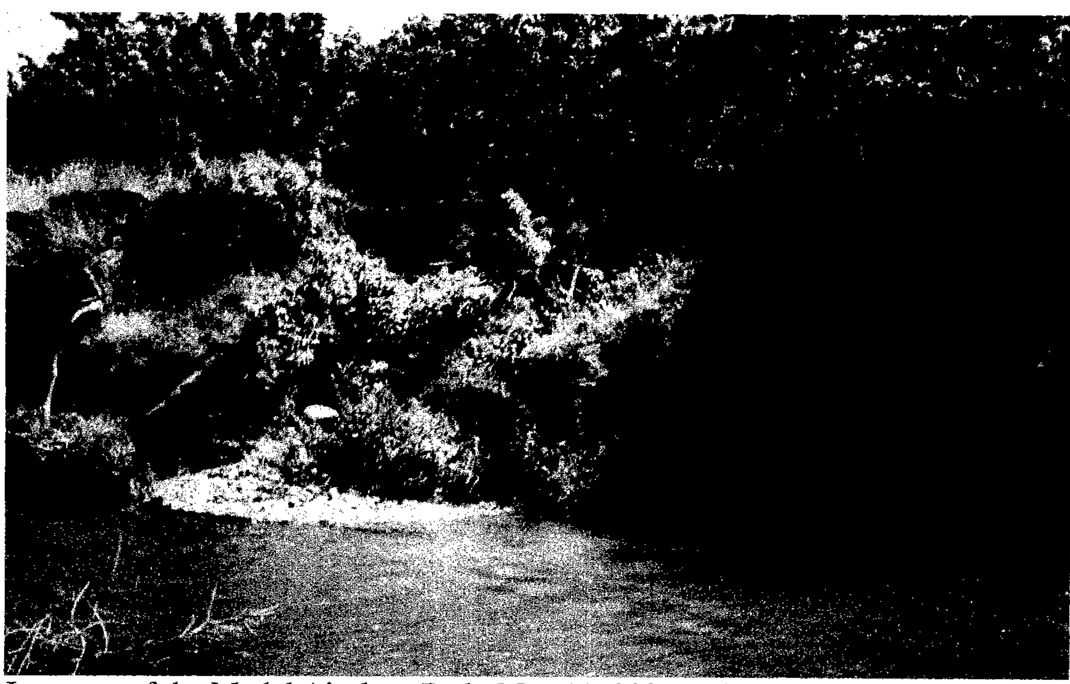
ATTACHMENT I

Coyote Creek just Downstream of Anderson Dam, the creek is downcutting and its banks are eroding.

Google Earth photo of Coyote Creek with Hwy 101 on right, yellow arrows show braided unstable channels. There are at least 2 channels on the right and left side of the photo. Green arrow show Model Airplane Park, red arrow show area of orchard bank failure.

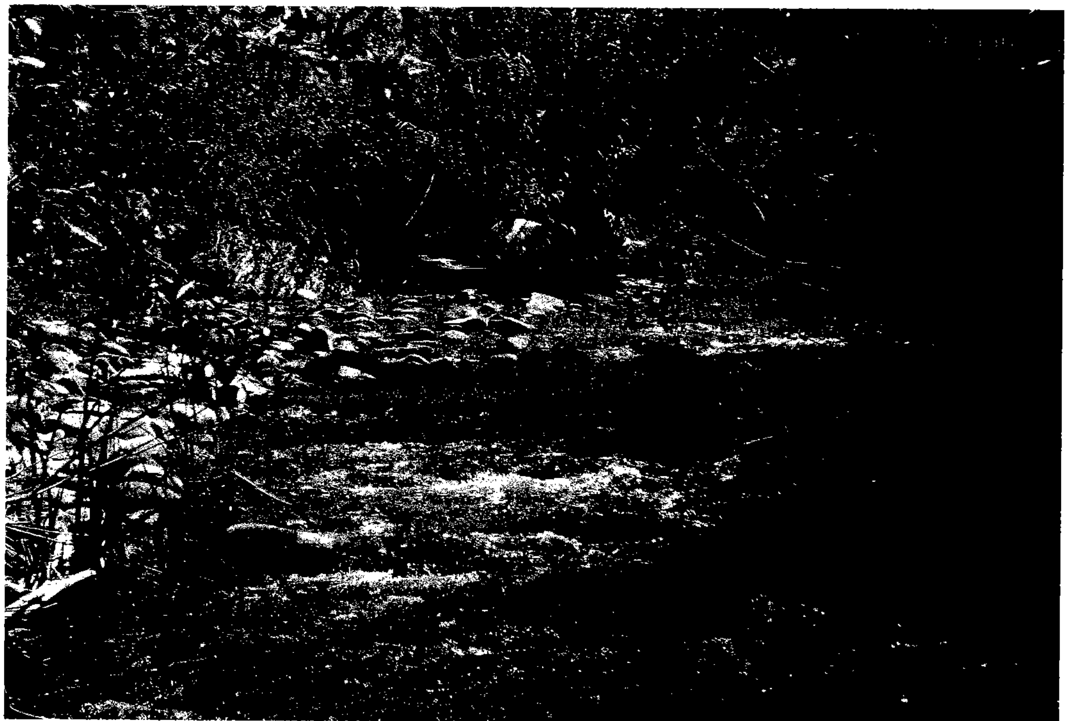
ATTACHMENT I

Just west of the Model Airplane Park, May 11, 2002. Fine sediment can be seen on the bed of the creek. Vertical failing orchard banks can be seen along the top of the photo.



Just west of the Model Airplane Park, May 11, 2002. Close-up of the failing banks on the west side of the creek, where large clumps of vegetation are sloughing off and falling into the channel.

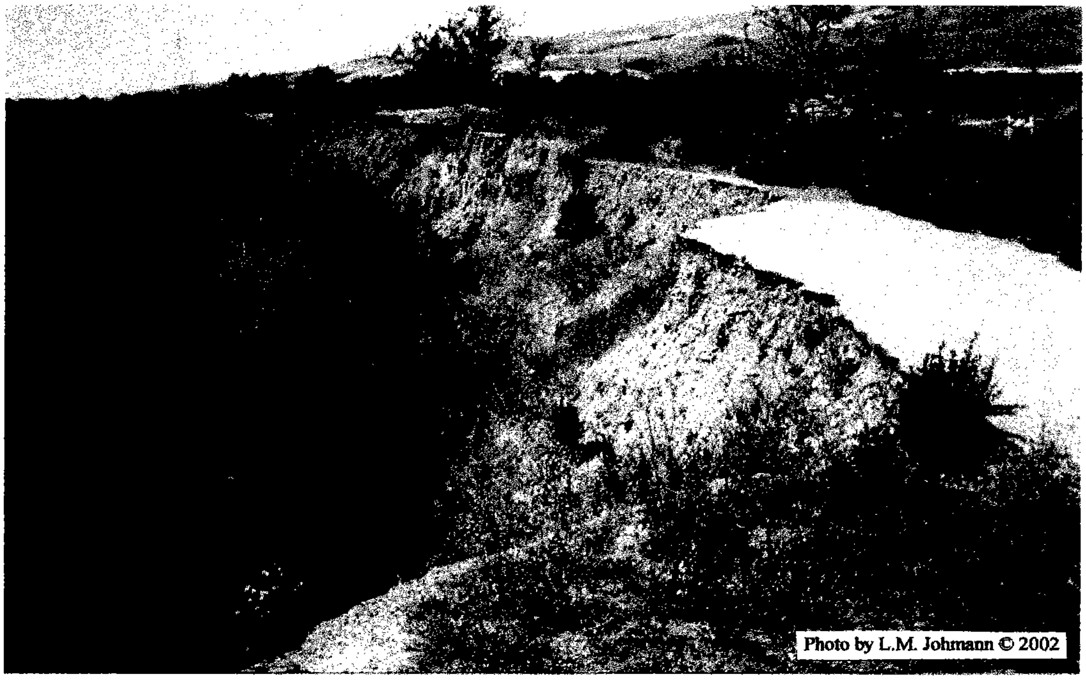
ATTACHMENT I



Coyote Creek channel just downstream of Model Airplane Park. Area has several shallow, narrow channels clogged with vegetation. Channel is deprived of necessary annual maintenance flows to keep it properly sized and vegetation free.

