DRAFT

ENVIRONMENTAL IMPACT REPORT

SCH NO. 93012010

STORM WATER MASTER PLAN UPDATE

CITY OF VISALIA

JULY, 1994

PREFACE

This environmental Impact Report (EIR) has been prepared under the auspices of the City of Visalia for the adoption and implementation of an update of the City's existing Storm Water Master Plan and a related amendment to the City's General Plan Land Use Element. The EIR conforms to the requirements of the California Environmental Quality Act (CEQA), CEQA Guidelines, and to the administrative procedures established by the City of Visalia for the preparation and processing of environmental documents. The City of Visalia is designated as the Lead Agency for this project.

This EIR is an informational document, the purpose of which is to provide the general public and appropriate governmental decision makers with a full understanding of the potential environmental effects of the proposed project. The process associated with the review and adoption of an EIR allows the public and decision makers to evaluate the significance of the effects of a project, examine methods of reducing the significance of identified adverse impacts, and consider alternatives to a project.

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1.0 PROJECT DESCRIPTION

The City of Visalia is proposing to adopt and implement an update to the City's 1987 Storm Water Master Plan that identifies the improvements needed to serve the planned land uses of the City's updated Land Use Element (LUE). The master plan "project" also includes an amendment to the City's General Plan Land Use Element that will establish a new "Storm Water Basin" land use category and criteria for locating future basins. The proposed General Plan amendment also will change the designation of sites that were designated for "Conservation" uses (based on the recommendations of the 1987 Master Plan) to other more intensive urban land uses.

PROPOSED STORM WATER MASTER PLAN

With the update of the City's LUE and a significant expansion of Visalia growth boundaries, it became necessary to update the 1987 Master Plan in order to identify the improvements that will be needed to serve the planned land uses of the updated LUE. While the 1987 Plan encompassed approximately 16,000 acres of planning area, including 4,500 acres of undeveloped land, the proposed Plan encompasses the 36,000 acres of land within the recently adopted 2020 UDB.

The proposed Master Plan includes a description of the existing drainage conditions in Visalia, a discussion of the methodology used to evaluate the planned land uses of the 2020 Plan, a discussion of the storm water management alternatives that were considered during the development of the Master Plan, and a description of the improvements that will be needed to serve the land uses of the 2020 Plan. The Master Plan also includes an estimate of the cost of the improvements, a capital improvement program, and a discussion of alternatives for funding the improvements. An overview discussion of these items is presented below.

Methodology

The proposed Master Plan divided the area within the 2020 UDB into eight drainage basins that include the five basins that were established for the 1987 Master Plan and three new basins for areas outside of the 1987 Plan. An evaluation of the runoff that the planned land uses within each drainage basin will generate was performed with U.S. Army Corps of Engineers HEC-1 models. The HEC-1 models that were developed for the 1987 Master Plan were expanded to include land within the 2020 UDB that was not modeled previously and models were developed for the new drainage basins. The runoff evaluation considered design storm events of varying duration and frequency.

Storm Water Management Alternatives

The proposed Master Plan considered two major storm water management alternatives. These alternatives consisted of; 1) detaining runoff in storage basins to reduce peak discharges into conveyance channels; and 2) discharging runoff directly into channels and conveying it downstream. The detention alternative is attractive when conveyance channels have limited capacity and channel improvements are not practical. The major disadvantages are the relatively high land acquisition and basin excavation costs. There also can be safety and aesthetic concerns with storage basins in urban areas.
The conveyance alternative is attractive when channels can be improved if additional

capacity is required. The major advantage of this alternative is that it typically is less expensive than the storage alternative. Channel improvements include widening, lining (with concrete), and partial lining. This alternative is considered unpractical if right-of-way is not available to accommodate needed improvements or if the improvements would effect sensitive riparian habitat.

Recommended Improvements

The proposed Master Plan recommends a combination of "in-town" storage basins, channel improvements, i.e. widening, and pipelines to serve the planned land uses of the updated LUE. The Plan also recommends the use of downstream "terminal" basins for the "ultimate" disposal of the City's storm water. These improvements are described below.

"In-Town" Storage Basins

The Master Plan recommends constructing 13 new storm water storage basins within the City's 2020 UDB in addition to utilizing the City's 16 existing basins and two privately owned basins. It should be noted that construction has already started on three of the recommended new basins. The recommended new "in-town" basins include five basins that were not recommended in the 1987 Master Plan. The proposed Plan also recommends expanding six of the City's existing basins. The existing and proposed "in-town" basins are identified in Table 2-2. The locations of these basins are displayed in Figure 2-3.

The capacity of these "in-town" basins generally was established based on the volume of tributary runoff that would be generated by the 10-year/2-day storm event (with 2.64 inches of rainfall). For the purpose of establishing the size and depth of the new basins, it was assumed that they would be developed as dual-use facilities that also would accommodate recreational activities.

The proposed Master Plan recommends that new development in Visalia's industrial park retain their runoff on-site in basins sized for the 10-year, 10-day storm event (with 4.17 inches of rainfall). This recommendation to retain the industrial runoff on-site was based on water quality, as well as flow rate considerations.

The City's updated LUE designates specific areas for "Conservation" and "Park" uses. Many of these designations were assigned (to storm water basin sites that had been recommended in the 1987 Master Plan) in order to reserve" sites for future basins. In the interest of maintaining consistency with the LUE, most of the basins that were recommended in the 1987 Plan have been perpetuated in the proposed Master Plan although extensive storm water storage capabilities may not have been needed (based on drainage considerations). This practice of perpetuating 1987 Master Plan basins was most evident in the Packwood Creek drainage area.

Pipelines

The proposed Master Plan recommends a total of approximately 300,000 feet of "collector" pipe ranging in size from 18 to 72 inches (in diameter). The recommended pipeline projects include the large-diameter Goshen Drain pipeline along Goshen Avenue that the City expects to complete by early 1995.

Channel Widening

The proposed Master Plan indicates that specific reaches of four conveyance channels will have to be widened in the future in order to accommodate the design flows that will be generated by the planned land uses of the updated LUE. The three channels that the Plan recommends widening are Modoc Ditch, Mill Creek, Persian Ditch, and Cameron Creek, as described below.

Modoc Ditch: Approximately 18,000 feet of the main Modoc Ditch channel between the Road 96 (Roeben Road) alignment and the Modoc Ditch "Overflow" Basin at Road 68 will have to be widened (see Figure 2-3). The bottom width of the channel, which currently is approximately six to seven feet across, will be increased to eight to ten feet at Shirk and to a maximum of 20 feet west of Road 76.

Mill Creek: Approximately 9,600 feet of Mill Creek between Linwood Street and Road 88 will have to be widened (see Figure 2-3). The bottom width of the channel, which currently varies between eight and twelve feet across, will be increased to eighteen to twenty feet.

Persian Ditch: Approximately 700 feet of the Middle Fork of the Persian Ditch immediately downstream of S.R. 99 will have to be widened (see Figure 2-3). The bottom width of the channel, which currently is approximately four to five feet across, will be increased by approximately one to two feet.

Cameron Creek: Approximately 3,500 feet of Cameron Creek immediately upstream of Mooney Grove Park will have to be widened (see Figure 2-3). The bottom width of the channel, which currently is approximately 17 feet across, will be increased to 30 feet.

"Terminal" Basins

The Master Plan recommends the use of "terminal" basins for the ultimate disposal of the storm water runoff that is discharged into conveyance channels. These basins are designed to have sufficient capacity to accommodate the additional volume of runoff that the planned land uses of the updated LUE will generate during a 50-year/10-day storm event. The design basin volume is equivalent to the difference between the post-development volume of runoff and the pre-development volume of runoff that Visalia will generate.

The Master Plan recommends using existing basins downstream of Visalia to serve as the City's "terminal" basins (see Figure 2-3). These basins, which typically are owned by private ditch companies or public districts, will be expanded, as necessary, to accommodate the City's runoff. However, Mill Creek does not have an existing "terminal" basin in close proximity to Visalia that can be used by the City to dispose of runoff discharged into the channel. Therefore, the Master Plan recommends the construction of a new Mill Creek "terminal" basin near the City's wastewater treatment plant.

Estimated Cost of Improvements

The total cost of the proposed Master Plan improvements is $38.2 million. A breakdown of this total is as follows:

o	Existing Deficiencies	$5.2 million
o	Industrial Park	$2.6 million
o	Urban Reserve areas	$4.6 million
o	Future (non-industrial) Development	$25.8 million
	Total:	$38.2 million

The industrial park and existing deficiency improvements are shown as separate cost items because these improvements will be funded separately from the future non-industrial improvements. The improvements for Urban Reserve areas, which are undesignated areas outside of the 2010 UDB, are shown as a separate cost item because they will not be funded at this time.

Alternatives for Funding Improvements

The proposed Master Plan improvements that will serve future non-industrial development will be funded with a combination of developer impact fees and an increase in the city-wide monthly utility rates. The City Council recently endorsed a plan in which 75% of the improvement costs would be funded with impact fees and the remaining 25% of the costs would be funded with an increase in the monthly utility rates.

The City intends to fund the improvements needed to upgrade the identified existing deficiencies entirely with an increase in the monthly utility rates, while the industrial park improvements will be entirely funded with developer impact fees. The impact fees needed to fund the improvements will be adopted after the proposed Master Plan is adopted. The increase in the monthly utility rates will be implemented in 1995.

The plan endorsed by the Council would result in a single-family residential impact fee of $1,885 per acre and a monthly rate increase of $1.21 per residential unit (including $0.54 for the cost of improvements to upgrade existing deficiencies). The City's current storm drain residential impact fee is $4,497 per acre.

GENERAL PLAN AMENDMENT

The proposed General Plan Amendment (GPA) will: 1) establish a new "Storm Water Basin" land use category and symbolize the generalized location of planned basins on the LUE Map; and 2) change the designation of selected "Conservation" sites to other urban uses. Further discussion of each component of the proposed GPA is provided below.

New "Storm Water Basin" Land Use Category

Although the City's updated LUE attempted to facilitate the implementation of the City's 1987 Storm Drain Master Plan with the designation of recommended basin sites for "Conservation" uses, the LUE does not explicitly state that storm water basins have to be located on sites designated for "Conservation" uses. As a result, while the City has located new basins on "Conservation" sites in recent years, basins also have been constructed on sites designated for other uses.

In the interest of facilitating the implementation of the proposed Master Plan (and future updates of the Plan), the proposed GPA will establish a new "Storm Water Basin" land use category (under the "Community Facilities" designation) and establish criteria for locating future basins. The proposed "Storm Water Basin" use includes basins that will be used to store storm water runoff either on a retention or detention basis. The proposed locational criteria for future basins are as follows:

- Symbols shall be added to the LUE Map to represent the generalized location of new basins recommended in the Master Plan and future updates of the Master Plan. Each basin symbol generally should be located within the boundaries of the area it is expected to ultimately serve. (Refer to Figure 2-4 for the location of the proposed LUE Map basin symbols).

- The final location of each symbolized basin shall be based on a number of factors, including hydraulic considerations, land costs, improvement costs, surrounding land uses, property owner cooperation, and the sequencing of development within the service area of the basin. The final location of each planned basin shall be approved by the City Engineer before all viable sites have been developed. As a guideline, the final location of a basin should be determined by the time 30 to 50 percent of the basin's service area has been built-out.

- Unplanned basins not symbolized on the LUE Map can be constructed for temporary or permanent use in developing areas regardless of the underlying land use designation provided that the basins will serve as viable alternatives to the recommendations of the Master Plan.

  Alternatives shall be developed and maintained in accordance with City Policies and Standards, and not have a significant adverse effect on the environment. The construction of all non-master planned basins shall be subject to the approval of the City Engineer.

- Following the construction of a new basin, the approximate boundary of the basin site shall be delineated on the LUE Map and the site designated for either "Park-Basin" uses (under the "Open Space" designation) or "Water Storage Basin" uses (under the "Community Facilities" designation). Basins with an established or planned park use will be designated for "Park-Basin" uses, while basins that are used strictly for water storage purposes with no planned park uses will be designated for "Water Storage Basin" uses. The post-construction designation of basins shall be done administratively by City staff as part of the City's on-going Map update process.

- The symbols for unconstructed planned basins shall be removed from the LUE Map if the City determines in the future that planned basins will not be needed (to serve the planned land uses) based on hydraulic, funding, and land development considerations. The removal of basin symbols from the LUE Map shall be done administratively by City staff as part of the City's on-going Map update process.

It should be noted that while the intent of the proposed "Storm Water Basin" symbols is to represent the location of new planned basins, symbols also are used (on Figure 2-4) to denote the recommended expansion of two existing basins on the north side of

Packwood Creek near Mooney Boulevard. These two basin expansions are "symbolized" because the recommended expansions consist of constructing significantly larger new basins south of Packwood Creek (opposite the existing basins). Existing development around the existing basins effectively precludes their expansion north of the channel. However, it also should be noted that the proposed Master Plan indicates that as an alternative to expanding these two basins, it appears that the flows that would be accommodated by the expansions could be discharged directly into the channel without being routing through the basins.

The City also is proposing to establish two other new land use categories that will be applied to planned basin sites (following the construction of the basins, as discussed above) and existing basin sites that currently are designated for "Conservation" uses (as discussed below). The new land uses are "Park-Basin" (under the "Open Space" designation) and "Water Storage Basin" (under the "Community Facilities" designation). Basins with an established or planned park use will be designated for "Park-Basin" uses, while basins that are used strictly for water storage purposes with no planned park uses will be designated for "Water Storage Basin" uses.

Re-designation of "Conservation" Sites

The City's updated LUE designates specific areas for "Conservation" uses. As discussed above, many of these "Conservation" designations were assigned to reserve sites for storm water basins that had been recommended in the 1987 Master Plan. Because the first component of the proposed GPA will establish a new "Storm Water Basin" land use category and symbolize the generalized location of planned basins on the LUE Map, there is no need to retain the "Conservation" designations that reserve sites for future basins. Therefore, the City is proposing to re-designate 11 undeveloped sites that were designated for "Conservation" uses based on the recommendations of the 1987 Master Plan. The "Conservation" designations will be replaced with more intensive urban uses that are compatible with the surrounding planned land uses and consistent with the policies of the LUE.

The City also is proposing to re-designate existing storm water basins that currently are designated for "Conservation" uses. The "Conservation" designations will be replaced with new uses that more accurately reflect the designated recreational uses of the existing basins.

Further discussion of the proposed re-designation of undeveloped 1987 Master Plan basin sites and existing basins that currently are designated for "Conservation" uses is presented below.

Re-designation of Undeveloped Basin Sites

The unconstructed basin sites that were recommended in the 1987 Master Plan that the City is proposing to re-designate are identified in Table 2-4 (along with the proposed land uses). Refer to Figure 2-4 (a-c) for the location of the "Conservation" areas that the City is proposing to re-designate.

The proposed re-designation areas include approximately 100 acres of land adjacent to an existing Modoc Ditch water storage basin located north of Riggin Avenue on the Linwood Road alignment. The 60-acre basin and the adjoining 100 acres were designated for "Conservation" uses because, in part, the 1987 Master Plan recommended that water from a planned basin at Demaree and Ferguson should be pumped to the basin. However, because the proposed Master Plan does not

recommend expanding the Modoc Ditch basin, there is no need to retain the "Conservation" designation on the adjoining 100 acres of land.

The re-designation also includes a 10-acre site located immediately west of Ben Maddox and south of Walnut. The basin that the 1987 Master Plan recommended constructing at this site actually was constructed approximately 1,500 feet west of the site. Therefore, there is no need to retain the "Conservation" designation at the site.

"Conservation" designations that were assigned to sensitive habitat areas, such as the "hobo jungle" along Jennings Ditch north of Mill Creek, are retained.

It should be recognized that because the proposed Master Plan perpetuates many of the basins that were recommended in the 1987 Master Plan, it is likely that basins will be constructed at or in the vicinity of most of the "Conservation" areas that will be re-designated. The proposed Master Plan recommends the construction of new basins, the use of an existing basin, or the expansion of an existing basin in the vicinity of eight of the eleven re-designation sites.

Although it is not included in the proposed GPA, another existing "Conservation" area that was established based on the recommendations of the 1987 Master Plan is the 20-acre site at the southwest corner of Demaree and Ferguson. This site was designated for "Conservation" uses because the 1987 Master Plan recommended a large basin at that site to detain flows from a proposed large-diameter collection line in Goshen Avenue (east of Mooney Boulevard). Storm water stored in this basin would be pumped to an existing Modoc Ditch basin north of Riggin. The proposed Master Plan recommends extending the planned collection line west along Goshen Avenue to serve new development in the Goshen Avenue Drainage Area and discharging the line into the Goshen "Ocean" near Road 76. Flows in the line will be routed through the two planned detention basins along Goshen Avenue (between Demaree and Shirk). Therefore, because the two planned basins on Goshen Avenue collectively serve a similar purpose as the recommended Demaree at Ferguson basin, a basin is no longer needed at that site. However, this site has not been included in the proposed GPA because it was redesignated for LDR uses during the preparation of this document with a separate GPA.