Coyote Creek, north of the Model Airplane Park, May 11, 2002. Failing east bank has taken out a paved trail and maintenance road. Large clumps of bank vegetation are sloughing off and falling into the channel and banks are about 20 ft. high.

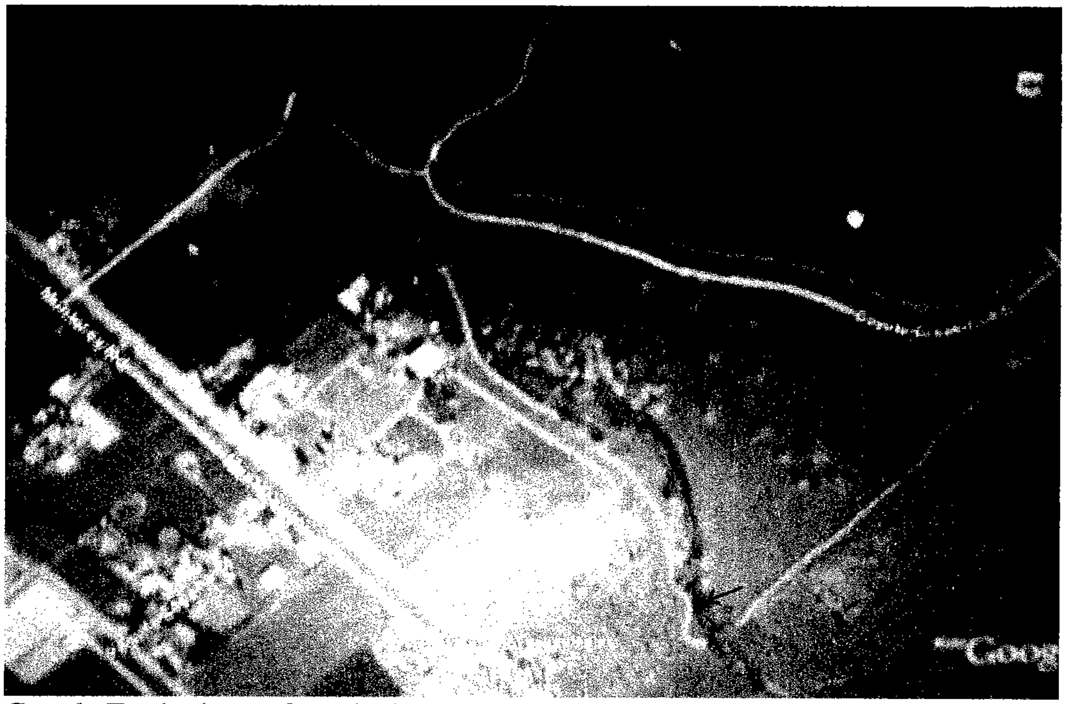
ATTACHMENT I



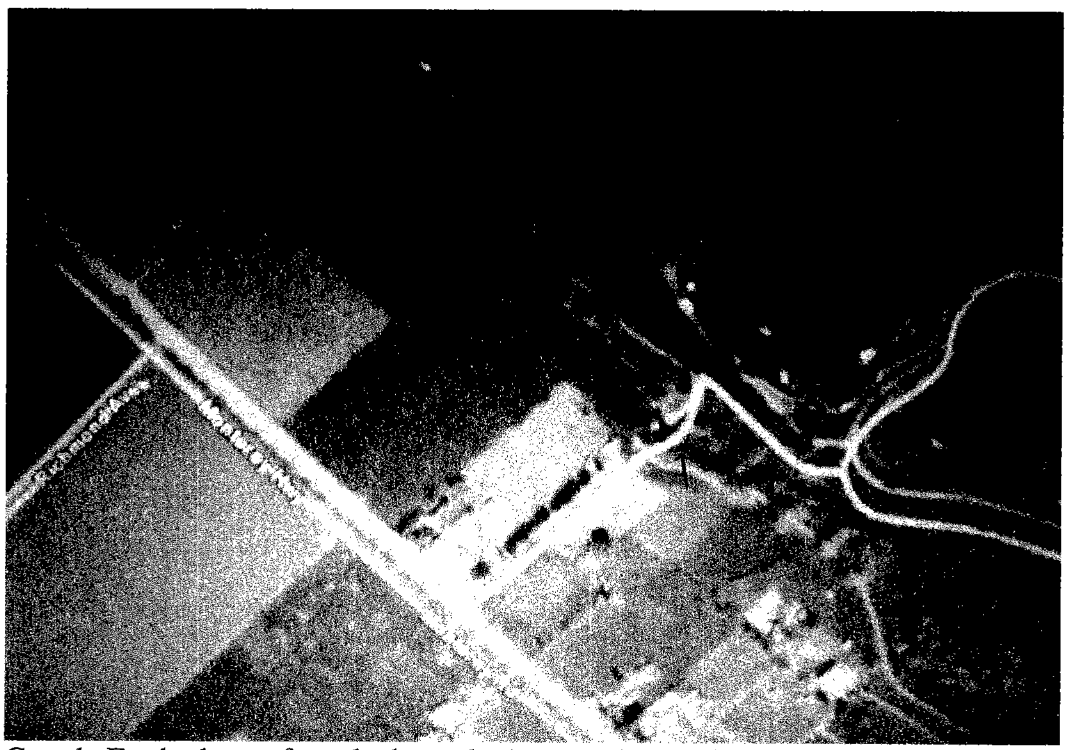
Coyote Creek, north of the Model Airplane Park, May 11, 2002. Failing east bank has taken out a paved trail and maintenance road. Large clumps of bank vegetation are sloughing off and falling into the channel.

Google Earth photo for Coyote Creek at Ogier ponds. Right arrow shows Model Airplane Park access road and undersized culvert underpass. Center arrow shows braided channels into pond, left arrow shows narrow channel running north.

ATTACHMENT I

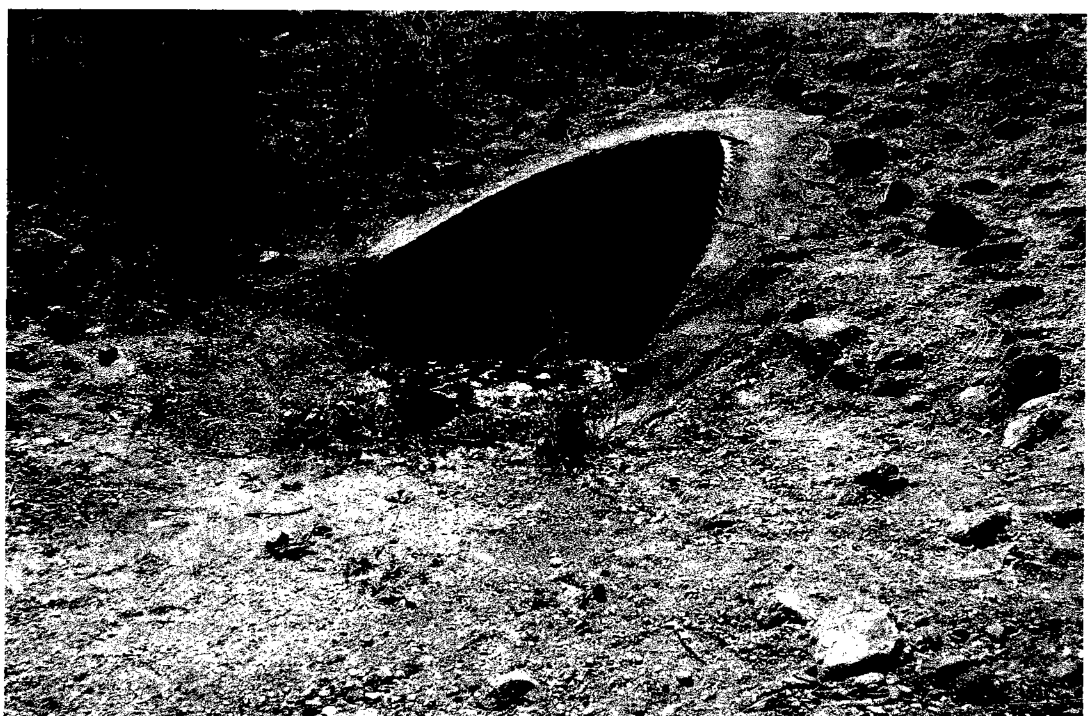


Google Earth photo of creek channel running from pond area to Coyote Creek Golf Course access road. Arrows show braided areas of the channel and the white line near the arrows is the trial.



Google Earth photo of creek channel. Arrows show culvert under crossing of the Golf Course access road. Culverts do not have the capacity to carry more than small storm flows.

ATTACHMENT I



Photos of the upstream side of two of the three small culverts that are supposed to pass creek flows under the Coyote Creek Golf Course access road.

ATTACHMENT I

Photo by L.M. Johmann © 1996

Downstream side of grossly undersized culverts under Coyote Creek Golf Course access road.

View of very narrow vegetation clogged creek channel downstream of Coyote Creek Golf Course access road.

ATTACHMENT I

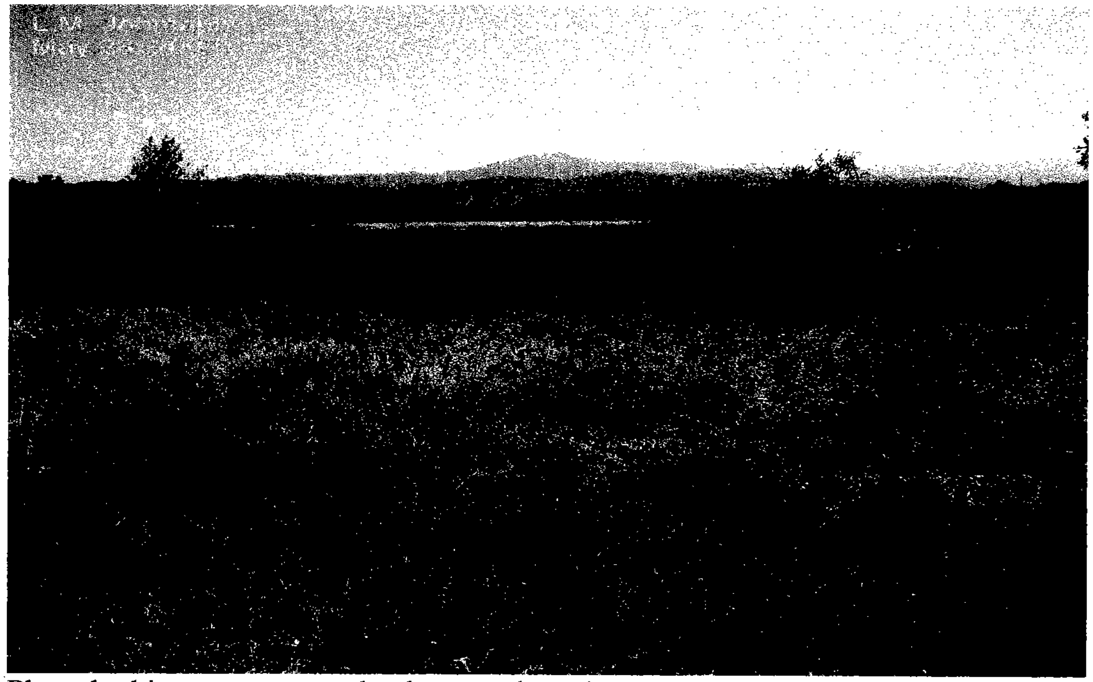
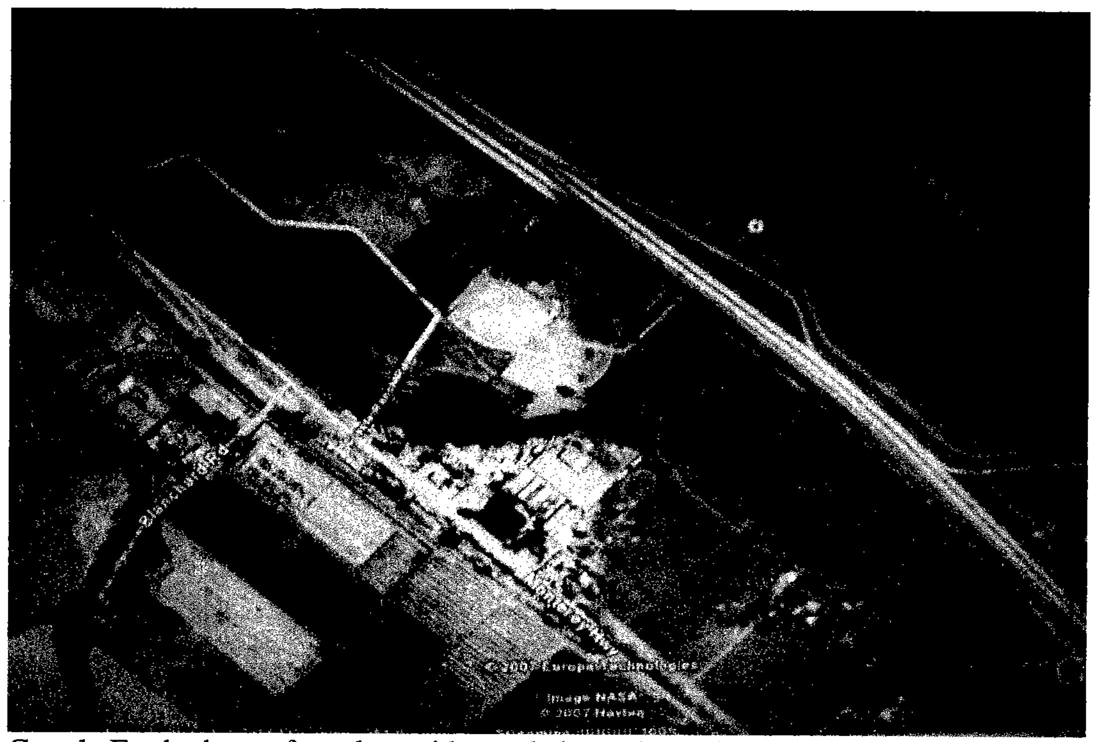


Photo looking west across the depressed creek corridor from trail west of Coyote Creek Golf Course. Monterey Hwy is visible running along the top third of the photo.