Re-designation of Existing Basins

The City is proposing to re-designate a total of eight existing "Conservation" storm water basins for either "Park-Basin" uses (under the "Open Space" designation) or "Water Storage Basin" uses (under the "Community Facilities" designation). Basins with an established or planned park use will be designated for "Park-Basin" uses, while basins that are used strictly for water storage purposes with no planned park uses will be designated for "Water Storage Basin" uses. The existing basins that the City is proposing to re-designate are identified in Table 2-5, as are the proposed new land use designations.

It should be noted that the proposed re-designation of existing storm water basins is considered a "paper" change that is not expected to change the existing or planned uses of the sites or have adverse environmental impacts.

2.0 POTENTIAL SIGNIFICANT PROJECT IMPACTS AND MITIGATION MEASURES

There are five identified potentially significant impacts that are directly attributable to the implementation of the proposed Master Plan: (1) Deterioration of air quality due to the generation of dust during the construction of improvements; (2) Accumulation of storm water runoff contaminants in storage basin soils; (3) Increased channel "seepage" losses during the irrigation season; (4) Disturbance of potential kit fox habitat; and (5) Disturbance of valley oak trees and other riparian habitat.

In addition to the identified potentially significant impacts, the City is proposing mitigation measures for two potential impacts that are not considered significant. These impacts, which relate to the loss of farm land and growth inducing pressures, and the recommended mitigation measures also are described below.

Potential Impact: Deterioration of air quality during construction of improvements

During the construction of the proposed basins, the excavation and grading of the soil may result in suspended dust particles, particularly under windy conditions. The rate of dust generation depends upon soil moisture, clay content, wind speed, and activity level. Dust generated during the installation of the lines may contribute to PM10 levels that exceed short-term standards established by the State Air Resources Board. The proposed widening of channels and installation of Master Plan pipelines also may generate dust that increases ambient PM10 levels.

Mitigation: The City shall implement the dust suppression measures recommended by the Jan Joaquin Valley Unified Air Pollution Control District (see Section 3.4.3).

Residual Impact: With the recommended mitigation measures, the potential impact is reduced to a level of insignificance.

Potential Impact: Accumulation of storm water runoff contaminants in storage basin soils

As runoff is retained in basins and disposed of by infiltration and evaporation, heavy metals and other contaminants that may be present in the runoff can accumulate in the bottom soils over time. The greatest potential for the accumulation of contaminants is expected to be in the deep portions of the basins that retain nuisance runoff and runoff from low intensity storms.

Mitigation: The City shall establish a program to monitor the bottom soils in storm water basins to determine if unacceptable concentrations of contaminants are accumulating at the bottom of the basins. As necessary, the bottom soils shall be removed and disposed of in an environmentally sound manner. The recommended monitoring program shall be established and implemented within 12 months of the City's submittal of an application for coverage under the State's General Permit for municipal storm water discharges.

Residual Impact: With the recommended mitigation measures, the potential impact is reduced to a level of insignificance.

Impact: Increased channel "seepage" losses during the irrigation season

The proposed widening of four conveyance channels is expected to result in an increase in "seepage" losses during the irrigation season. This increase in channel losses includes a short-term increase due to an increase in permeability (of the soils in channel) immediately following widening of the channel and a long-term increase due to a greater "wetted" perimeter. The short-term losses should diminish with time as the newly graded sediments stabilize and the banks "seal" back up. The potential increase in channel losses most likely will impact the Modoc Ditch and Persian Ditch channels and the irrigators that receive ditch water downstream of the channel reaches that the Master Plan recommends widening.

Because the Mill Creek channel widening will occur downstream of the diversion headgate for the Persian-Watson Ditch system and historically there has been little irrigation with Mill Creek water downstream of the headgate, a potential increase in water losses on Mill Creek should not have a significant impact on downstream water users. The water losses in Cameron Creek also should not have a significant impact on irrigators because there are no established non-riparian water rights on the channel and water generally only is diverted into the channel for recharge purposes when excess flows are available on the Lower Kaweah River system.

Mitigation: As mitigation for the expected increase in water losses in Modoc Ditch and Persian Ditch during the irrigation season, the City shall compensate the ditch companies in accordance with the terms of the recent agreements between the City and the ditch companies.

Residual Impact: With the recommended mitigation measure, the potential impact is reduced to a level of insignificance.

Impact: Disturbance of potential kit fox habitat

The recommended "terminal" basin sites are within or in close proximity to the identified "potential kit fox habitat" area along S.R. 99. Therefore, the construction of a new basin and the expansion of existing basins potentially could impact kit fox habitat.

Mitigation: The City shall conduct pre-construction biological surveys at the site of the proposed new Mill Creek basin and the sites of the existing basins that the Master Plan recommends expanding. If the survey results indicate that the sites provide habitat for kit fox or other sensitive species, the City shall consult with the Department of Fish and Game to develop plans to construct/expand the basins without adversely effecting the animals.

Residual Impact: With the recommended mitigation measures, the potential impact is reduced to a level of insignificance.

Impact: Disturbance of valley oak trees and riparian habitat

The proposed widening of channels potentially could impact valley oak trees and other riparian habitat, particularly along Mill Creek, Persian Ditch, and Cameron Creek.

Mitigation: The City shall conduct pre-construction biological surveys of the channel segments that the City intends to widen. Based on information obtained during the surveys, the City shall develop widening plans that accommodate mature oak trees to the greatest possible extent and reduce the impact to other significant habitat.

Prior to commencing construction, the City shall notify DFG of its intention to widen the channels and apply, as necessary, for a Stream Restoration Permit. During construction, the City shall comply with the measures identified in the Permit.

In the event that any oak trees are removed or severely damaged during the widening of the channels (or any other actions related to the implementation of the proposed Master Plan), the City should plant and maintain a minimum of three oak trees as mitigation for each tree that is removed or damaged.

Residual Impact: With the recommended mitigation measures, the potential impact is reduced to a level of insignificance.

Impact: Loss of farm land

The proposed construction of new "in-town" basins, expansion of existing "in-town" basins, and "terminal" basin construction/expansion will result in the loss of approximately 175 acres of farm land, including 125 acres adjacent to "terminal" basin sites. However, as discussed in Section 3.2.2, this loss of farm land is not considered significant.

Mitigation: Although the loss of farm land that will occur as a result of the project is not considered significant, the City is proposing the following mitigation measure: When the City acquires farm land for the purpose of developing a future basin and the basin will not be constructed for a least one year following the acquisition, the City shall allow the property owner (or other interested individuals) to continue farming the site until such time as the basin is needed to serve surrounding development projects.

Residual Impact: The identified loss of farm land impact is less than significant.

Impact: Growth inducing pressures

The proposed Master Plan generally is not expected to have significant potential growth-inducing impacts because most of the recommended improvements only will serve a relatively small area and there should not be pressures to construct the improvements until the land within the service area is ready to develop. Refer to Section 3.2.2 for further discussion of the potential growth inducing impacts of the project.

Mitigation: Although the growth inducing impacts of the project are not considered significant, the following mitigation measure is proposed: The City shall resist pressures to prematurely develop lands that can be served by installed Master Plan improvements by

adhering to the growth phasing policies of the updated LUE. Refer to Section 3.2.3 for further discussion of the growth phasing policies contained in the LUE.

Residual Impact: The growth inducing impact of the project is less than significant.

3.0 POTENTIAL SIGNIFICANT CUMULATIVE IMPACTS

The cumulative impacts attributable to the development of the planned land uses of the updated LUE are described in the LUE EIR. These updated LUE impacts, which are considered "indirect" impacts of the Master Plan, are referenced in Section 3.0 of this document, as are the LUE EIR mitigation measures.

The LUE EIR indicates that with the implementation of the recommended mitigation measures, many of the cumulative impacts are reduced to a level of insignificance. The potential cumulative LUE impacts that can not be mitigated to a level of insignificance are as follows:

- Loss of approximately 13,000 acres of farm land to the development of urban land uses.
- Creation of conflicts between agricultural activities and adjacent urban land uses.
- Increase in vehicle traffic and congestion.
- Generation of substantial levels of mobile source air pollutant emissions and a corresponding decrease in local air quality.
- Increase in ground water pumping that may contribute to a long-term overdraft condition.
- Loss of habitat for various wildlife species by urban development.
- Increase in ambient noise levels which may affect potentially sensitive land uses.

4.0 PROJECT ALTERNATIVES

There are two identified alternatives to the proposed project that provide different approaches to managing the storm water runoff that will be generated from future development. The first alternative involves the adoption and implementation of a long-term storm water master plan that recommends the extensive use of "in-town" storage basins (with reduced direct discharges to the channels that convey the storm water beyond Visalia). The second master plan alternative recommends discharging runoff from future development directly into the conveyance channels (with minimal use of "in-town" storage basins). A discussion of these alternatives, as well as a "no-project" alternative, as required by CEQA, is presented below.

The discussion of project alternatives does not consider alternative locations for the planned "in-town" basins because precise locations have not been determined at this time. The proposed General Plan Amendment will establish the "generalized" basin locations on the LUE Map and criteria for subsequently selecting the final location of each planned basin. The project alternatives discussion also does not consider alternative "park" uses for the planned basins because the proposed uses were tentatively established for the purpose of determining the total development cost of the basins. The actual configuration, depth, and recreational use of each planned basin will be determined in the future based on recreational "needs" in the vicinity of the park and the availability of funding to construct and maintain park improvements.

Alternative No. 1 - Increased "In-Town" Storage

Project Alternative No. 1 consists of the adoption and implementation of a long-term master plan that recommends the extensive use of "in-town" storage basins to serve the planned land uses of the updated LUE. This approach would result in less direct discharges into the conveyance channels used by the City and reduced peak storm water flows in the channels.

The primary potential benefit of increased storage is that the conveyance channels can better accommodate the reduced storm water flows (without an increase in their capacity). This is particularly important if it would be difficult to widen the channels because of limited right-of-way, the presence of significant habitat resources or other constraints along the channel. Other potential benefits of an increase in the use of "in-town" storage basins include an increased opportunity for groundwater recharge and additional open space/park area in the community.

However, with respect to groundwater recharge opportunities, the additional volume of runoff that could be "captured" with additional basins is not expected to be significant, particularly when compared with Visalia's annual water demand (see Section 3.6) and the hydrologic cycle on the Kaweah River system. Therefore, the potential benefit to groundwater conditions in the immediate vicinity of Visalia that could be derived from additional basins are expected to be somewhat limited. It should be noted that City storm water discharges generally are conveyed downstream and either stored in recharge basins (that are operated by local water interests) or applied to farm lands. This means that much of the Visalia runoff that is discharged into conveyance channels has an opportunity to replenish the regional groundwater aquifer, which can result in indirect benefits to the groundwater conditions in the Visalia area.

It also should be noted that most of the City's existing basins are designed to be operated as detention facilities that are drained within one or two days of each storm event and this short-term detention generally does not provide sufficient holding time to have any significant recharge occur. The City historically has been reluctant to construct basins that can be used for retention purposes because retention basins require more capacity (and typically more land) than detention basins, and detention basins generally can more readily be used for recreational activities than retention basins. In addition, there have been safety and aesthetic concerns with dedicated retention basins in the community.

With respect to the issue of additional open space/park area, there could be an increase in open space/park acreage in the community if the number of "in-town" basins was increased. However, that the City's COSPR Element established a population-based acreage standard for open space/park land in Visalia and the subsequent

update of the LUE provides the acreage needed to comply with the standard. Therefore, additional unplanned open space/park land is not needed in Visalia in order to comply with the community's open space/park land standard. Furthermore, additional open space/park land would mean increased maintenance costs for the City.

The primary downside with the "increased storage" alternative plan is its relatively high land and construction costs. This potentially is significant because increased master plan improvement costs translate to higher development impact fees which impacts the affordability of housing in the community. The "increased storage" alternative plan also will result in higher on-going maintenance costs if pumps are used and the basins have landscaping that requires regular maintenance.

In conclusion, the "increased storage" alternative plan generally is expect to have environmental consequences that are not significantly different than the consequences associated with adoption and implementation of the proposed Master Plan (with implementation of the identified mitigation measures). However, the alternative plan would have higher construction and maintenance costs than the proposed Plan.

Alternative No. 2 - Direct Discharge to Conveyance Channels

Project Alternative No. 2 consists of the adoption and implementation of a long-term master plan that recommends discharging runoff from future development directly into the conveyance channels utilized by the City with minimal use of "in-town" basins. This approach to storm water management generally would result in higher storm water flows in the conveyance channels used by the City, which could necessitate a need to increase the capacity of the channels in order to accommodate the increased flows.

The primary benefit of this alternative is a substantial reduction in the cost of the improvements needed to serve the planned land uses of the updated LUE, specifically reduced "in-town" basin costs. Because storm water would be discharged directly to the conveyance channels without routing the water through "in-town" basins, the number of new basins that are needed and the number of existing basins that have to be expanded to serve future development could be reduced. This reduction would result in a savings in the initial land, excavation, and landscaping costs and the on-going cost of maintaining the basins.

However, it should be recognized that the widening of a channel to increase its capacity may not be feasible due to limited right-of-way, the encroachment of improvements, undersized culverts, the presence of sensitive riparian habitat, or resistance from adjoining property owners. If any of these constraints preclude the widening of a channel, the peak rate of City discharges can not exceed the existing capacity of the channel.

Because many of the constraints identified above exist along the channels that receive City storm water discharges, it would be difficult to implement the "direct discharge" alternative on a large-scale. The proposed Master Plan has recommended the "direct discharge" approach where the existing conditions along the channel make it feasible. These conditions primarily occur in areas that have not been developed with urban uses.

Other environmental issues associated with this alternative include the loss of groundwater recharge opportunities, loss of open space/park land in the community, and an increase in irrigation water losses. With regard to groundwater recharge, a reduction in the number of "in-town" basins potentially means that there are less

opportunities to "hold" runoff for recharge purposes. However, the volume of storm water runoff from new development that would not be "captured" (with a reduction in basins) is not expected to be significant.

Furthermore, as discussed above, storm water generally has to be stored in a basin for an extended period of time in order to obtain maximum recharge benefits. Based on current City policies, it is expected that most of the future basins constructed by the City will be designed and operated as detention basins that provide a relatively short holding time for storm water. These considerations mean that a reduction in the number of future basins should not result in significant adverse groundwater recharge impacts.

With a reduction in the number of "in-town" basins, there could be loss of open space/park land in the community because it is expected that many of the City's future basins also would serve as park facilities. However, as discussed previously, the LUE designates future park sites (in compliance with the COSPR Element park land standard) and parks can be developed at these sites regardless of whether storm water basins are constructed.

The widening of the channels used by the City could result in an increase in seepage losses that would potentially impact deliveries to downstream irrigators. There will be short-term losses that occur due to the disturbance of the soil and long-term losses that occur due to the increased "wetted" perimeter of the channels. The magnitude of the short-term losses should diminish as the newly cut sediments stabilize and the banks "seal" back up. However, the City intends to compensate ditch companies that incur water losses due to City activities in accordance with the terms of agreements between the City and local water interests. Therefore, the potential water loss impacts associated with the widening of channels are not expected to be significant.

In conclusion, implementation of the "direct discharge" alternative plan on a large scale is considered infeasible due to the lack of right-of-way, the presence of significant habitat, and other constraints along the channels. The other identified environmental issues associated with this alternative are not considered significant.

"No Project" Alternative

With the "no project" alternative, the proposed Master Plan would not be adopted and the recommended improvements would not be constructed. Without an updated master plan, it is likely that the recommendations of the 1987 Master Plan would be implemented as development occurred within the boundaries of its planning area, which is significantly smaller than the area within the City's 2020 UDB. As development occurred outside of the planning area of the 1987 Master Plan, it is likely that improvements would be planned and constructed on a project-by-project basis.
As Visalia grows, the risks associated with future development without a city-wide comprehensive master plan increase. Without the large-scale coordination that a master plan provides, there potentially could be a proliferation of small basins that only serve individual development projects, which would represent a distinct change in the City's current policies on storage basins.