Google Earth photo of creek corridor and channel. Right and center red arrows show creek trail crossings. Only one extremely small culvert carries flows under the trail in both locations. They are not capable of carrying even small storm flows. Left red arrow shows two very small culvers under Coyote Ranch access road. Yellow arrow shows Coyote Canal running towards the creek just south of the ranch.

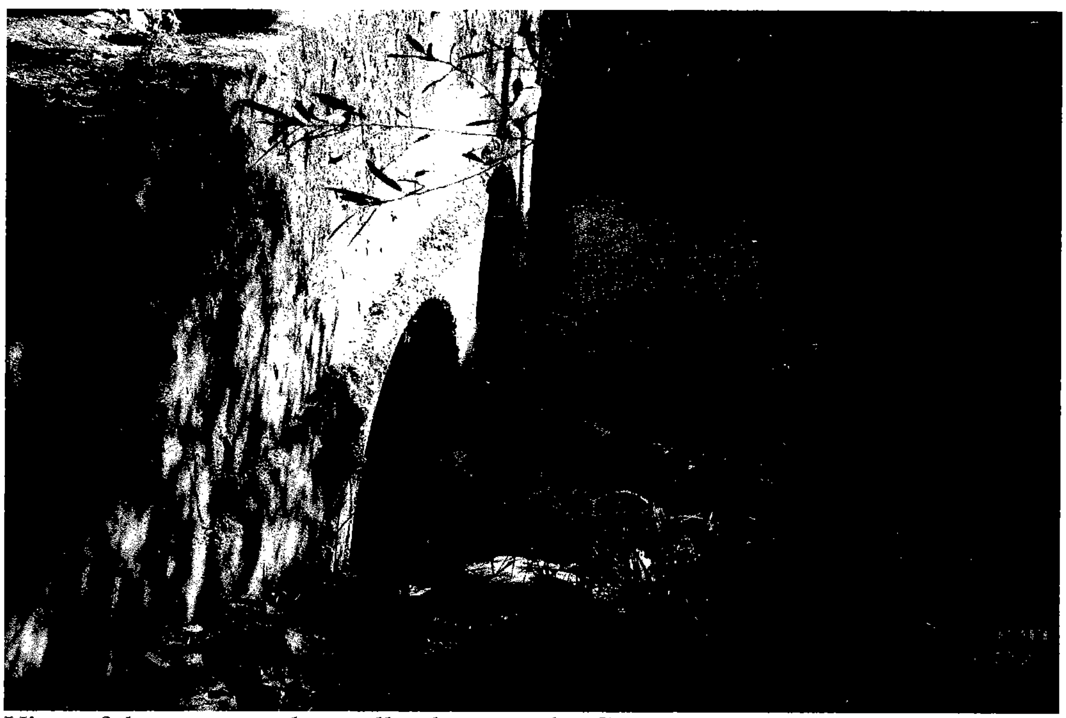
ATTACHMENT I

Trail crossing of the creek, right red arrow on the previous photo. Very small culvert under the trail will not pass even the smallest storm flows.

View downstream at extremely narrow and vegetation clogged channel from trail just upstream of Coyote Canal/Coyote Ranch. The vegetation is so thick you can see the very small culvert under the trail that can't pass even small storm flows.

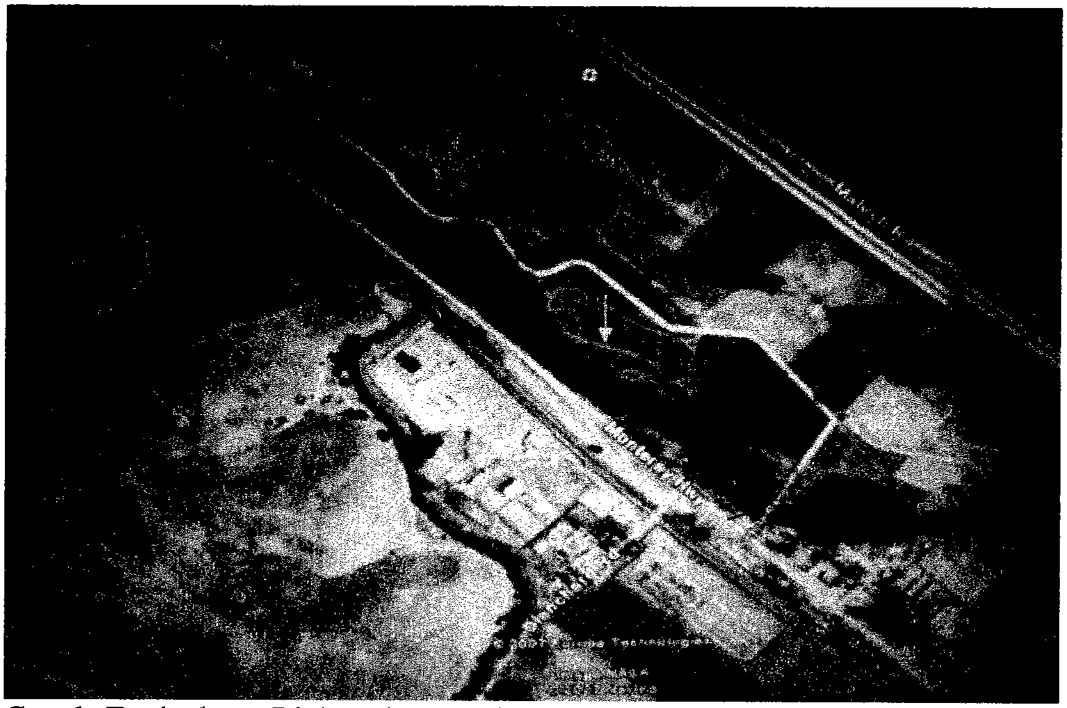
ATTACHMENT I

View upstream at very narrow creek channel and corridor upstream of the Coyote Ranch Road crossing.



View of three extremely small culverts under Coyote Ranch Road. These culverts do not have the capacity to pass even the small storm flows and the potential for becoming clogged with debris and sediment is very high.