It also is more likely that as development occurs, the City's discharges could exceed the capacities of the channels, and trunk lines that are expected to serve future development may be undersized to accommodate all of the runoff that the planned land uses will generate. In addition, without a long-range capital improvement program, it may be difficult for the City to establish an impact fee schedule that will consistently fund the total cost of individual projects.

In the event that "no project" alternative results in a partial or full moratorium on future development (beyond the planning area of the 1987 Master Plan), the direct impacts attributed to the implementation of the Master Plan would be substantially reduced. In addition, the indirect and cumulative impacts associated with development of the planned land uses of the 2020 Plan would be significantly reduced, if not avoided entirely. However, a moratorium also would potentially result in a tightening of the local housing market, an increase in housing costs, and a reduction in economic growth and employment opportunities.

In the event that the "no project" alternative results in the installation of improvements on a project-by-project basis (as the planned land uses develop), the individual projects would have comparable environmental consequences as the proposed Master Plan projects. The individual projects also would have many of the same "indirect" impacts as the Master Plan projects.

"Environmentally Superior" Alternative

The CEQA Guidelines require that an EIR identify the "environmentally superior" alternative. Of the alternatives considered, the environmentally superior alternative is the "No Project" Alternative with a moratorium on development (outside of the planning area of the 1987 Master Plan) because, as discussed above, the direct and indirect impacts associated with the implementation of the Master Plan would be largely eliminated.

Of the remaining alternatives, the proposed Master Plan and the Alternative Project with an increased use of "in-town" basins, which have comparable direct impacts, are considered the superior alternatives. However, as discussed above, the cost of implementing the proposed Master Plan is significantly lower than the cost of the implementing the "increased storage" alternative. The indirect and cumulative impacts associated with these alternatives also are comparable.

The "No Project" Alternative without a moratorium is considered somewhat inferior to the two alternatives identified above because it lacks a comprehensive approach to serving the planned land uses of the updated LUE (outside of the planning area of the 1987 Master Plan). As discussed above, this alternative could result in a proliferation of small storage basins that cannot be developed into parks because of their size and could become an "eyesore" because they are not adequately landscaped and maintained. In addition, this alternative could result in less efficient drainage conditions in the community and adversely effect downstream land owners. The Alternative Project with a master plan that recommends discharging runoff from new development directly to conveyance channels with minimal use of new "in-town" storage basins, is considered infeasible on a large-scale due to constraints that preclude comprehensive widening of the channels.

1.0 INTRODUCTION

1.1 OVERVIEW

In September of 1991, the City of Visalia adopted an updated Land Use Element (LUE) to its General Plan. The updated LUE established development boundaries for the community (through the year 2020) and the distribution of residential, commercial, industrial, open space, and institutional uses within those boundaries. To ensure that development of the planned land uses is not restricted by infrastructure constraints, the LUE (also referred to as the 2020 Plan) contains a specific policy pertaining to the update of the City's existing Storm Drainage Master Plan, which was prepared prior to the update of the City's LUE. Policy 5.1.11 of the LUE states "Revise and amend the existing Storm Drainage Master Plan to ensure compatibility with the Land Use Element."

In response to this policy, the City has updated the existing Master Plan to identify the improvements that will be needed to serve the planned land uses of the update LUE. The Master Plan presents a Capital Improvement Program that details the timing and costs of the improvements.

Pursuant to Section 15378 of the California Environmental Quality Act (CEQA) Guidelines, the adoption of such a master plan is defined as a "project" and it must meet the requirements of CEQA. To assess the potential significance of the proposed project, the City of Visalia, lead agency for the project, prepared an Initial Study. The findings of the Initial Study (see Appendix A) suggested that the project could have a significant adverse impact on the environment. Based on this finding, the City elected to prepare an EIR for the project.

1.2 RELATIONSHIP TO LAND USE ELEMENT EIR

An EIR (State Clearinghouse No. 90020160) was prepared for the adoption of the City's updated Land Use Element. The LUE EIR serves as a "master" or "program" EIR for future development projects in the Visalia area by providing an evaluation of the cumulative impacts associated with implementation of the updated LUE. This allows environmental documents for subsequent related projects (such as implementation of the updated Storm Water Master Plan) to focus on environmental issues that were not addressed in the "master" EIR and reduce the need for further analysis of cumulative impacts.

The City has determined that the LUE EIR adequately evaluated the cumulative impacts (of the updated LUE) that are indirectly associated with implementation of the updated Master Plan. However, the LUE EIR did not address the potential impacts that are directly attributable to the construction of the recommended Master Plan improvements. Therefore, the focus of this document is the direct impacts of the updated Master Plan. The LUE EIR evaluation of the cumulative impacts of the 2020 Plan is incorporated herein by reference.

1.3 TIERED EIR

This EIR has been prepared as a "tiered" EIR, as permitted under Section 15152 of the CEQA Guidelines. The tiering concept promotes efficiency in the environmental assessment process by focusing review on the issues which are relevant to the project under consideration. This EIR, as the first "tier", provides a general evaluation of the impacts that are directly attributable to the construction of Master Plan improvements.

Subsequent "second tier" environmental documents for future improvement projects (not defined at this time) will address project-specific issues that were not adequately addressed in this "first tier" document. There would be no need to repeat the discussion of issues that are adequately addressed in the "first tier" document.

1.4 SCOPE OF THE EIR

In January, 1993, the City of Visalia prepared and distributed a Notice of Preparation (NOP) for this EIR, inviting responsible agencies and other interested parties to comment upon the scope of the environmental analysis. A copy of the NOP is presented in Appendix A and copies of the comments received by the City are presented in Appendix B. Based on the findings of the NOP Initial Study and the NOP comments, the City determined that the Draft EIR should focus on the following environmental issues:

- Land Use
- Population and Housing
- Traffic/Circulation
- Air Quality
- Water Resources
- Biological Resources
- Noise
- Aesthetic/Visual Resources
- Public Services
- Cultural/Historical Resources

1.5 ORGANIZATION OF THE DRAFT EIR

Section 2.0 provides a detailed description of the proposed project. Section 3.0 presents a comprehensive description of the existing environmental setting in the project area, an evaluation of the potential environmental impacts of the project, and mitigation measures that are intended to minimize the significance of the identified adverse impacts. Section 4.0 contains a description of the project alternatives. Section 5.0 describes the consequences of project implementation, including significant effects which cannot be avoided, short-term versus long-term productivity, and effects related to the growth-accommodating aspect of the project.

1.6 INTENDED USE OF THE EIR

This EIR is intended to serve as the environmental document for the adoption and implementation of the proposed Sewer Master Plan. It is subject to review by four types of agencies: "lead agencies:, "responsible agencies", "trustee agencies", and "review agencies".

Lead Agency

The City of Visalia, which has the responsibility for adopting and implementing the proposed Master Plan, is the "lead agency" for the project. As the "lead agency", the City is responsible for the CEQA public review process.

Responsible Agencies

The CEQA Guidelines define "responsible agencies" as agencies having discretionary permitting authority or approval power over a project. There are no identified "responsible agencies" for the proposed project.

Trustee Agencies

"Trustee Agencies" are the State agencies that have jurisdiction over natural resources that are affected by the project. They may recommend denial of aspects of the project that adversely impact their areas of interest. The State Department of Fish and Game and the State Water Resources Control Board are "trustee" agencies.

Reviewing Agencies

"Reviewing agencies" include local and State agencies that have jurisdiction over resources that may be affected by the project. The following agencies are considered "reviewing agencies":

- San Joaquin Valley Unified Air Pollution Control District
- Tulare County Planning and Development Department
- Tulare County Public Works Department
- Kaweah Delta Water Conservation District
- Tulare Irrigation District
- Evans Ditch Company
- Modoc Ditch Company
- Persian Ditch Company
- Watson Ditch Company

1.7 PUBLIC REVIEW OF THE DRAFT EIR

This Draft EIR will be circulated to local agencies and State agencies (through the State Clearinghouse) for a period of 45 days. Copies of the Draft EIR will be available for public review and comment during the review period at the following locations:

City of Visalia (Public Works Department)
707 W. Acequia
Visalia, CA 93291

Tulare County Library (Visalia Branch)
202 W. Oak Street
Visalia, CA 93291

The Visalia Planning Commission and City Council will each conduct a public hearing for the purpose of receiving comments on the Draft EIR. The date, time, and location of the public hearings will be published in the Visalia Times-Delta.

2.0 PROJECT DESCRIPTION

2.1 OVERVIEW

The City of Visalia is proposing to adopt and implement an update to the City's 1987 Storm Water Master Plan that identifies the improvements needed to serve the planned land uses of the City's updated Land Use Element (LUE). The master plan "project" also includes an amendment to the City's General Plan Land Use Element that will establish a new "Storm Water Basin" land use category and criteria for locating future basins. The proposed General Plan amendment also will change the designation of sites that were designated for "Conservation" uses (based on the recommendations of the 1987 Master Plan) to other more intensive urban land uses.

2.2 LOCATION AND ENVIRONMENTAL SETTING

The City of Visalia is located in the northwestern portion of Tulare County near the western foothills of the Sierra Nevada Mountains. Tulare County is situated in the southeastern portion of the San Joaquin Valley, immediately south of Fresno County and north of Kern County. State Route 99, passing at the western edge of the City, and State Route 198 are the major access routes to Visalia.

Visalia is situated on an alluvial fan of the Kaweah River, which drains over 500 square miles on the western slope of the Sierra Nevada Mountains. The river is regulated by Terminus Dam in the foothills east of Visalia. Downstream of the dam, the Kaweah River forms a complex distributary channel system. Several of the distributary channels traverse Visalia as they flow in a westerly direction toward the Tulare Lake Basin in the Kings County. These channels are used to distribute flood control and irrigation releases from Terminus Dam.

The combination of rich alluvial soils, favorable climate, and the availability of irrigation water have made much of Tulare County, and the area surrounding Visalia in particular, a productive agricultural area. Almost all of the undeveloped land surrounding Visalia is in agricultural production.

2.3 PLANNING AREA GROWTH BOUNDARIES.

The Planning Area for the Storm Water Master Plan includes all of the area within the City's 2020 Urban Development Boundary (UDB), as established in 1991 with the update of the General Plan Land Use Element. The planned land uses within the 2020 UDB, which encompasses approximately 55 square-miles (36,000 acres), are expected to accommodate a projected population of 165,000 (see Figure 2-1).

The City's 2020 Plan also established intermediate urban development boundaries. The 2000 UDB, which encompasses approximately 24,000 acres, is expected to accommodate a projected population of 98,700. A total of 28,700 acres are contained within the 2020 UDB, which is expected to accommodate a population of 129,000. The 2020 Plan Urban Area Boundary (UAB), which encompasses approximately 58,000 square miles, provides an open space buffer around the planned land uses within the 2020 UDB.

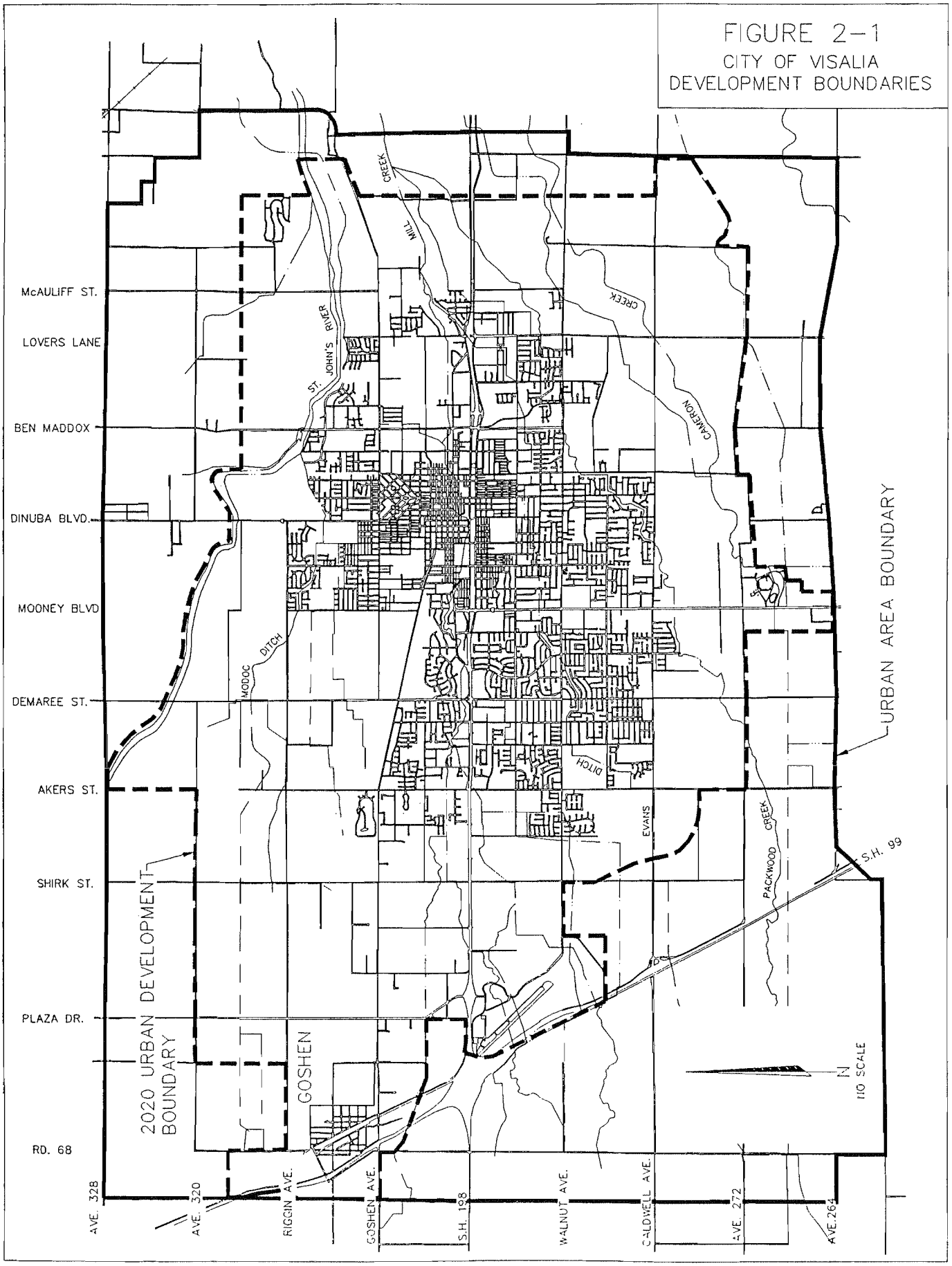


FIGURE 2-1
CITY OF VISALIA
DEVELOPMENT BOUNDARIES

2.4 STORM WATER MANAGEMENT BACKGROUND

Historically, the City has disposed of storm water runoff by directing it to the distributary channels of the Kaweah River system that traverse Visalia. These channels include natural channels operated by public districts and ditch channels owned and operated by private ditch companies. The channels used by the City also are used by the districts and ditch companies to convey irrigation and flood control waters released from Terminus Dam, to lands downstream of Visalia.

If a storm event in Visalia coincided with releases from Terminus Dam (or flows from an uncontrolled source upstream of Visalia) that were routed through Visalia, the City's discharges generally could not exceed the remaining capacity that was available in the channels. This practice worked for many years because the City's cumulative discharges were relatively low and Kaweah Delta Water Conservation District (KDWCD), which regulates flows on the Kaweah River system, attempted to limit the amount of water that was diverted to channels that received City discharges when it rained in Visalia.

However, as Visalia grew and the rate of storm water discharges into the channels increased, it was recognized that when the channels have to be simultaneously used by the City and the operating districts/companies, the potential for the combination of City discharges and irrigation/flood control flows exceeding the capacity of the channels increased. It was also recognized that the City's discharges alone potentially could exceed the capacity of some channels.

In order to reduce the potential for situations in which the capacity of the channels would be exceeded by the City's direct discharges, the City established a policy of routing storm water runoff from new development through storage basins. By detaining the runoff in basins, the discharge rate into the receiving channels could be substantially reduced.

The City incorporated this detention basin policy into Visalia's initial Storm Drain Master Plan, which was adopted in 1987. This Plan encompassed approximately 16,000 acres, including 4,500 acres of undeveloped land that was designated for development within the City's Urban Improvement Boundary (prior to the 1991 update of the LUE). The industrial park area in northwest Visalia was not included in the 1987 Plan. It addressed existing and future drainage conditions and evaluated a wide range of improvement alternatives including dual use park-pond facilities, upstream storage basins to decrease flows entering Visalia, and downstream improvements to fully utilize the conveyance capacity of the channels that traverse Visalia.