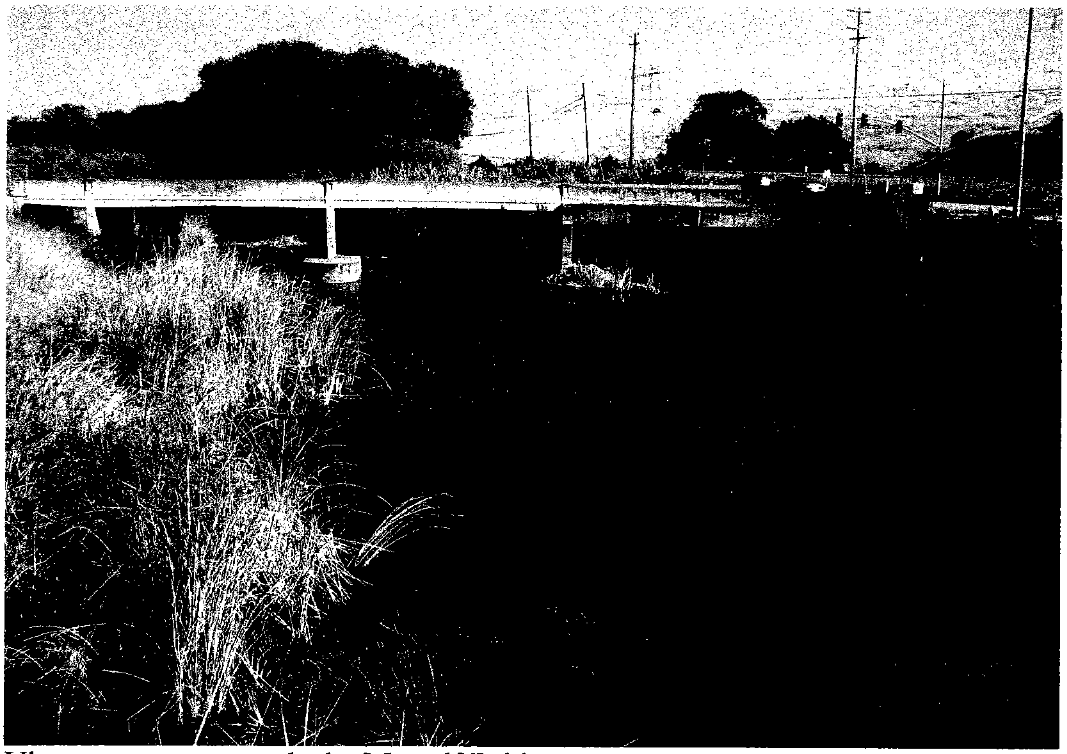
ATTACHMENT I



Google Earth photo. Right red arrow shows undersized culverts on Coyote Ranch Road, left red arrow shows very narrow channel and corridor, about 150 ft., just downstream of Fisher Creek Confluence. Yellow arrows show trail.

Photo looking west from trail, across very narrow channel and corridor several hundred yards upstream of Metcalf Rd. Monterey Hwy can be seen in the background, center of the photo.

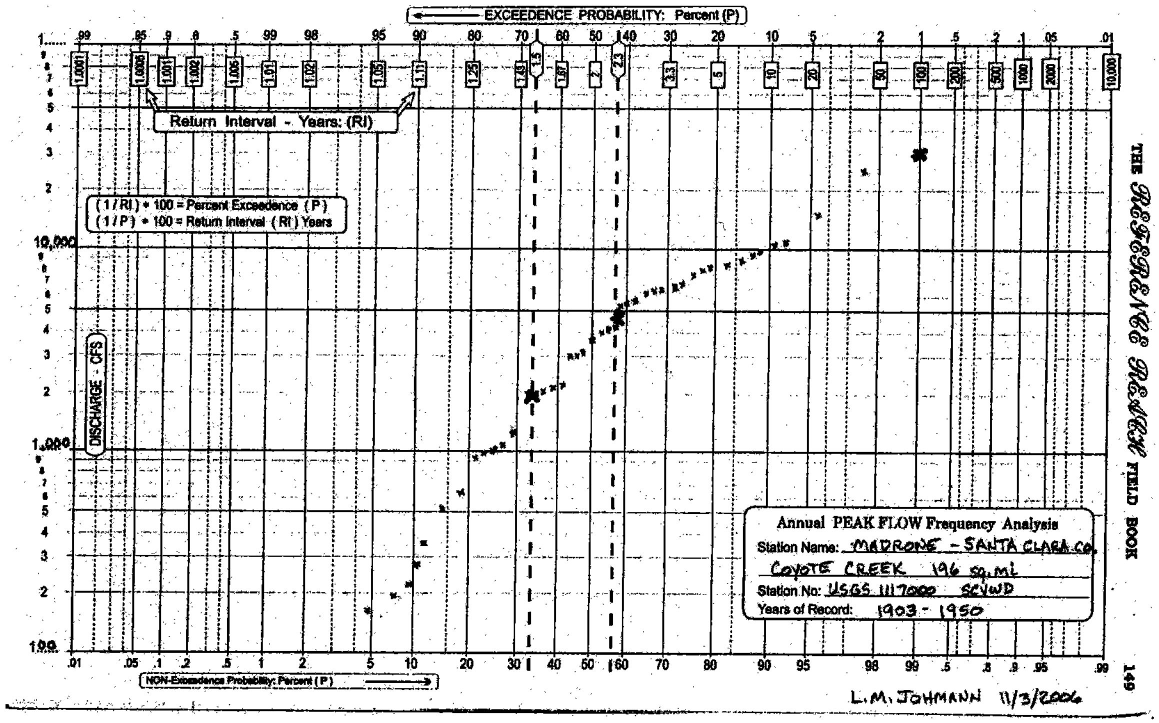
ATTACHMENT I



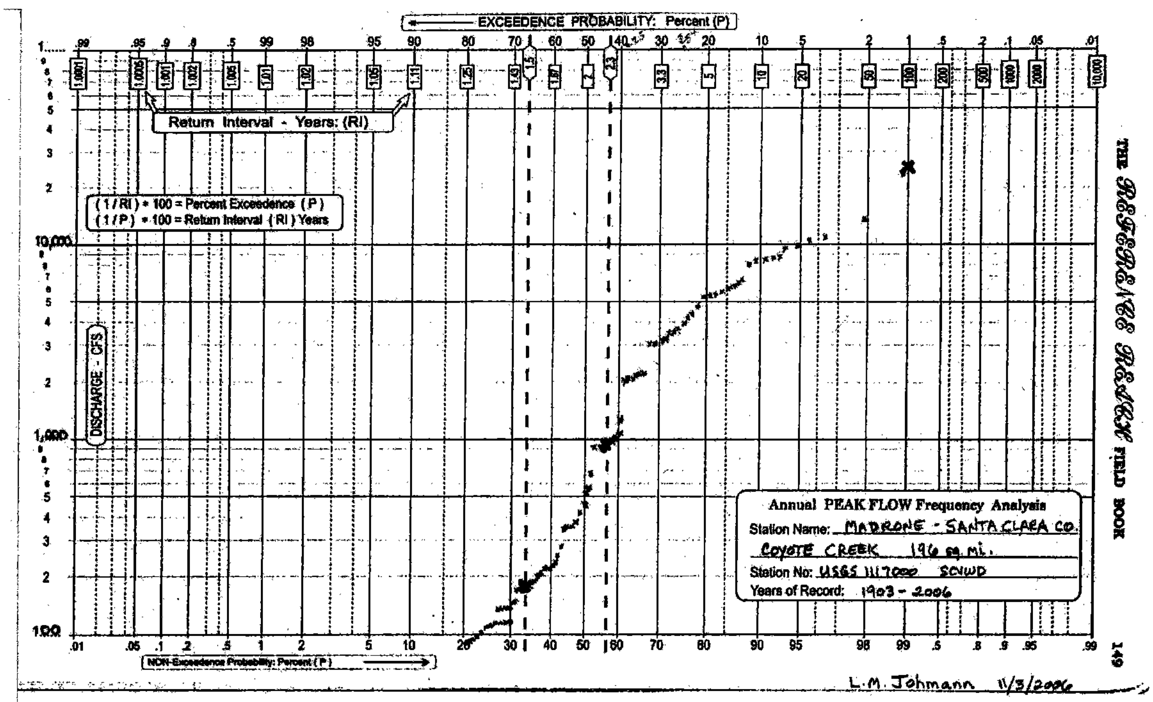
View upstream towards the Metcalf Bridge, arrows show where emergency repairs were done on the bridge in the 1990's to keep it from washing away.

View downstream of Metcalf Bridge, creek backed up by in-stream percolation pond, which impairs and degrades proper stream function.

ATTACHMENT II

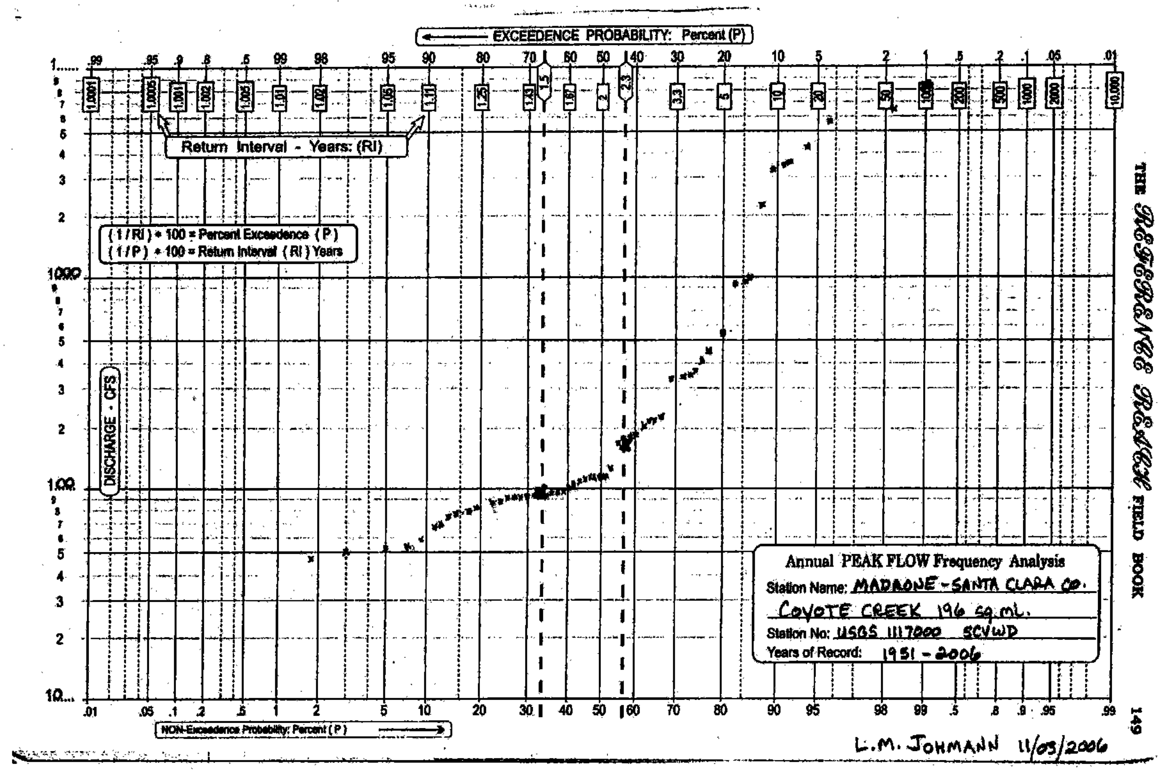


Bankfull ~ 2,000 cfs Mean Annual Flood ~ 4,800 cfs 100-Yr. Flood~30,000 cfs
Madrone Gage Station, 196 mi² Drainage - 1903 to 1950 Data (Pre Anderson Dam)



Bankfull ~ 180 cfs Mean Annual Flood ~ 900 cfs 100-Yr. Flood~28,000 cfs
Madrone Gage Station, 196 mi² Drainage - 1903 to 2006 Data (Full Data Set)

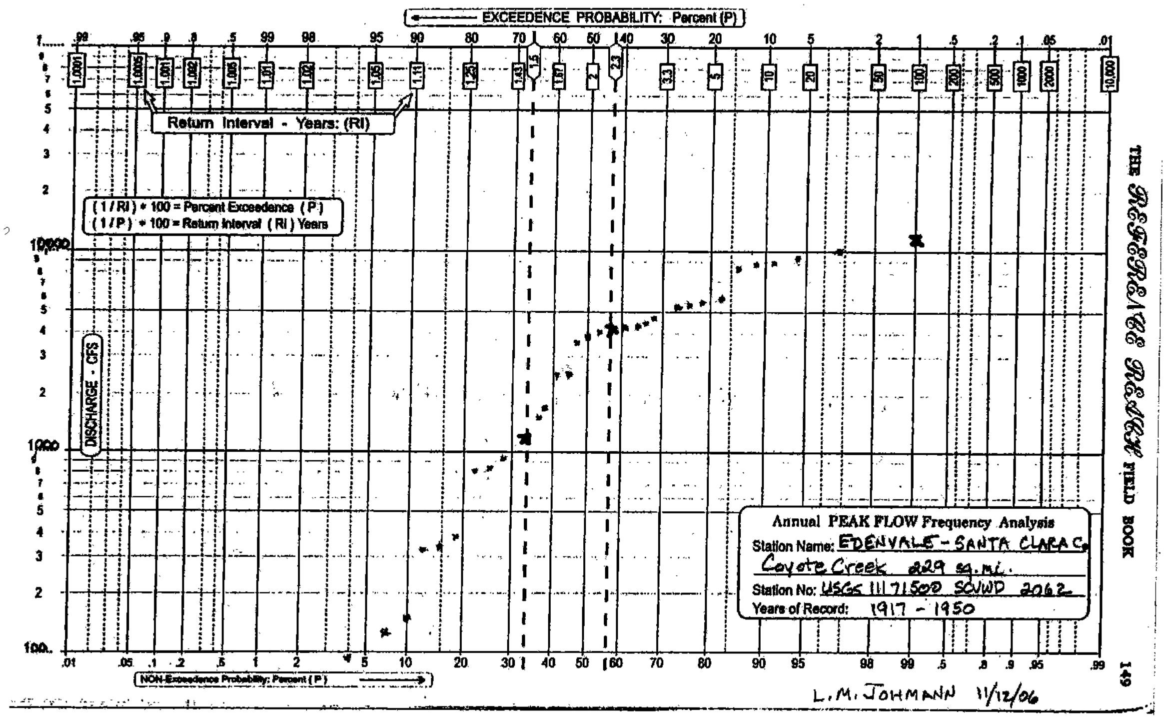
ATTACHMENT II



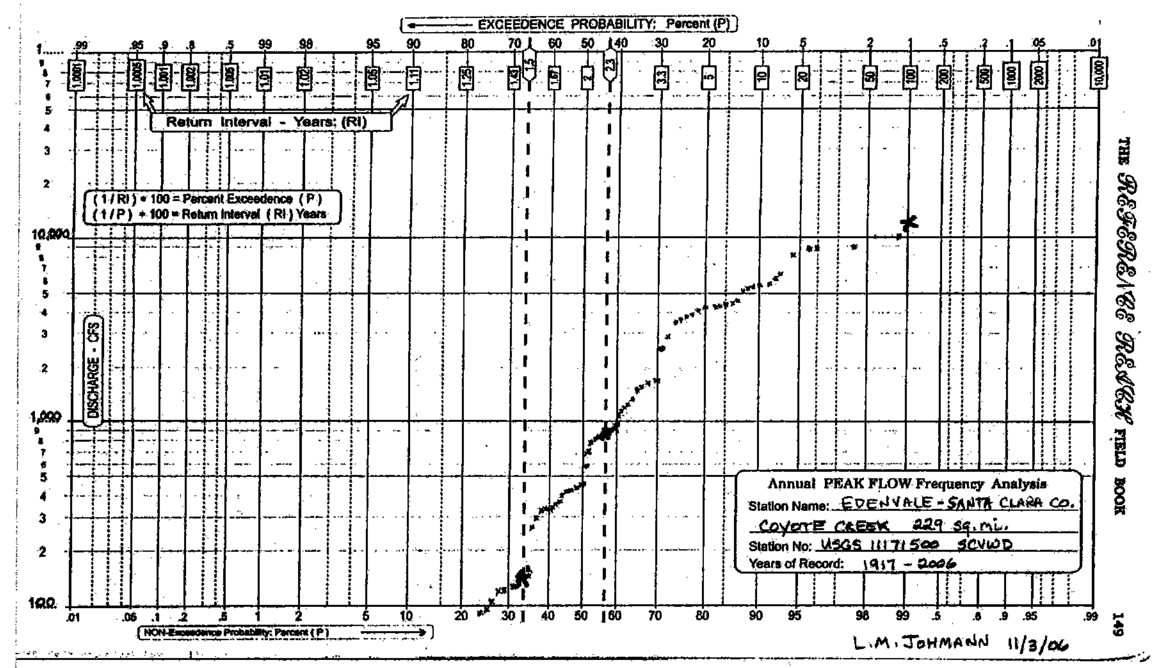
Bankfull ~ 95 cfs Mean Annual Flood ~ 180 cfs 100-Yr. Flood~8,000 cfs
Madrone Gage Station, 196 mi² Drainage - 1951 to 2006 Data (Post Anderson Dam)