The total cost of the improvements recommended in the 1987 Plan was estimated to be approximately $36 million. Of the total cost, $6 million was required to alleviate existing deficiencies and the remainder was for improvements that would serve new development. Nearly $22 million were for the construction of park-pond facilities, including approximately $10 million for landscaping.

Following the adoption of the 1987 Master Plan, the City entered into agreements with the ditch companies and districts that operate the channels that receive City's storm water discharges. These agreements establish the conditions under which the City can discharge storm water into the channels and define the City's channel maintenance responsibilities.

2.5 PROPOSED 1994 STORM WATER MASTER PLAN

With the update of the City's LUE and a significant expansion of Visalia growth boundaries, it became necessary to update the 1987 Master Plan in order to identify the improvements that will be needed to serve the planned land uses of the updated LUE. While the 1987 Plan encompassed approximately 16,000 acres of planning area, including 4,500 acres of undeveloped land, the proposed Plan encompasses the 36,000 acres of land within the recently adopted 2020 UDB.

The proposed Master Plan includes a description of the existing drainage conditions in Visalia, a discussion of the methodology used to evaluate the planned land uses of the 2020 Plan, a discussion of the storm water management alternatives that were considered during the development of the Master Plan, and a description of the improvements that will be needed to serve the land uses of the 2020 Plan. The Master Plan also includes an estimate of the cost of the improvements, a capital improvement program, and a discussion of alternatives for funding the improvements. An overview discussion of these items is presented below.

Existing Conditions

Visalia currently is divided into five distinct drainage areas that are served by the channels of Kaweah River distributary system. These drainage areas, which typically have an extensive system of improvements for the collection and disposal of urban runoff, are described below.

- St. John's River

  The St. John's River drainage area is located in northeast Visalia. Runoff collected within this drainage area is discharged into the St. John's River, a natural channel on the Kaweah River system. The channel, which currently is maintained by the Kaweah Delta Water Conservation District (KDWCD), originates at McKays Point 12 miles east of Visalia and joins Cottonwood Creek near State Route 99 northwest of Visalia.

- Modoc Ditch

  The Modoc Ditch drainage area is located in north and northwest Visalia. Runoff collected within this drainage area is discharged in Modoc Ditch, a privately owned and operated irrigation channel. The ditch headgate is located on St. John's River approximately one-quarter mile west of Ben Maddox Way. The main ditch channel terminates at an "overflow" basin located near Road 68.

- Mill Creek

  The Mill Creek drainage area, which is largely urbanized, includes the downtown area and other areas along State Route 198. Runoff collected within this drainage area is discharged into Mill Creek, a natural channel that originates at a split of the Lower Kaweah River near Road 158, flows through Visalia, and connects with Cross Creek in Kings County.

- Evans Ditch

  The Evans Ditch drainage area includes pockets of development south of S.R. 198. Runoff collected within the drainage area is discharged into Evans Ditch, a privately owned and operated irrigation channel. The ditch headgate is located on Mill Creek near McAuliff Road. It flows through Visalia and beyond to the west.

- Packwood Creek

  The Packwood Creek drainage area is located in south Visalia. Runoff collected within the drainage area is discharged into Packwood Creek, a natural channel that originates at a split of the Lower Kaweah River near Road 158. Southwest of Visalia, the channel flows through Tagus Basin and beyond.

Methodology

The proposed Master Plan divided the area within the 2020 UDB into eight drainage basins that include the five basins that were established for the 1987 Master Plan and three new basins for areas outside of the planning area of the 1987 Plan. The new basins are the Cameron Creek Basin, the Goshen Drain Basin, and the Persian-Watson Basin. A description of these three new basins is provided below.

- Cameron Creek

  The Cameron Creek drainage basin is located in the southeast portion of the planning area. Runoff collected within the drainage basin will be discharged into Cameron Creek, a channel that originates approximately five miles east of Visalia as a diversion off of the Tulare Irrigation District (TID) Canal and connects back to the TID Canal near Mooney's Grove. At this time, the City does not discharge storm water runoff into Cameron Creek.

- Goshen Drain

  The Goshen Drain drainage basin is located in northwest Visalia along Goshen Avenue. Runoff collected within the drainage basin will be discharged into a pipeline that follows the alignment of Goshen Avenue. The pipeline will terminate at the Goshen "Ocean", a basin near S.R. 99. It should be noted that the City expects to complete the construction of the pipeline by early 1995.

- Persian/Watson

  The Persian/Watson drainage basin in located in west Visalia between Akers Road and S.R. 99 south of S.R. 198. Runoff collected within the basin will be discharged into the Persian Ditch and Watson Ditch system. The headgate for this ditch system is located on Mill Creek near Linwood Street. The channel crosses S.R. 198 near Akers Road and continues west, splitting into several branches prior to reaching S.R. 99. At this time, the City does not discharge storm water runoff into the Persian/Watson Ditch system.

Figure 2-2 displays the eight drainage basins described above. The acreage within each of the eight basins is presented in Table 2-1.

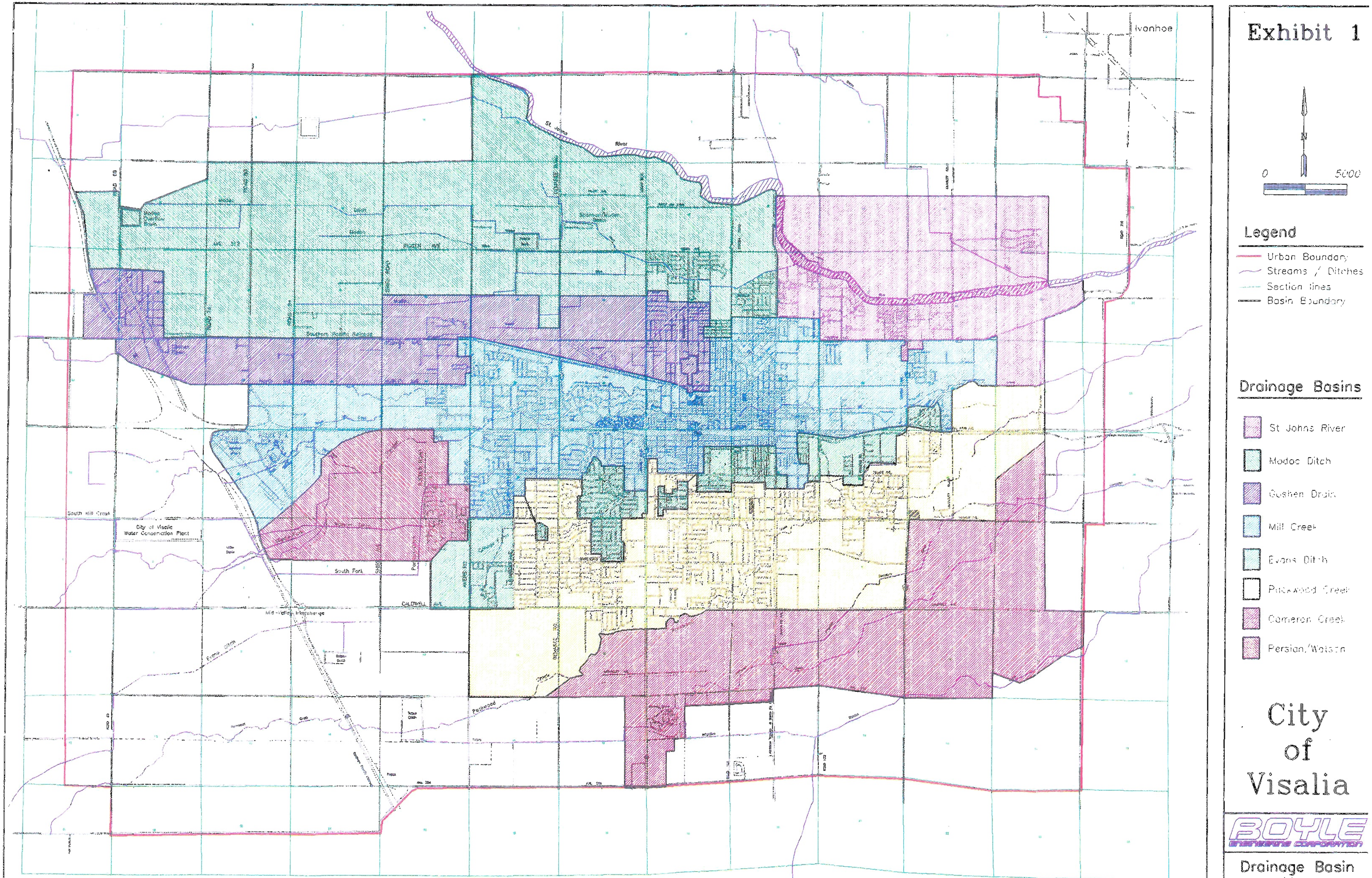


Exhibit 1
Ivanhoe
St. Johns
River
Modoc Overflow Basin
Modoc
Ditch
Modoc
AVE 312
RIGGEN AVE
ROAD 68
ROAD 80
ROAD 76
ROAD 84
SHIRK ROAD
DEMAREE ROAD
Southern Pacific Railroad
Shannon/Modoc Basin
South Mill Creek
City of Visalia Water Conservation Plant
South Fork
CALDWELL AVE
Mid-Valley Interchange
Evans Ditch
Packwood
DEMAREE RD.
0
5000
N
Legend
Urban Boundary
Streams / Ditches
Section lines
Basin Boundary
Drainage Basins
St Johns River
Modoc Ditch
Goshen Drain
Mill Creek
Evans Ditch
Packwood Creek
Cameron Creek
Persian/Watson
City of Visalia
BOYLE ENGINEERING CORPORATION
Drainage Basin Map

FIGURE 2-2

TABLE 2-1

Master Plan Drainage Basin Areas

Basin	1987 Master Plan (acres)	1994 Master Plan (acres)
Cameron Creek	not modeled	4,780
Evans Ditch	1,987	1,614
Goshen Drain	not modeled	3,243
Mill Creek	7,695	6,149
Modoc Ditch	535	8,247
Packwood Creek	4,637	5,880
Persian/Watson	not modeled	1,626
St. John's River	1,444	3,393
Total:	**16,298**	**35,932**

An evaluation of the runoff that the planned land uses within each basin will generate was performed with U.S. Army Corps of Engineers HEC-1 models. The HEC-1 models that were developed for the 1987 Master Plan were expanded to include land within the 2020 UDB that was not modeled previously and models were developed for the three new drainage basins. The runoff evaluation considered design storm events of varying duration and frequency.

Storm Water Management Alternatives

The proposed Master Plan considered two major storm water management alternatives. These alternatives consisted of; 1) detaining runoff in storage basins and discharging it at a reduced rate into conveyance channels; and 2) discharging runoff directly into the channels and conveying it downstream. The storage alternative is attractive when the conveyance channels have limited capacity and channel improvements are not practical. The major disadvantages are the cost of acquiring land for basins and the excavation costs. There also can be safety and aesthetic concerns with storage basins in urban areas.

The conveyance alternative is attractive when channels can be improved if additional capacity is required. The major advantage of this alternative is that it typically is less expensive than the storage alternative. Channel improvements include widening, lining (with concrete), and partial lining. This alternative is considered unpractical if right-of-way is not available to accommodate needed improvements or if the improvements would effect sensitive riparian habitat.

Recommended Improvements

The proposed Master Plan recommends a combination of "in-town" storage basins, channel improvements, i.e. widening, and pipelines to serve the planned land uses of the updated LUE. The Plan also recommends the use of downstream "terminal" basins for the "ultimate" disposal of the City's storm water. These improvements are described below.

"In-Town" Storage Basins

The Master Plan recommends constructing 13 new storm water storage basins within the City's 2020 UDB in addition to utilizing the City's 16 existing basins and two privately owned basin. It should be noted that construction has already started on three of the recommended new basins. The recommended new "in-town" basins include five basins that were not recommended in the 1987 Master Plan. The proposed Plan also recommends expanding six of the City's existing basins. The existing and proposed "in-town" basins are identified in Table 2-2. The locations of these basins are displayed in Figure 2-3.

The capacity of these "in-town" basins generally was established based on the volume of tributary runoff that would be generated by the 10-year/2-day storm event (with 2.64 inches of rainfall). For the purpose of establishing the size and depth of the new basins, it was assumed that they would be developed as dual-use facilities that also would accommodate recreational activities. Each of the new "in-town" basins was characterized as either a community park, neighborhood park, park-pond, or water storage facility. A description of these basin types is presented below.

Park-Pond: (3 to 5 acres) Most of the site is turfed and depressed five feet or less and used for water storage and recreation purposes. Twenty percent of the site is depressed 10 to 15 feet and used strictly for storm water storage purposes.

Neighborhood Park: (5 to 8 acres) Used for both recreation and storm water storage purposes. Approximately one-half of the site is depressed 10 to 15 feet and devoted to water storage. The other one-half is turfed and depressed 5 feet or less and uses for water storage and recreation purposes.

Community Park: (8 to 12 acres) Designed with one-third of the site at street level for recreational purposes, one-third turfed and depressed five feet or less for water storage and recreation purposes, and one-third depressed 10 to 15 feet for water storage purposes.

Water Storage Basin Designed for storm water storage and groundwater recharge. These basins are not accessible to the public and they do not accommodate any recreational uses.

The proposed Master Plan recommends that new development in Visalia's industrial park retain their runoff on-site in basins sized for the 10-year, 10-day storm event (with 4.17 inches of rainfall). This recommendation to retain the industrial runoff on-site was based on water quality, as well as water quantity considerations.

The City's updated LUE designates specific areas for "Conservation" and "Park" uses. Many of these designations were assigned (to storm water basin sites that had been recommended in the 1987 Master Plan) in order to "reserve" sites for future basins. In the interest of maintaining consistency with the LUE, most of the basins that were recommended in the 1987 Plan have been perpetuated in the proposed Master Plan although extensive storm water storage capabilities may not have been needed (based on drainage considerations). This practice of perpetuating 1987 Master Plan basins was most evident in the Packwood Creek drainage area.

TABLE 2-2

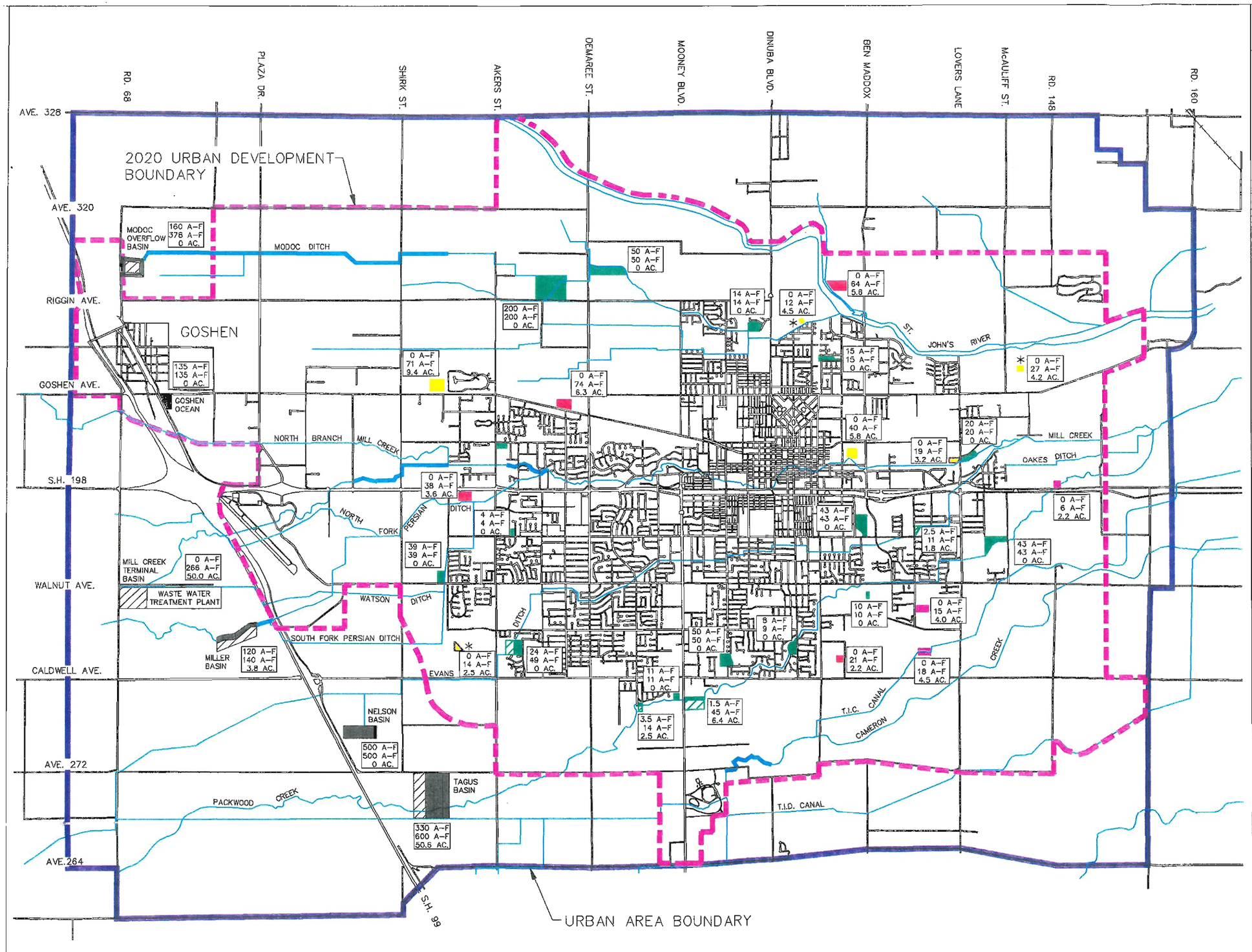
Master Plan "In-Town" Water Storage Basins