Annual Peak flow data from rivers with natural and quasi natural flows plot as a sloping line on log Pearson paper. A best fit convex curved line projected through the data points give extrapolated flows such as the projected 100-year flow. Note the data from 1903 to 1950 plot and the 1903 to 2006 plot show a more regular sloping line but the bankfull and mean annual flows are significantly lower in the 1903 to 2006 plot because of excessive water impoundments and diversions post dam construction. The effects of the post dam impoundments and diversions can be clearly seen in the 1951 to 2006 plot. The plot is very irregular and the data does not accommodate a best fit curve. The bankfull, mean annual and 100-year flows are excessively low. Published data from waterways studied in the San Francisco Bay area show the bankfull flow for a 200 mi² drainage area to be between 2000 to 5000 cfs.

ATTACHMENT II

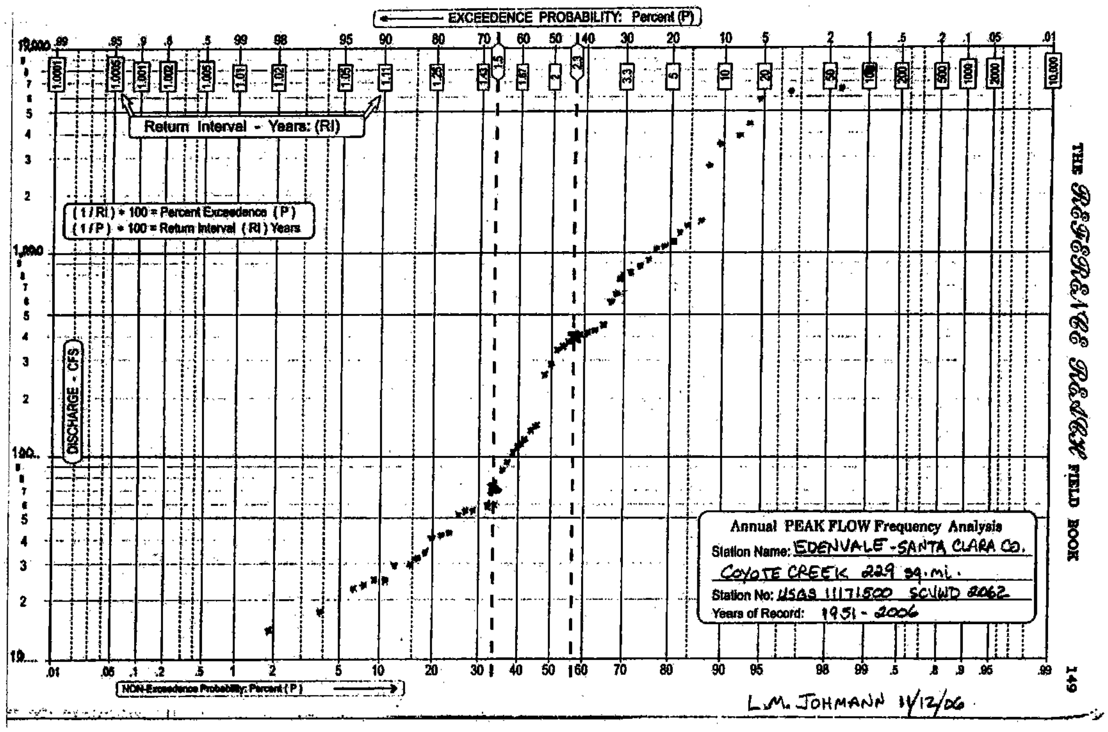


Bankfull ~ 1,100 cfs Mean Annual Flood ~ 4,200 cfs 100-Yr. Flood~12,000 cfs
Edenvale Gage Station, 229 mi² Drainage - 1917 to 1950 Data (Pre Anderson Dam)



Bankfull ~ 140 cfs Mean Annual Flood ~ 900 cfs 100-Yr. Flood~11,000 cfs
Edenvale Gage Station, 229 mi² Drainage - 1917 to 2006 Data (Pre Anderson Dam)

ATTACHMENT II



Bankfull ~ 75 cfs Mean Annual Flood ~ 400 cfs 100-Yr. Flood~8,000 cfs
Edenvale Gage Station, 229 mi^2 Drainage - 1951 to 2006 Data (Pre Anderson Dam)

Annual Peak flow data from rivers with natural and quasi natural flows plot as a sloping line on log Pearson paper. A best fit convex curved line projected through the data points give extrapolated flows such as the projected 100-year flow. Note the data from 1903 to 1950 plot and the 1903 to 2006 plot show a more regular sloping line but the bankfull and mean annual flows are significantly lower in the 1903 to 2006 plot because of excessive water impoundments and diversions post dam construction. The effects of the post dam impoundments and diversions can be clearly seen in the 1951 to 2006 plot. The plot is very irregular and the data does not accommodate a best fit curve. The bankfull, mean annual and 100-year flows are excessively low. Published data from waterways studied in the San Francisco Bay area show the bankfull flow for a 200 mi^2 drainage area to be between 2500 to 6000 cfs.

ATTACHMENT III

COYOTE PEAK FLOW GAGE DATA

	GILROY		MADRONE		EDENVALE	
	109 mi^2		196 mi^2		229 mi^2	
	USGS	11169800	USGS	11170000	USGS	11171500
WATER			SCVWD	82 - 1498	SCVWD	58 - 2062
YEAR	**cfs**	**Date**	**cfs**	**Date**	**cfs**	**Date**
2006	7440	12/31/2005	998	4/6/2006	1149	4/7/2006
2005	3800	12/31/2004	407	3/29/2005	794	3/31/2005
2004			50	9/6/2004	156	2/26/2004
2003			51	8/3/2003	587	12/20/2002
2002			69	8/1/2002	30	12/2/2001
2001			83	7/10/2001	83	3/5/2001
2000			544	3/9/2000	1040	3/10/2000
1999			58	10/31/1998	58	2/10/1999
1998			3210	2/8/1998	4010	2/9/1998
1997			5120, 6280	1/26/1997	5900	1/26/1997
1996			928	2/24/1996	1090	2/24/1996
1995			2200	3/24/1995	2780	3/24/1995
1994			94	8/31/1994	94	12/11/1993
1993			92	9/16/1993	429	2/19/1993
1992			66	3/23/1992	139	2/14/1992
1991			48	8/26/1991	32	3/24/1991
1990			92	10/1/1989	58	5/27/1990
1989			101	8/11/1989	25	11/23/1988
1988					51	1/17/1988
1987			201	9/25/1987	421	9/22/1987
1986			386	3/20/1986	1860	2/15/1986
1985			74	4/26/1985	30	11/27/1984
1984			352	12/3/1983	365	12/25/1983
1983			4720	3/1/1983	6460	3/2/1983
1982	6840	1/4/1982	3630	4/1/1982	4300	4/1/1982
1981	5030	1/29/1981	71	8/29/1981	395	1/29/1981
1980	6210	2/19/1980	107	2/25/1980	858	2/19/1980
1979	2500	2/21/1979	87	5/16/1979	323	8/14/1979
1978	6510	1/16/1978	90	5/28/1978	674	1/17/1978
1977	35	1/3/1977	51	10/1/1976	18	12/30/1976
1976	22	1/3/1976	113	6/18/1976	269	8/16/1976
1975	2220	2/2/1975	217	4/5/1975	134	4/7/1975
1974	2330	3/3/1974	985	4/2/1974	901	4/3/1974
1973	4960	1/9/1973	77	8/9/1973	441	2/7/1973
1972	445	12/25/1971	99	4/12/1972	27	12/25/1971
1971	1270	12/2/1970	88	9/20/1971	130	12/22/1970

1970	4720	1/16/1970	346	3/10/1970	299	12/29/1969
1969	8190	1/25/1969	3570	2/25/1969	3580	2/25/1969
1968	700	1/30/1968	112	6/25/1968	46	1/31/1968
1967	6900	1/21/1967	96	7/31/1967	454	3/16/1967
1966	1650	12/28/1965	110	5/2/1966	27	12/30/1965
1965	5320	1/6/1965	113	6/19/1965	44	8/14/1965
1964	2290	1/21/1964	217	3/25/1964	60	1/23/1964
1963	10100	1/31/1963	245	**7/17/1963**	0	1963
1962	4450	2/15/1962	183	2/22/1962	159	3/7/1962
1961	42	2/3/1961	180	4/13/1961	16	10/4/1960
1960			170	10/20/1959	71	1/13/1960
1959			176	4/5/1959	1410	2/16/1959
1958			5750	4/3/1958	6250	4/3/1958
1957			127	7/14/1957	47	2/25/1957
1956			98	5/16/1956	1610	12/23/1955
1955			113	**4/17/1955**	34	5/28/1955
1954			460	9/17/1954	24	7/18/1954
1953			93	12/7/1952	102	1/9/1953
1952			93	3/31/1952	768	1/12/1952
1951			230	11/22/1950	400	12/8/1950
1950			365	1/28/1950	143	1/28/1950
1949			663	3/11/1949	329	3/12/1949
1948			**221**	4/12/1948	0	1948
1947			196	11/23/1946	95	11/25/1946
1946			504	1/5/1946	346	1/5/1946
1945			6580	2/2/1945	5550	2/2/1945
1944			3050	3/4/1944	2420	3/5/1944
1943			5450	1/21/1943	5350	1/21/1943
1942			2230	2/6/1942	2420	1/24/1942
1941			4180	4/4/1941	3810	4/4/1941
1940			3920	2/29/1940	3230	2/29/1940
1939			283	3/9/1939	162	3/9/1939
1938			6670	2/11/1938	7920	2/11/1938
1937			4060	3/22/1937	4220	3/21/1937
1936			1020	2/22/1936	861	2/23/1936
1935			5340	4/8/1935	4250	4/8/1935
1934			2010	1/1/1934	1620	1/1/1934
1933			2080	1/29/1933	1820	1/29/1933
1932			10600	12/28/1931	8520	12/28/1931
1931			**178**	2/15/1931	0	1931
1930			6500	3/5/1930	4200	3/5/1930
1929			920	2/3/1929	326	2/4/1929
1928			3580	3/27/1928	3430	3/27/1928
1927			6340	2/16/1927	4630	2/16/1927
1926			7180	2/13/1926	5010	2/13/1926
1925			1000	2/23/1925	1130	2/13/1925
1924			**8**	1/27/1924	0	1924
1923			9200	1/24/1923	8800	1/24/1923

1922					9760	2/10/1922		10000	2/10/1922
1921					5130	1/30/1921		4430	1/30/1921
1920					970	3/22/1920		800	3/22/1920
1919					8030	2/10/1919		5940	2/11/1919
1918					2090	3/12/1918		915	3/12/1918
1917					10100	2/21/1917		8590	2/21/1917
1916									
1915									
1914									
1913									
1912					1210	3/12/1912			
1911					25000	3/7/1911			
1910					3000	12/9/1909			
1909					8230	1/21/1909			
1908					2150	1/25/1908			
1907					8210	12/11/1906			
1906					8350	1/19/1906			
1905					3000	3/19/1905			
1904									
1903					15000	3/31/1903			

ATTACHMENT IV

[illegible] Coyote Creek
Upstream of William Street Bridge

[illegible] Saturday, 1/14/07
Clear ~55°F

[illegible] L.M. Johmann & Pioneer HS Students

[illegible] Measuring Rod - Crain SVR 25 Tenths - Model # 90340
Laser Level - Topcon RL-H_A rotating laser Serial # PS0819
Laser Receivers - Topcon LS-70B
Water Velocity Global Water FP-101

[illegible] Riffle [illegible] Upstream side of William St. Bridge GPS
N 37° 20' 13.2" W 121° 52' 05.5" Alt.~150'

[illegible] 100

[illegible] 3.500 * Benchmark, NW corner of pedestrian bridge upper support footing slab on E side of creek

[illegible]
Water Depth @ Gage Station mesured 1.01ft.
Average Velocity, 0.68 ft/sec
Gage Station Reported water elevation as .04 ft.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.000	5.300			98.200	
5.000	5.630			97.870	
10.000	5.550			97.950	
15.000	6.700			96.800	
20.000	10.520			92.980	
25.000	13.930			89.570	
30.000	15.960			87.540	
35.000	18.220			85.280	
40.000	20.840			82.660	
45.000	21.890			81.610	
50.000	20.220			83.280	
55.000	19.680			83.820	
60.000	20.070			83.430	
65.000	20.670			82.830	
70.000	20.730			82.770	
75.000	22.490			81.010	Left Top of Active Channel
76.000	23.480	0.000		80.020	Left Water Edge
78.000	23.940	0.450		79.560	
80.000	24.230	0.740		79.270	
82.000	24.330	0.840	0.680	79.170	Vmax .9
84.000	24.380	0.880		79.120	
86.000	24.480	1.000		79.020	
87.000	24.500	1.010	0.680	79.000	Gage Station Sensor, Vmax .9
88.000	24.510	1.020		78.990	
90.000	24.480	0.990	0.510	79.020	Vmax .7
92.000	24.280	0.800		79.220	
94.000	24.040	0.570		79.460	
96.000	24.370	0.840		79.130	
98.000	24.230	0.730		79.270	
100.000	23.580	0.000		79.920	Right Water Edge
105.000	22.520			80.980	
110.000	18.700			84.800	
115.000	16.530			86.970	
120.000	13.410			90.090	
125.000	10.920			92.580	

130.000	8.430	95.070
135.000	6.640	96.860
140.000	6.110	97.390
145.000	5.520	97.980
		0.000
		0.000
		0.000
		0.000