Drainage Area	Name/Location	New Area (ac)	Park Use	New Volume (ac-ft)	Status
Packwood Cr.	McAuliff @ Tulare	0	WS	0	Exist.
	Blain Park	0	PP	1	Exist. w/ expansion
	Stonebrook	0	PP	0	Exist.
	PC e/o Mooney	6.4	NP	44	Exist. w/ expansion
	PC @ County Center	2.5	NP	11	Exist. w/ expansion
	PC @ Road 148	2.2	PP	6	Proposed
	@ Pinkham s/o Walnut	4.0	PP	15	Proposed
	@ Pinkham s/o K Road	4.6	PP	18	Proposed
	n/o Caldwell e/o Santa Fe	2.2	WS	21	Proposed
	s/o Walnut w/o Ben Maddox	0	WS	0	Exist.
	PC w/o Mooney	0	WS	0	Exist.
Mill Creek	MC w/o Lovers Lane	3.2	NP	19	Proposed
	MC w/o Ben Maddox	5.8	NP	40	Proposed
	w/o Akers s/o S.R. 198	3.6	WS	38	Proposed
	MC e/o Lovers Lane	0	PP	0	Exist.
	@ Willow Glen School	0	PP	4	Exist. w/ expansion
	Constitution Park	0	PP	0	Exist.
Modoc Ditch	Peltzer Basin w/o Demaree	0	WS	0	Exist.[1]
	Shannon-Modoc Basin	0	WS	0	Exist.[1]
	@ Fairview School	0	PP	0	Exist.
	MD e/o Court St.	4.5	PP	12	Const. in-progress
Goshen Drain	n/o Goshen w/o Demaree	6.3	WS	74	Proposed
	n/o Goshen e/o Shirk	9.4	NP	71	Proposed
Evans Ditch	ED @ Linwood Park	0	NP	25	Exist. w/ expansion
	ED @ Pinkham Park	1.8	NP	9	Exist. w/ expansion
	Edison Park n/o Tulare	0	PP	0	Exist.
	Lisendra Hts Park	2.5	NP	14	Const. in-progress
St Johns R.	Ruiz Park w/o Burke	0	PP	0	Exist.
	n/o Houston e/o McAuliff	4.2	NP	27	Const. in-progress
	n/o SJR w/o Ben Maddox	5.6	WS	64	Proposed
Persn.-Watson	w/o Roeben n/o Walnut	0	WS	0	Exist.
Cameron Cr	no "in-town" basins	0	n/a	0	n/a

Park Uses:
WS: Water Storage Basin
NP: Neighborhood Park
PP: Park-Pond

[1] Owned by Modoc Ditch Company

STORM WATER MASTER PLAN



LEGEND

- PROPOSED CHANNEL WIDENING
- PROPOSED NEIGHBORHOOD PARK BASIN
- * CURRENTLY UNDER CONSTRUCTION
- PROPOSED PARK POND
- PROPOSED WATER STORAGE BASIN
- PROPOSED TERMINAL BASIN OR EXPANSION OF EXISTING TERMINAL BASIN
- EXISTING TERMINAL BASIN
- EXISTING PARK/POND-WATER STORAGE BASIN
- PROPOSED EXPANSION OF EXISTING PARK/POND -WATER STORAGE BASIN
- URBAN AREA BOUNDARY
- 2020 URBAN DEVELOPMENT BOUNDARY
- 00 A-F — EXISTING CAPACITY (ACRE-FEET)
- 00 A-F — ULTIMATE CAPACITY (ACRE-FEET)
- 0.0 AC. — ADDITIONAL LAND (ACRES)

N
NO SCALE

NOTE:
TENTATIVE PARK USES FOR PROPOSED BASINS ESTABLISHED FOR THE PURPOSE OF DETERMINING THE TOTAL DEVELOPMENT COSTS OF THE BASINS.

City Of Visalia

PROPOSED STORM WATER BASINS AND CHANNEL WIDENING IMPROVEMENTS

FIGURE 2-3

Pipelines

The proposed Master Plan recommends a total of approximately 300,000 feet of "collector" pipe ranging in size from 18 to 72 inches (in diameter). The recommended pipeline projects include the large-diameter Goshen Drain pipeline along Goshen Avenue that the City expects to complete by early 1995.

Channel Widening

The proposed Master Plan indicates that specific reaches of four conveyance channels will have to be widened in the future in order to accommodate the design flows that will be generated by the planned land uses of the updated LUE. The three channels that the Plan recommends widening are Modoc Ditch, Mill Creek, Persian Ditch and Cameron Creek, as described below.

Modoc Ditch: Approximately 18,000 feet of the main Modoc Ditch channel between the Road 96 (Roeben Road) alignment and the Modoc Ditch "Overflow" Basin at Road 68 will have to be widened (see Figure 2-3). The bottom width of the channel, which currently is approximately six to seven feet, will be increased to eight to ten feet at Shirk and to a maximum of 20 feet west of Road 76.

Mill Creek: Approximately 9,600 feet of Mill Creek between Linwood Street and Road 88 will have to be widened (see Figure 2-3). The bottom width of the channel, which currently varies between eight and twelve feet, will be increased to eighteen to twenty feet.

Persian Ditch: Approximately 700 feet of the Middle Branch of Persian Ditch immediately downstream of S.R. 99 will have to be widened (see Figure 2-3). The bottom width of the channel, which currently is approximately four to five feet across, will be increased by approximately one to two feet.

Cameron Creek: Approximately 3,500 feet of Cameron Creek immediately upstream of Mooney Grove Park will have to be widened (see Figure 2-3). The bottom width of the channel, which currently is approximately 17 feet, will be increased to 30 feet.

"Terminal" Basins

The Master Plan recommends the use of "terminal" basins for the ultimate disposal of the storm water runoff that is discharged into conveyance channels. These basins are designed to have sufficient capacity to accommodate the additional volume of runoff that the planned land uses of the updated LUE will generate during a 50-year/10-day storm event. The design basin volume is equivalent to the difference between the post-development volume of runoff and the pre-development volume of runoff that Visalia will generate.

The Master Plan recommends using existing basins downstream of Visalia to serve as the City's "terminal" basins (see Figure 2-3). These basins, which typically are owned by private ditch companies or public districts, will be expanded, as necessary, to accommodate the City's runoff.

However, Mill Creek does not have an existing "terminal" basin in close proximity to Visalia that can be used by the City to dispose of runoff discharged into the channel. Therefore, the Master Plan recommends the construction of a new Mill Creek "terminal" basin near the City's wastewater treatment plant. The "terminal" basins that the Plan recommends using are identified in Table 2-3.

TABLE 2-3

MASTER PLAN "TERMINAL" BASINS

Drainage Area	Terminal Basin	Net City Runoff Volume (ac-ft)	New Area (ac)
Cameron Creek	Tagus Basin	153	29
Evans Ditch	Nelson Basin	0	0
Goshen Drain	Goshen "Ocean"	0	0
Mill Creek	@ WWTP	266	50
Modoc Ditch	"Overflow" Basin	218	20
Packwood Creek	Tagus Basin	117	22
Persian-Watson	Miller Basin	20	4
St. Johns River	no basin	0	0
	Total:	774	125

Estimated Cost of Improvements

The total cost of the proposed Master Plan improvements is $38.2 million. A breakdown of this total is as follows:

o	Existing Deficiencies	$5.2 million
o	Industrial Park	$2.6 million
o	Urban Reserve areas	$4.6 million
o	Future (non-industrial) Development	$25.8 million
	Total:	$38.2 million

The industrial park and existing deficiency improvements are shown as separate cost items because these improvements will be funded separately from the future non-industrial improvements. The improvements for Urban Reserve areas, which are undesignated areas outside of the 2010 UDB, are shown as a separate cost item because they will not be funded at this time.

Alternatives for Funding Improvements

The proposed Master Plan improvements that will serve future non-industrial development will be funded with a combination of developer impact fees and an increase in the city-wide monthly utility rates. The City Council recently endorsed a plan in which 75% of the improvement costs would be funded with impact fees and the remaining 25% of the costs would be funded with an increase in the monthly utility rates.

The City intends to fund the improvements needed to upgrade the identified existing deficiencies entirely with an increase in the monthly utility rates, while the industrial park improvements will be entirely funded with developer impact fees. The impact fees needed to fund the improvements will be adopted after the proposed Master Plan is adopted. The increase in the monthly utility rates will be implemented in 1995.

The plan endorsed by the Council would result in a single-family residential impact fee of $1,885 per acre and a monthly rate increase of $1.21 per residential unit (including $0.54 for the cost of improvements to upgrade existing deficiencies). The City's current storm drain residential impact fee is $4,497 per acre.

2.6 GENERAL PLAN AMENDMENT

The proposed General Plan Amendment (GPA) will: 1) establish a new "Storm Water Basin" land use category and criteria for locating future basins; and 2) change the designation of selected "Conservation" sites to other urban uses. Further discussion of each component of the proposed GPA is provided below.

New "Storm Water Basin" Land Use Category

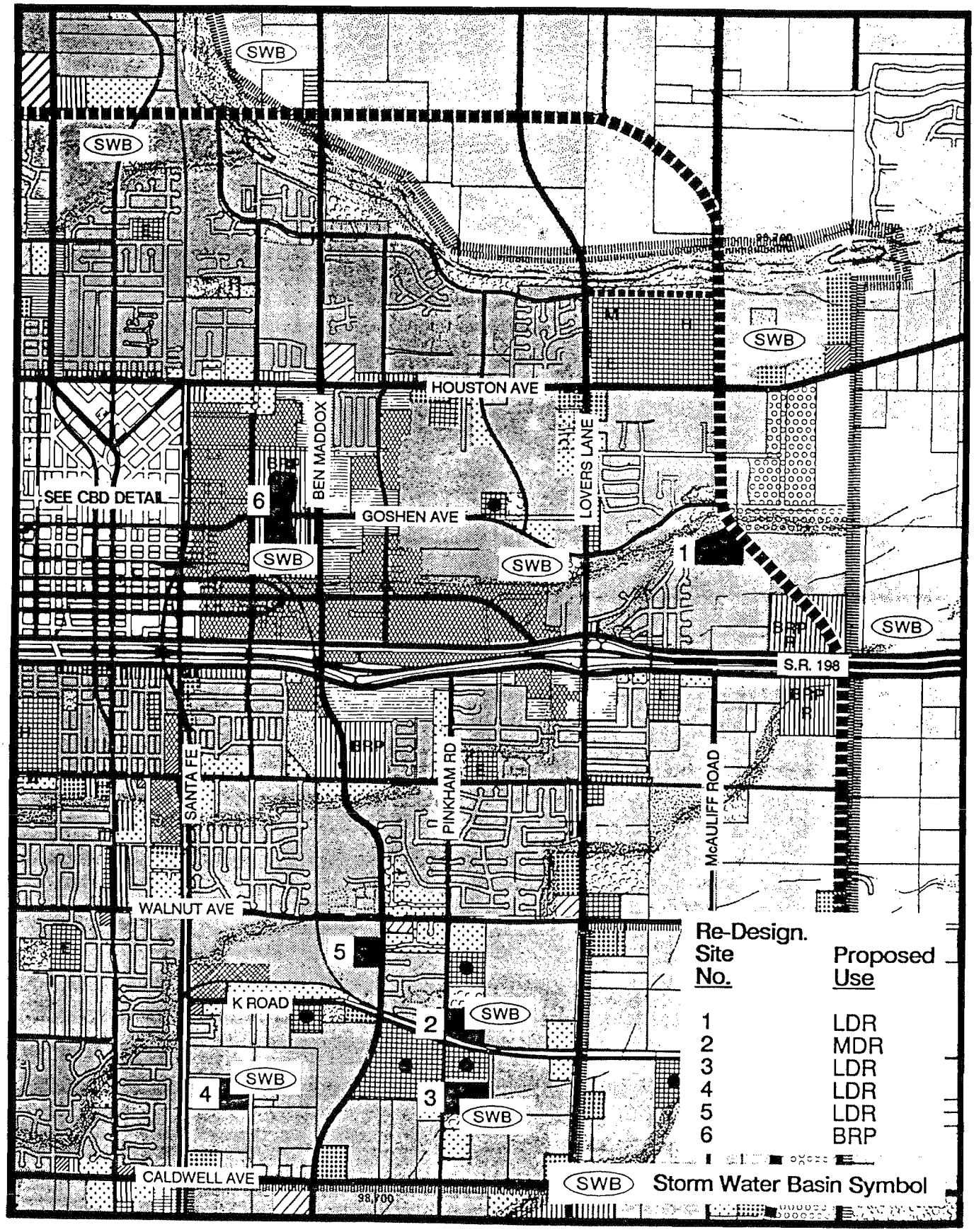
Although the City's updated LUE attempted to facilitate the implementation of the City's 1987 Storm Drainage Master Plan with the designation of recommended basin sites for "Conservation" uses, the LUE does not explicitly state that storm water basins have to be located on sites designated for "Conservation" uses. As a result, while the City has located new basins on "Conservation" sites in recent years, basins also have been constructed on sites designated for other uses.

In the interest of facilitating the implementation of the proposed Master Plan (and future updates of the Plan), the proposed GPA will establish a new "Storm Water Basin" land use category (under the "Community Facilities" designation) and establish criteria for locating future basins. The proposed "Storm Water Basin" use includes basins that will be used to store storm water runoff either on a retention or detention basis. The proposed locational criteria for future basins are as follows:

- Symbols shall be added to the LUE Map to represent the generalized location of new basins recommended in the Master Plan and future updates of the Master Plan. Each basin symbol generally should be located within the boundaries of the area it is expected to ultimately serve. (Refer to Figure 2-4 for the location of the proposed LUE Map basin symbols).

- The final location of each symbolized basin shall be based on a number of factors, including hydraulic considerations, land costs, improvement costs, surrounding land uses, property owner cooperation, and the sequencing of development within the service area of the basin. The final location of each planned basin shall be approved by the City Engineer before all viable sites have been developed. As a guideline, the final location of a basin should be determined by the time 30 to 50 percent of the basin's service area has been built-out.

- Unplanned basins not symbolized on the LUE Map can be constructed for temporary or permanent use in developing areas regardless of the underlying land use designation provided that the basins will serve as viable alternatives to the recommendations of the Master Plan.

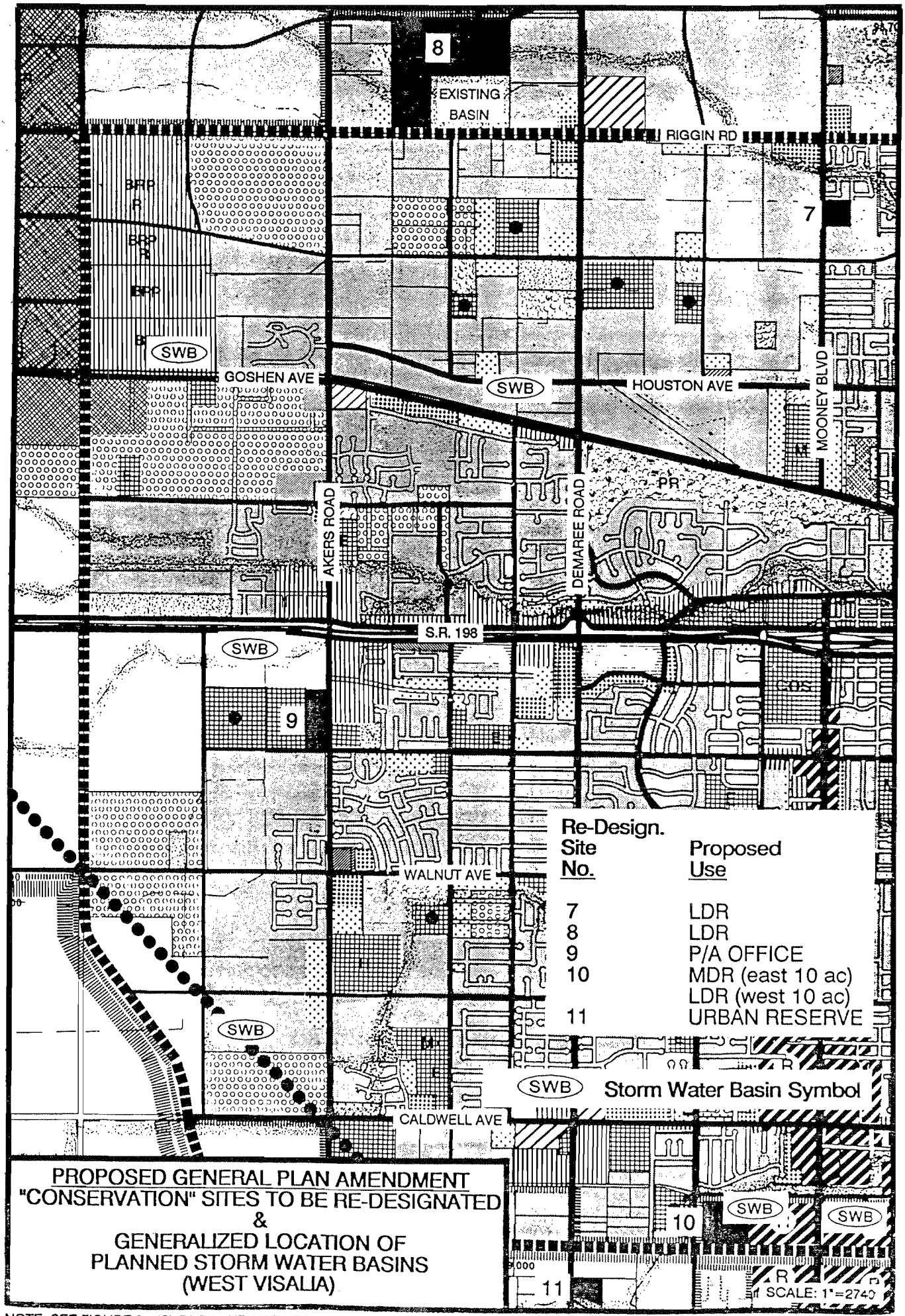


SCALE: 1"=2740'

FIGURE 2-4(A)

PROPOSED GENERAL PLAN AMENDMENT
"CONSERVATION" SITES TO BE RE-DESIGNATED
&
GENERALIZED LOCATION OF PLANNED STORM WATER BASINS
(EAST VISALIA)

NOTE: SEE FIGURE 2-4(C) FOR LAND USE LEGEND



PROPOSED GENERAL PLAN AMENDMENT
"CONSERVATION" SITES TO BE RE-DESIGNATED
&
GENERALIZED LOCATION OF
PLANNED STORM WATER BASINS
(WEST VISALIA)

NOTE: SEE FIGURE 2-4(C) FOR LAND USE LEGEND

FIGURE 2-4(B)

LAND USE DESIGNATIONS

RESIDENTIAL

	Du/Net Acre
RURAL	up to 2
LOW DENSITY	2 to 10
MEDIUM DENSITY	10 to 15
HIGH DENSITY	15 to 29

COMMUNITY FACILITIES:

PUBLIC INSTITUTIONAL*

E - ELEMENTARY SCHOOL
M - MIDDLE SCHOOL
H - HIGH SCHOOL
COS - COLLEGE OF THE SEQUOIAS
- PROPOSED SCHOOL
AP - VISALIA MUNICIPAL AIRPORT
WTP - WASTEWATER TREATMENT PLANT

COMMERCIAL / OFFICE

CONVENIENCE CENTER

NEIGHBORHOOD CENTER

SHOPPING/OFFICE CENTER

COMMUNITY CENTER

CENTRAL BUSINESS DISTRICT

REGIONAL CENTER (R-RESERVE)

HIGHWAY

SERVICE

PROFESSIONAL/ADMINISTRATIVE OFFICE
(BRP - BUSINESS RESEARCH PARK)
(R-BRP RESERVE)

INDUSTRY:

LIGHT INDUSTRY

HEAVY INDUSTRY
(R - INDUSTRIAL RESERVE)

OPEN SPACE:

AGRICULTURE

CONSERVATION*

PARKS*
(PR - PRIVATE RECREATION)

URBAN RESERVE:

URBAN RESERVE

URBAN BOUNDARIES

URBAN AREA BOUNDARY

URBAN DEVELOPMENT BOUNDARIES:

98,700 POPULATION
129,000 POPULATION

URBAN GROWTH BOUNDARY
(165,600 POPULATION)

LEGEND FOR LAND USE ELEMENT
LAND USE DESIGNATIONS

FIGURE 2-4(C)

Alternatives shall be developed and maintained in accordance with City Policies and Standards, and not have a significant adverse effect on the environment. The construction of all non-master planned basins shall be subject to the approval of the City Engineer.

- Following the construction of a new basin, the approximate boundary of the basin site shall be delineated on the LUE Map and the site designated for either "Park-Basin" uses (under the "Open Space" designation) or "Water Storage Basin" uses (under the "Community Facilities" designation). Basins with an established or planned park use will be designated for "Park-Basin" uses, while basins that are used strictly for water storage purposes with no planned park uses will be designated for "Water Storage Basin" uses. The post-construction designation of basins shall be done administratively by City staff as part of the City's on-going Map update process.

- The symbols for unconstructed planned basins shall be removed from the LUE Map if the City determines in the future that planned basins will not be needed (to serve the planned land uses) based on hydraulic, funding, and land development considerations. The removal of basin symbols from the LUE Map shall be done administratively by City staff as part of the City's on-going Map update process.

It should be noted that while the intent of the proposed "Storm Water Basin" symbols is to represent the location of new planned basins, symbols also are used (on Figure 2-4) to denote the recommended expansion of two existing basins on the north side of Packwood Creek near Mooney Boulevard. These two basin expansions are "symbolized" because the recommended expansions consist of constructing significantly larger new basins south of Packwood Creek (opposite the existing basins). Existing development around the existing basins effectively precludes their expansion north of the channel. However, it also should be noted that the proposed Master Plan indicates that as an alternative to expanding these two basins, it appears that the flows that would be accommodated by the expansions could be discharged directly into the channel without being routing through the basins.

The City also is proposing to establish two other new land use categories that will be applied to planned basin sites (following the construction of the basins, as discussed above) and existing basin sites that currently are designated for "Conservation" uses (as discussed below). The new land uses are "Park-Basin" (under the "Open Space" designation) and "Water Storage Basin" (under the "Community Facilities" designation). Basins with an established or planned park use will be designated for "Park-Basin" uses, while basins that are used strictly for water storage purposes with no planned park uses will be designated for "Water Storage Basin" uses.

Re-designation of "Conservation" Sites

The City's updated LUE designates specific areas for "Conservation" uses. As discussed above, many of these "Conservation" designations were assigned to reserve sites for storm water basins that had been recommended in the 1987 Master Plan. Because the first component of the proposed GPA will establish a new "Storm Water Basin" land use category and symbolize the generalized location of planned basins on the LUE Map, there is no need to retain the "Conservation" designations that reserve sites for future basins. Therefore, the City is proposing to re-designate 11 undeveloped

sites that were designated for "Conservation" uses based on the recommendations of the 1987 Master Plan. The "Conservation" designations will be replaced with more intensive urban uses that are compatible with the surrounding planned land uses and consistent with the policies of the LUE.

The City also is proposing to re-designate existing storm water basins that currently are designated for "Conservation" uses. The "Conservation" designations will be replaced with new uses that more accurately reflect the designated recreational uses of the existing basins.

Further discussion of the proposed re-designation of undeveloped 1987 Master Plan basin sites and existing basins that currently are designated for "Conservation" uses is presented below.

Re-designation of Undeveloped Basin Sites

The unconstructed basin sites that were recommended in the 1987 Master Plan that the City is proposing to re-designate are identified in Table 2-4 (along with the proposed land uses). Refer to Figure 2-4 (a-c) for the location of the "Conservation" areas that the City is proposing to re-designate.

The proposed re-designation areas include approximately 100 acres of land adjacent to an existing Modoc Ditch water storage basin located north of Riggin Avenue on the Linwood Road alignment. The 60-acre basin and the adjoining 100 acres were designated for "Conservation" uses because, in part, the 1987 Master Plan recommended that water from a planned basin at Demaree and Ferguson should be pumped to the basin. However, because the proposed Master Plan does not recommend expanding the Modoc Ditch basin, there is no need to retain the "Conservation" designation on the adjoining 100 acres of land.

The re-designation also includes a 10-acre site located immediately west of Ben Maddox and south of Walnut. The basin that the 1987 Master Plan recommended constructing at this site actually was constructed approximately 1,500 feet west of the site. Therefore, there is no need to retain the "Conservation" designation at the site.

"Conservation" designations that were assigned to sensitive habitat areas, such as the "hobo jungle" along Jennings Ditch north of Mill Creek, are retained.

It should be recognized that because the proposed Master Plan perpetuates many of the basins that were recommended in the 1987 Master Plan, it is likely that basins will be constructed at or in the vicinity of most of the "Conservation" areas that will be re-designated. The proposed Master Plan recommends the construction of new basins, the use of an existing basin, or the expansion of an existing basin in the vicinity of eight of the eleven re-designation sites.

Although it is not included in the proposed GPA, another existing "Conservation" area that was established based on the recommendations of the 1987 Master Plan is the 20-acre site at the southwest corner of Demaree and Ferguson. This site was designated for "Conservation" uses because the 1987 Master Plan recommended a large basin at that site to detain flows from a proposed large-diameter collection line in Goshen Avenue (east of Mooney Boulevard). Storm water stored in this basin would be pumped to an existing Modoc Ditch basin north of Riggin.

TABLE 2-4

General Plan Amendment

Redesignation of Undeveloped Basin Sites

Site No.	Location	Proposed Use	Basin Needed per Proposed MP
1)	w/o McAuliff s/o of Evans Ditch	LDR	No
2)	e/o Pinkham n/o K Road	MDR	Yes
3)	e/o Pinkham s/o K Road	LDR	Yes
4)	e/o Court n/o Caldwell	LDR	Yes
5)	w/o Ben Maddox s/o Walnut	LDR	Yes[1]
6)	w/o Ben Maddox n/o Mill Creek	BRP	Yes
7)	e/o Mooney n/o Ferguson	LDR	No
8)	n/o Riggin @ Linwood	LDR	Yes[2]
9)	w/o Akers n/o Tulare	PA Office	Yes
10)	e/o County Center s/o Packwood Cr	MDR (east 10 ac.) LDR (west 10 ac.)	Yes[3]
11)	e/o Demaree s/o Avenue 276	Urban Reserve	No

Proposed Land Uses

LDR: Low Density Residential
MDR: Medium Density Residential
HDR: High Density Residential
BRP: Business Research Park
PA: Professional/Administrative Office

1 Existing basin constructed approximately 1,500 west of designated "Conservation" site.
2 Reduce extent of "Conservation" designation to match limits of existing basin.
3 Expansion of existing basin.

The proposed Master Plan recommends extending the planned collection line west along Goshen Avenue to serve new development in the Goshen Avenue Drainage Area and discharging the line into the Goshen "Ocean" near Road 76. Flows in the line will be routed through the two planned detention basins along Goshen Avenue (between Demaree and Shirk). Therefore, because the two planned basins on Goshen Avenue collectively serve a similar purpose as the recommended Demaree at Ferguson basin, a basin is no longer needed at that site. However, this site has not been included in the proposed GPA because it was redesignated for LDR uses during the preparation of this document with a separate GPA.

Re-designation of Existing Basins

The City is proposing to re-designate a total of eight existing "Conservation" storm water basins for either "Park-Basin" uses (under the "Open Space" designation) or "Water Storage Basin" uses (under the "Community Facilities" designation). Basins with an established or planned park use will be designated for "Park-Basin" uses, while basins that are used strictly for water storage purposes with no planned park uses will be designated for "Water Storage Basin" uses.

The existing basins that the City is proposing to re-designate are identified in Table 2-5, as are the proposed new land use designations.

TABLE 2-5

General Plan Amendment

Redesignation of Existing Basin Sites

Basin Site	Proposed Land Use
Constitution Park	Park-Basin
Linwood Park	Park-Basin
Stonebrook Park	Park-Basin
Edison Park	Park-Basin
Mill Creek Park	Park-Basin
Tulare at McAuliff	Park-Basin
Whitendale at Roeben	Park-Basin
Ruiz Park annex	Water Storage Basin

It should be noted that the proposed re-designation of existing storm water basins is considered a "paper" change that is not expected to change the existing or planned uses of the sites or have adverse environmental impacts.

3.0 EXISTING SETTING, ENVIRONMENTAL IMPACTS, AND MITIGATION MEASURES

3.1 INTRODUCTION

The section of the document describes the environmental setting in the project area, identifies the potential environmental impacts associated with the proposed project, and provides mitigation measures that are intended to reduce the significance of the impacts.

Because the LUE EIR adequately describes the existing environmental setting in the Visalia area and the cumulative impacts attributed to the update of the LUE, material from the LUE EIR frequently is referenced in this section of the document. This EIR presents supplemental material that was not contained in the LUE EIR, such as a description of the setting in the vicinity of Master Plan improvement projects, and a discussion of the potential impacts that are directly attributable to implementation of the Master Plan. These "direct" impacts generally consist of the potential impacts associated with the construction of Master Plan improvements. The detail to which these direct impacts can be discussed is related to the degree to which specific improvement projects can be defined. Therefore, it is understood that the construction of specific Master Plan improvements potentially may be subject to further environmental review as improvement projects are defined in the future.

Because the intent of the Master Plan is to serve the planned land uses of the updated LUE, it was recognized that implementation of the Master Plan will, to some degree, facilitate the development of these land uses. Therefore, for the purpose of this report, the potential cumulative impacts associated with the development of the planned land uses are considered to be "indirect" impacts of the Master Plan.

3.2 LAND USE

3.2.1 Existing Conditions

a) Existing Land Uses

Planning Area Overview

As discussed in Section 2.0, the Master Plan considers all of the area within the City's 2020 Urban Development Boundary (UDB), which encompasses approximately 55 square-miles (36,000 acres). There currently are approximately 14,500 acres of developed urban uses in the Visalia area. The unincorporated community of Goshen, which is within Visalia's 2020 UDB, has approximately 340 acres of urban development. Section 4.1 of the LUE EIR describes the distribution of urban uses in Visalia and Goshen.

Rural residences, farm buildings and other agricultural improvements exist outside of the urban areas. It is estimated that another 6,000 acres are occupied by the latter type of development, leaving a total of approximately 14,000 acres of undeveloped land within the Master Plan Area. It is assumed that most of this undeveloped land is in agricultural production.

Master Plan Basin Sites

Most of the 13 planned new "in-town" basins that are recommended in the Master Plan will be located on sites that currently are largely rural and in agricultural production. The existing uses in the vicinity of these planned basin sites are identified in Table 3-1.

TABLE 3-1

Existing Land Uses at Planned "In-Town" Basin Sites

Drainage Area	General Basin Location	Existing Use
Packwood Creek	n/o S.R. 198 @ Road 148	Agriculture
	e/o Pinkham s/o Walnut	Agriculture
	e/o Pinkham s/o K Road	Agriculture
	e/o Santa Fe n/o Caldwell	Agriculture
Mill Creek	n/o Mill Cr w/o Lovers Ln	Vacant & Residential
	n/o Mill Cr w/o Ben Maddox	Vacant & Auction Yard
	s/o S.R. 198 w/o Akers	Agriculture
Modoc Ditch	n/o Modoc Ditch e/o Court	Construction in progress
Goshen Drain	n/o Goshen w/o Demaree	Agriculture
	n/o Goshen e/o Shirk	Agriculture
Evans Ditch	e/o Roeben s/o Whitendale	Construction in progress
St Johns River	n/o Houston e/o McAuliff	Construction in progress
	n/o SJ River w/o Ben Maddox	Agriculture

The new Mill Creek "terminal" basin site west of Visalia's wastewater treatment plant currently is in agricultural production. The existing "terminal" basins that the proposed Master Plan recommends expanding generally are surrounded by lands that are in agricultural production.

Redesignation Sites

With the exception of the site west of Ben Maddox and north of Mill Creek and the site west of Lovers Lane and north of Mill Creek, the "Conservation" sites that the City is proposing to redesignate currently are in agricultural production. The site at Ben Maddox and Mill Creek currently is largely vacant south of Goshen Avenue. On the north side of Goshen, the site supports a livestock auction yard. The site west of Lovers Lane and north of Mill Creek is largely vacant with limited residential uses. Many of the proposed redesignation sites also were identified in Table 3-1 because the new Master Plan recommends constructing most of the "in-town" basins on or near designated "Conservation" sites.

b) Planned Land Uses

Planning Area Overview

As mentioned earlier, the proposed Master Plan was prepared with the objective of identifying the improvements that are needed to accommodate the development of the planned land uses of the updated LUE through the year 2020. The updated LUE establishes the distribution of residential, commercial, industrial, open space, and institutional uses within the 2020 UDB, which encompasses approximately 36,000 acres. The land uses within the 2020 UDB are expected to accommodate a projected population of 165,000 (with a 30 percent vacancy factor for single-family residential uses). Figure 3-1 presents the planned land uses of the 2020 Plan.

The updated LUE also established intermediate urban development boundaries. The 2000 UDB, which encompasses approximately 24,000 acres, is expected to accommodate a projected population of 98,700. A total of 28,700 acres are contained within the 2010 UDB, which is expected to accommodate a project population of 129,000. Visalia's UAB, which encompasses approximately 90 square miles (58,000 acres), provides an "open space" buffer around the planned land uses within the 2020 UDB.

Master Plan Basin Sites

Most of the "Conservation" uses and some of the "Park" uses on the City's LUE Map were established where the 1987 Master Plan recommended storm water basins. Because many of the basins that were recommended in the 1987 Plan have been perpetuated in the proposed Master Plan, most of the proposed Master Plan "in-town" basins are located on or near land that has been designated for "Conservation" or "Park" uses. Other proposed Master Plan "in-town" basins were not recommended in the 1987 Plan and therefore are not located on lands designated for "Conservation" or "Park" uses. The planned land uses at the 13 new "in-town" basin sites recommended in the proposed Master Plan are identified in Table 3-2.

The existing "terminal" basins generally are outside of Visalia's 2020 UDB and designated for "Agricultural" uses. The Goshen "Ocean" basin is within the UDB and designated for "Conservation" uses. The new "terminal" basin site west of Visalia's wastewater treatment plant is designated for "Public/Institutional" (wastewater treatment plant) uses.

It should be noted that the City's 1989 Conservation, Open Space, Recreation, and Parks Element identified most of the basin sites recommended in the 1987 Master Plan as future park sites. Therefore, many of the proposed "in-town" basin sites (that have been perpetuated from the 1987 Master Plan) are designated as future park sites in the COSRP Element. It also should be noted that the City intends to update the COSRP Element in order to make it more consistent with the LUE, which was updated subsequent to the adoption of the COSRP Element.

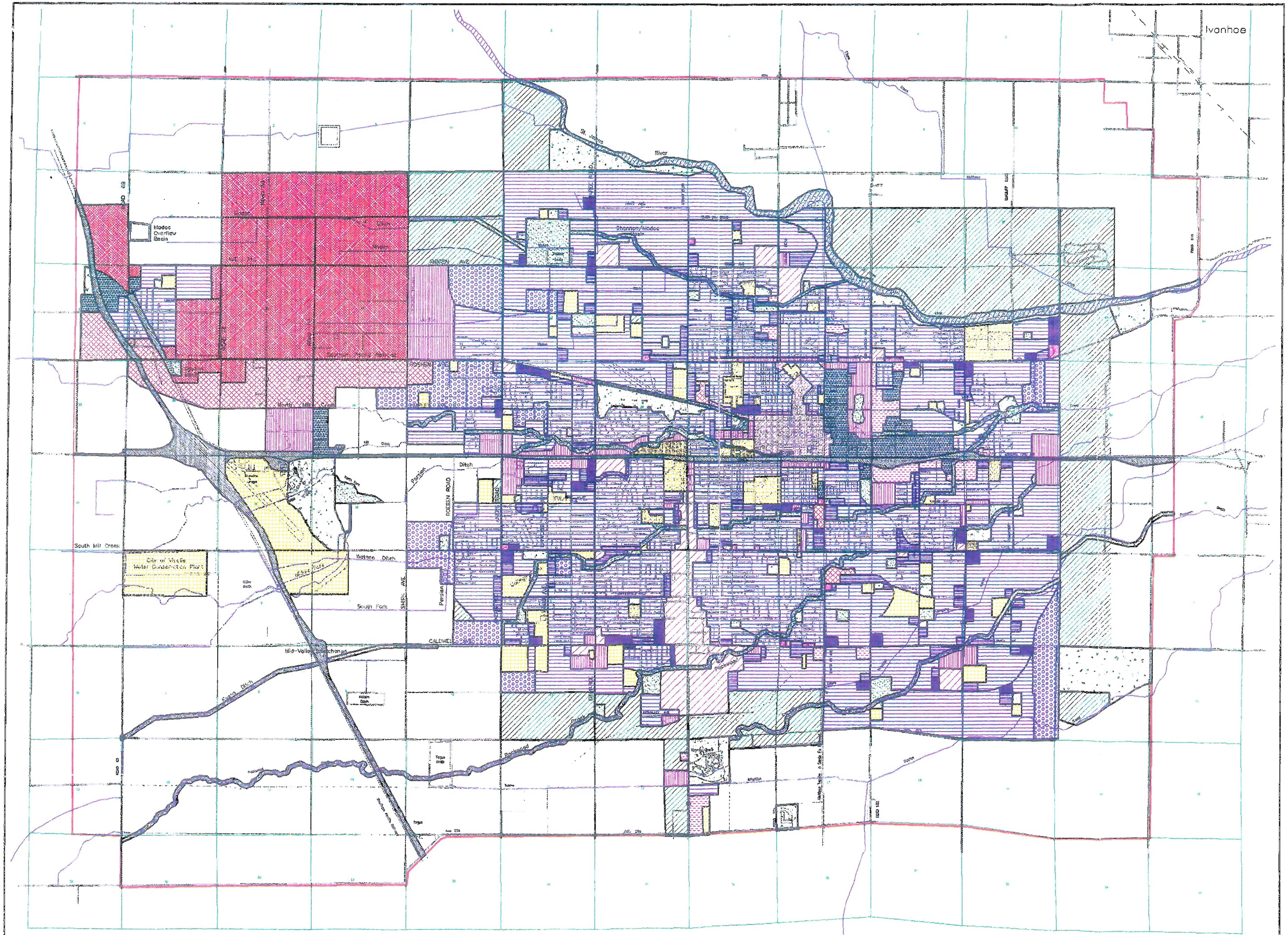


FIGURE 3-1

Exhibit 3

0 5000

Legend

- Urban Boundary
- Section lines
- Landuse Boundary

Residential

- RA Rural
- LDR Low Density
- MDR Medium Density
- HDR High Density

Commercial/Office

- CC Convenience Ctr
- CNC Neighborhood Ctr
- CSO Shop/Office Ctr
- CCM Community Center
- CBD Central Busin. Ctr
- CR Regional Center
- CH Highway
- CS Service
- PA Professional/ Administrative

Community Facilities

- PI Public/Institutional

Industry

- IL Light Industry
- IH Heavy Industry

Open Space

- OSA Agriculture
- OSC Conservation
- OSP Parks

- UR Urban Reserve

City of Visalia

BOYLE ENGINEERING CORPORATION

Land Use Map

TABLE 3-2

Planned Land Uses at Master Plan "In-Town" Basin Sites

Drainage Area	General Basin Location	Planned Use
Packwood Creek	n/o S.R. 198 @ Road 148	Low Density Residential
	e/o Pinkham s/o Walnut	Conservation
	e/o Pinkham s/o K Road	Conservation
	e/o Santa Fe n/o Caldwell	Conservation
Mill Creek	n/o Mill Cr w/o Lovers Ln	Park
	n/o Mill Cr w/o Ben Maddox	Conservation
	s/o S.R. 198 w/o Akers	Agriculture (S.R. 198 Scenic Corridor)
Modoc Ditch	n/o Modoc Ditch e/o Court	Conservation
Goshen Drain	n/o Goshen w/o Demaree	Low Density Residential
	n/o Goshen e/o Shirk	Business Research Park
Evans Ditch	e/o Roeben s/o Whitendale	Conservation (Airport Protective Zone)
St Johns River	n/o Houston e/o McAuliff	Conservation
	n/o SJR w/o Ben Maddox	Urban Reserve

3.2.2 Environmental Impacts

a) Direct Impacts

Existing Land Uses

Master Plan Improvements

Most of the proposed new "in-town" basins will be constructed on rural lands that currently are not developed with urban uses. As shown in Table 3-1, eight of the ten unconstructed new basin sites are in agricultural use, one is largely vacant with limited residential uses and one supports a livestock auction yard. Construction has begun on the remaining three new basins on lands that previously were in agricultural use. With the development of all thirteen new basins, approximately 50 acres of farm land will be taken out of production.

The City expects that construction of the ten unconstructed basins typically will not commence until adjacent or nearby land that will be served by the new basin begin to develop. This expectation is illustrated by the three "in-progress" new basins; construction on each of these basins was started in order to serve an adjoining development project. This means that the farm land on which the basins will be located generally will not be taken out of production until adjoining lands begin to develop. It should be noted that eight of the ten unconstructed new "in-town" basins will serve either existing development or future development on lands within the 2000 UDB and it is likely that they could be constructed by the year 2000. The remaining two "in-town" basins are located between the 2010 UDB and 2020 UDB and they are not expected to develop until after 2010.

The proposed Master Plan recommends expanding six existing "in-town" basins. Three of these basins will be enlarged laterally with the acquisition of additional land and three basins will be excavated deeper (without additional land) to provide additional capacity. Two of the basins that are to be expanded by the acquisition of additional land are located along Packwood Creek. One basin is located east of Mooney while the second basin is located near County Center. However, the existing basins are located on the north side of Packwood Creek and the surrounding lands are fully developed. Therefore, the needed additional storage capacity will have to be obtained by acquiring and developing a total of nine acres of land south of Packwood Creek. Because most of the land south of Packwood Creek near Mooney Boulevard currently is in agricultural production, the "expansion" of the two Packwood Creek basins will result in the loss of approximately nine acres of farm land.

It should be noted, however, that the proposed Master Plan indicates that as an alternative to expanding the two Packwood Creek basins, it appears that runoff that would be routed through the expanded basins could be discharged directly into the channel. Based on the considerations identified in the discussion of project alternatives in Section 4.0, the alternative of discharging directly into Packwood Creek is not expected to result in any additional potentially significant environmental impacts, and it would have significantly lower construction and maintenance costs than the proposed expansion of the two basins. As discussed previously, the recommendation to expand the two existing Packwood Creek basins was based on a desire to be consistent with the updated LUE and the 1987 Master Plan.

The third basin that the proposed Master Plan recommends expanding with the acquisition of additional land is the Pinkham Park basin in the Evans Ditch drainage area. However, because the surrounding lands are fully developed with urban uses it is unlikely that the City will acquire additional land to expand the Pinkham Park basin.

The Master Plan recommends expanding three of the five existing "terminal" basins that will be used as the disposal site for City storm water and constructing one new "terminal" basin. As shown in Table 2-3, this construction will involve a total of approximately 125 acres. Because most of the land adjoining these basins currently is in agricultural production, the recommended expansions will result in the loss of approximately 125 acres of farm land. However, it should be noted that the City expects that the expansions will occur in a phased manner over the next 20 to 30 years.

In summary, the proposed construction of new "in-town" basins, expansion of existing "in-town" basins, and "terminal" basin construction/expansion will result in the loss of approximately 175 acres of farm land. However, this loss of farm land is not considered significant for the following reasons:

1) The new "in-town" basins generally will be located at or in close proximity to areas currently designated for "Conservation" uses by Visalia's updated LUE. Therefore, the development of basins in the vicinity of the recommended sites is considered consistent with the LUE.

2) Because the recommended new "in-town" basins generally are within the 2020 Plan's 2000 UDB, it is likely that these lands would be developed with other urban uses in the event that the basins were not constructed.

3) The new "in-town" basins generally will be developed at the time the surrounding lands are developed, which means that construction of the basins should not result in the premature loss of farm land.

4) The Master Plan recommends expanding the two existing Packwood Creek "in-town" basins on lands within the 2010 UDB that are designated for urban uses. Therefore, it is likely that these lands would be developed with other urban uses in the event that the basins were not expanded.

5) The existing "terminal" basins that require expansion and the site of the new "terminal" basin (along Mill Creek) are located outside of the updated LUE's 2020 UDB but within the UAB. These "terminal" basins and the surrounding farm lands commonly are considered compatible uses because the basins are used to regulate and recharge water deliveries and the expansion of existing basins and construction of a new basin will provide additional water regulation and groundwater recharge benefits.

Another environmental issue of concern with the Master Plan project is the compatibility of the recommended new "in-town" basins with the existing surrounding agricultural uses. However, because the basins will not be constructed until the surrounding lands develop, the basins should not represent an incompatible encroachment into agricultural areas (that will restrict current farming practices). With regard to the "terminal" basins, as discussed above, water storage basins and farm lands are considered compatible uses.

General Plan Amendment

The proposed redesignation of selected "Conservation" sites should not result in any significant impacts to the existing land uses in the vicinity of the sites. The proposed new land uses will not effect the site until the land is developed. Until that occurs, the existing uses will not be restricted or impacted by the new planned uses.

As lands surrounding the basins develop in the future, the proposed new uses should not have a significant effect on the surrounding lands because, as discussed below, the proposed new land use designations for the "Conservation" sites are consistent with the policies of the updated LUE and compatible with the surrounding planned land uses.

Planned Land Uses

Master Plan Improvements

As mentioned in Section 1.1, the City's updated LUE contains a policy that encourages the City to update Visalia's 1987 Storm Drain Master Plan in order to identify the improvements that will be needed to serve future growth areas within the 2020 UDB. Because the intent of the proposed Master Plan is to comply with this policy, the Master Plan generally is considered to be consistent with the LUE. Based on this consistency, implementation of the Master Plan is expected to promote the orderly development of the planned land uses and not adversely effect implementation of the LUE.

As discussed above, most of the recommended new "in-town" basin sites are located on or near lands designated for "Conservation" or "Park" uses. However, the Master Plan recommends five new "in-town" basins that were not recommended in the 1987 Master Plan. Two of these sites are outside of the area served by the 1987 Master Plan; the site north of S.R. 198 at Road 148 that is designated for LDR uses, and the site north of the St. John's River and west of Ben Maddox that is designated for "Urban Reserve" uses. Two of the basins sites are along Goshen Avenue between Demaree and Shirk; the site west of Demaree that is designated for LDR uses and the site east of Shirk that is designated for BRP uses. The fifth basin site, located near Roeben and Whitendale, is designated for "Conservation" uses because it is within the Protection Zone of the Visalia Municipal Airport.

It can be argued that locating basins at sites designated for non-conservation or non-park uses is not consistent with the City's LUE because the Element attempted to reserve land for "in-town" storm water basins by designating the 1987 Master Plan basin sites for "Conservation" or "Park" uses. However, as noted in Section 2.0, the LUE does not explicitly indicate that storm water basins cannot be located in areas designated for residential, commercial, or other non-conservation uses. It does, however, indicate that water storage basins can be located in areas designated for "Conservation" uses.

Therefore, it is concluded that locating basins on sites designated for residential, commercial and other non-conservation uses is not inconsistent with the City's General Plan LUE. Nevertheless, in the interest of facilitating the future implementation of the proposed Master Plan, the City is proposing a General Plan Amendment that will establish a new "Storm Water Basin" land use category and symbolize the generalized location of planned basins on the LUE Map. As discussed in Section 2.7, the proposed GPA also will provide the City with the flexibility to construct unplanned basins that are not symbolized on the Map regardless of the underlying land use designation.

The proposed Master Plan generally is not expected to have significant potential growth-inducing impacts because most of the recommended improvements only will serve a relatively small area and there should not be pressures to construct the improvements until the land within the service area is ready to develop. For example, the "in-town" basins generally have tributary service areas that are less than one square mile in size. Furthermore, because most of the "in-town" basins are within the 2000 UDB, the areas that these basins will serve are expected to develop by the year 2000, i.e. during the current growth period of the updated LUE. This means that any pressure to prematurely develop lands (served by the basins) will be short-lived.

The major pipelines recommended in the Master Plan typically will serve areas that are less than one square mile in size on a "stand-alone" basis. This means that the maximum area that can develop with the installation of a single line is relatively small. Although most of the individual pipeline service areas are within a single growth period, a few of the pipelines do extend across an urban development boundary and serve lands in two growth periods, generally with the downstream end of the line being in the later growth period. However, this is not seen as a significant growth inducing measure because land not designated for development (in the current growth period) could be readily developed without a connection to a off-site storm drain line if a temporary on-site basin was used to retain runoff.

With respect to the recommended expansion/construction of "terminal" basins, these projects are not perceived to be growth inducing because downstream storage capacity has not been an issue in the evaluation of serving new development. Furthermore, the City expects that the actual expansion/construction of these basins will occur in a phased manner by growth period. This means that the basins generally would not have a significant amount of unused capacity allocated to serve development during a future growth period.

The proposed Master Plan generally is consistent with the COSPR Element in that many of the recommended basin locations are identified as future park sites in the Element. However, it should be noted, as discussed earlier, that the City intends to update the COSPR Element in order to make it more consistent with the LUE. Through this update process, any existing inconsistencies between the proposed Master Plan and the COSPR Element will be eliminated.

General Plan Amendment

The proposed redesignation of eleven specific areas from "Conservation" to more intensive urban uses should not have a significant impact on the planned land uses of the updated LUE because the net acreage and distribution of the planned uses (following the development of the recommended basins) will not be significantly changed. Although the "Conservation" designations that reserved land for planned drainage basins will be removed, basins typically will be constructed at or near each of the areas that are to be redesignated.

As discussed in Section 2.7, the proposed Master Plan recommends the construction of five new "in-town" basins that were not recommended in the 1987 Master Plan, including two basins on Goshen Avenue that effectively replace a basin that was recommended in the 1987 Plan. The proposed Plan also recommends the construction of a basin in the vicinity of eight of the eleven re-designation sites (that were recommended as basin sites in the 1987 Plan). Therefore, the proposed Plan will result in a net increase of two basins. It should be noted that the "Conservation" area south of Packwood Creek and east of the County Center alignment (that the City is proposing to re-designate) was

"reserved" as the site for a basin that would provide the additional storage capacity that the 1987 Master Plan recommended was needed near Mooney Boulevard and the proposed Master Plan perpetuated with the recommended expansion of two existing basins.

This means that the planned "Conservation" acreage that will be lost as a result of the proposed redesignation generally will be balanced, if not exceeded, by the construction of new basins on lands currently designated for other uses. Similarly, the net acreage and distribution of LDR uses and the other uses that will replace "Conservation" uses should not be significantly changed.

Because the basins will serve the planned land uses as they develop, it can be argued that the proposed GPA will facilitate the development of the planned uses by allowing the City to "fine-tune" the generalized basin locations identified in the Master Plan. As discussed in Section 2.7, the actual location of each basin would be based on hydraulic considerations, land costs, improvement costs, surrounding land uses, property owner cooperation and the sequencing of development within the service area of the basin.

In summary, the proposed GPA is considered a Master Plan implementation action that will establish the generalized location of planned basins and criteria for selecting the final location of each basin. Therefore, the proposed GPA should not have a significant impact on the future development of the planned land uses of the LUE.

b) Indirect Impacts

The LUE EIR attributes several significant land use cumulative impacts to the implementation of the LUE. These impacts include conflicts between incompatible land uses, such as agricultural and urban uses; the loss of land for a particular uses, such as the loss of farm land to urban uses; and an imbalance of land use types.

The LUE EIR indicates that the LUE includes a number of policies that are intended to reduce the significance of the identified land use impacts, including the loss of farm land to urban development.

3.2.3 Mitigation Measures

a) Direct Impacts

Although no potential significant land use impacts that are directly attributable to the Project were identified, the City is proposing mitigation measures related to the loss of farm land and growth-inducing pressures. These measures are described below.

Loss of Farm Land

When the City acquires farm land for the purpose of developing a future basin and the basin will not be constructed for a least one year following the acquisition, the City shall allow the property owner (or other interested individuals) to continue farming the site until such time as the basin is needed to serve surrounding development projects.

Growth Inducing Pressures

The City should resist pressures to prematurely develop lands that can be served by installed Master Plan improvements by adhering to the growth phasing policies of the updated LUE. Policy 6.2.2 states that new or expanded urban development between the

2020 UDB and the UAB should be discouraged because the intervening area is largely agricultural land that generally is not suited for urban uses. Policy 6.2.3 refers to the factors that were considered in establishing the 2000, 2010, and 2020 UDBs for the LUE. Policy 6.2.3 also refers to compliance with a "build-out" criteria before development can occur outside of the 2010 and 2020 UDBs. This criteria is described in Appendix C of the Land Use Element. Policy 6.2.6 states that annexation of land outside of the current UDB may be permitted only if: a) the proposal is required for orderly and efficient land use planning within Visalia's planning area, and b) the land is designated consistent with the City's LUE Map.

b) Indirect Impacts

The LUE EIR contains a number of measures that are intended to reduce the significance of potential land use impacts. Measures presented in Section 4.1.5 relate to potential land use conflict and land supply balance impacts. Section 4.2.4 presents the mitigation measures that relate to potential "loss of farm land" impacts. These "loss of farm land" measures include increasing residential densities in areas where the infrastructure will not be adversely affected, and implementing a growth management system which will give preference to development proposals contiguous to existing development.

3.2.4 Residual Impacts

a) Direct Impacts

The land use impacts directly attributable to the implementation of the Master Plan are less than significant.

b) Indirect Impacts

The LUE EIR states that the loss of prime farm land will remain a significant and unavoidable impact because farm lands cannot be replaced.

3.3 POPULATION AND HOUSING

3.3.1 Existing Setting

a) Planning Area Overview

Population

The City of Visalia's current population is estimated to be 86,000. Visalia has experienced a steady growth in population since the early 1970s. The average annual growth from 1975 to 1990 was approximately 3.5 percent.

Population projections for Visalia that were utilized in the 2020 Plan assumed that local population will increase at the rate of 3.5 percent per year through 1995, with an 0.25 percent reduction in the growth rate over each subsequent five-year interval, until a "steady state" growth rate of 2.5 percent per year is reached by the year 2015). The 2020 Plan projects that the Visalia's population will total 98,700 in the year 2000; 129,400 in the year 2010; and 165,000 by the year 2000.

Currently, the City's population generally is distributed in what is referred to as a "concentric" pattern, with the City's traditional central business district being the approximate geographic center of the community and residential and other urban development surrounding this core. Through the 1960's and early 1970's, residential development occurred predominantly in the southwesterly portion of the community, taking advantage of proximity to existing infrastructure.

City land use policy began to change in the very early 1970's, however, with the designation of a high school, middle, and elementary school complex in northeast Visalia. In 1976, this policy direction became formalized with the adoption of an updated Land Use Element, which explicitly prescribed more development to the northeast and deliberately constrained further urbanization of the southerly and westerly portions of Visalia.

The 2020 Plan, establishes a policy framework and land use designations which will continue to keep the central business district at the approximate geographic center of the community and to promote concentric growth in all four quadrants of the City.

Housing

The LUE EIR indicates that the State Department of Finance estimated that there were a total of 25,596 dwelling units in Visalia in 1989. The predominant dwelling type was single family residences of which there were 18,835 units. The single family units comprised approximately seventy to seventy-five percent of the total housing stock in the community. There were approximately 5,716 multiple family dwelling units, which comprised about twenty to twenty-five percent of the local housing stock, and 1,045 mobile home units, which accounted for about four percent of the housing in Visalia.

The 1992 update of the City's Housing Element indicates that the 1990 U.S. Census reported that there were a total of 28,651 housing units in Visalia, including 20,643 single-family units, 6,511 multi-family units, and 1,497 mobile home units. The 1990 Census also reported that the average household size in Visalia had increased from 2.55 persons in 1980 to 2.78 persons in 1990. This increase was attributed, in part, to the influx of Southeast Asians to Visalia during the 1980s.

The updated Housing Element indicated that between 1980 and 1990, a total of 5,940 new housing units were constructed, while 72 units were demolished, resulting in a net gain of 5,868 housing units, or an average of 587 units per year. Single-family units comprised approximately 74 percent of the total number constructed.

In 1991, a "vacant land" survey by the City indicated that there were approximately 1,900 acres of vacant land that could be developed for residential uses within the city limits. The 2020 Plan designates an additional 9,400 acres of land for residential uses. Approximately 3,200 acres of this total is available for development by the year 2000. It should be noted that the lands designated for residential uses include a 30 percent contingency or "flexibility factor". This means that the designated lands will accommodate approximately 130 percent of the 2020 Plan's projected increase in Visalia's population (by the year 2020).

The LUE EIR indicated that the average prices for newly-constructed housing units in Visalia have been increasing steadily since 1982. In 1990, the estimated average price for a newly-constructed single family dwelling unit was approximately $106,000. Factors potentially affecting housing pricing typically include vacancy rates and the availability of competing products in the market area, land costs, construction costs, and underlying

social and economic factors which create demand for housing (for example, the influx of relocated Southern California and San Francisco Bay Area residents to the central San Joaquin Valley in the late 1980's and early 1990's).

b) Project Areas

Master Plan Improvements

The Master Plan basins and other improvements that serve future development generally will be installed either in rural areas that are sparsely populated or unpopulated areas that are being prepared for development. The Master Plan basins that are recommended to upgrade existing deficiencies also will be installed in sparsely populated areas that typically are undeveloped.

It should be noted that the proposed basin site west of Lovers Lane and north of Mill Creek, which is in the vicinity of a planned community park facility at southwest corner of Lovers Lane and Mill Creek Parkway, is near four to five single-family residential units that are accessed from a dirt road that connects with Goshen Avenue. These units, which currently appear to be somewhat dilapidated, are served by individual septic tank/leach field systems and wells. There also is a single rural-residential type dwelling unit in the vicinity of the basin site located north of Goshen and east of Shirk that potentially could be impacted by the construction of a basin. This residence is located west of the grazing land that is immediately west of "The Lakes".

General Plan Amendment

The proposed redesignation of "Conservation" sites generally involves areas that currently are not developed with residential housing or populated.

3.3.2 Project Impacts

a) Direct Impacts

Master Plan Improvements

In general, the construction of planned basins and other improvements is not expected to have a significant impact on existing population and housing conditions in the vicinity of the improvements. However, the construction of basins potentially could effect housing units on or near two of the planned basin sites. At the basin site west of Lovers Lane and north of Mill Creek, the construction of a basin potentially could result in the removal of up to three or four existing dilapidated housing units. The exact number of units, if any, that will be impacted by the construction of a basin will depend on the location and design of the basin (and the design of the planned community park). The City expects that the basin location and design will not be established for at least one to two years. At the basin site along Goshen Avenue east of Shirk, an existing dwelling unit near the site potentially also could be effected by the construction of a planned basin.

In the event that the construction of a basin requires the removal of one or more of the units, the City would purchase the properties and relocate the occupants in accordance with the Federal Relocation Assistance and Real Properties Act of 1970 (and all updates thereof). With the procedures established by this federal legislation, any potential impacts associated the acquisition of properties and relocation of all displaced occupants (to accommodate the construction of basins) are not expected to be significant.

General Plan Amendment

The proposed redesignation of "Conservation" areas generally should not have a significant impact on existing housing and population conditions because there are no houses or inhabitants on the areas under consideration. Similarly, the proposed use of a symbol to represent the generalized location of planned basins on the LUE Map is not expected to have a significant impact on existing housing and population conditions because future basins typically will be located in areas that are not developed with housing and other urban improvements.

b) Indirect Impacts

Population

Section 4.4.3 of the LUE EIR indicates that the population impacts associated with the implementation of the 2020 Plan are considered less than significant. Therefore, the indirect impacts associated with implementation of the Master Plan are not considered significant.

Housing

The LUE EIR states that implementation of the 2020 Plan would not significantly effect housing supply and demand in Visalia. Therefore, implementation of the Master Plan is not expected to result in any significant indirect housing impacts.

3.3.3 Mitigation Measures

a) Direct Impacts

Population

The proposed project is not expected to have a significant impact on the existing population conditions of Visalia. Therefore, no mitigation measures are required.

Housing

In the absence of any significant potential impacts on the community housing stock or supply that are directly attributable to the proposed project, no mitigation measures are required.

b) Indirect Impacts

Because there LUE EIR did not attribute any significant population and housing impacts to the development of the planned land uses of the 2020 Plan, no mitigation measures were recommended.

3.3.4 Residual Impacts

The population and housing impacts of the projects are less than significant.

3.4 TRAFFIC/CIRCULATION

3.4.1 Existing Setting

a) Planning Area Overview

Visalia is served by a circulation network that is built on a grid of "arterial" and "collector" roadways. The arterials are spaced one mile apart, while the collectors generally exist at one-half mile intervals between the arterials. Major east-west components of the City's circulation network include State Route 198, a four-lane highway through central Visalia that extends west to Highway 101 and east into Sequoia National Park; and Caldwell Avenue, a roadway of regional significance in the southern portion of the community. Major north-south components include Mooney Boulevard, a major commercial roadway that extends south to Tulare; and Road 80 (Plaza Drive), which extends north of S.R. 198 through the City's Industrial Park to Dinuba and beyond. Several of Visalia's arterial roadways are part of Tulare County's recently adopted Congestion Management Plan (CMP) network.

The LUE EIR referenced the City's 1989 Circulation Element for a description of the existing circulation/traffic conditions in Visalia. The major conclusion of the 1989 document is that "...for the most part, there is more than adequate capacity in Visalia's existing circulation system for existing levels of development...". The document also identified areas in the system that are experiencing congestion and other deficiencies.

It should be noted that the City currently is in the process of updating its Circulation Element. The updated Element will identify the improvements that are needed to serve the planned land uses of the 2020 Plan.

b) Project Areas

Master Plan Improvements

Most of the recommended Master Plan improvements that will be needed to serve future development will be constructed/installed in areas that currently are largely rural and undeveloped. Most of the roadways that serve these areas at this time are relatively narrow with one travel lane in each direction and no paved shoulder or curb and gutter.

Most of the pipeline improvements will be installed in these existing roadways as the adjacent lands develop. However, it is expected that many of the roadways will be widened and improved to City Standards at the time the pipelines are installed. Other Master Plan pipelines will be installed in future roadway alignments at the time the roadways are constructed in accordance with City Standards.

The recommended new basins will be constructed outside of existing, as well as future "ultimate" street rights-of-way. The recommended widening of channels also will occur outside of the existing and future street rights-of-way.

General Plan Amendment

The proposed General Plan Amendment generally also involves rural and undeveloped areas that are served by narrow roadways that do not comply with current City Standards. These roadways will be improved in accordance with City Standards when the adjoining lands are developed. It is expected that the GPA areas also will be served with new roadways that will be constructed as the adjoining lands are developed.

3.4.2 Project Impacts

a) Direct Impacts

Master Plan Improvements

The proposed Master Plan storm water basins are not expected to have significant adverse traffic impacts either during or following their construction because they should be low traffic generators. During construction, "project" trips generally will be limited to construction vehicles approaching and leaving the site during non-peak hours over a fairly short period of time. Following construction, trips to and from the basins should be minimal; typically consisting of intermittent maintenance vehicle traffic.

It should be noted that park facilities may be developed on some of the recommended "in-town" basins sites and a park would be expected to generate a higher number of vehicle trips than a basin that is used strictly for storm water storage purposes. However, the trips that would be generated by park facilities were not considered in the evaluation of the project due to the lack of specific information on the type of recreational uses that each park will accommodate and the type of traffic each use will generate. The traffic impacts associated with the future development of a park facility at a basin site will be evaluated at the time an improvement project is proposed and the specific recreational uses of the site can be defined.

Installation of Master Plan pipelines in roadways potentially could result in traffic disruptions. However, it is expected that virtually all of the recommended lines will be installed at the time existing roadways are widened and new roadways are constructed. Furthermore, any traffic disruptions that may occur as a result of pipeline projects should be short-term problems that are eliminated when the pipeline is installed and construction of the roadway is completed.

General Plan Amendment

The proposed redesignation of "Conservation" areas to more intensive urban uses would be expected to result in an increase in the number of vehicle trips that would be generated by each of the areas under consideration. This increase in traffic potentially could impact the operating conditions on the roadways in the vicinity of the "Conservation" areas. However, as discussed earlier, the proposed Master Plan recommends constructing basins at or in close proximity to most of the "Conservation" areas under consideration. This means that when a basin is constructed, there generally will be a comparable loss of the more intensive land use (that replaced the "Conservation" use) or a similar use. Therefore, there will effectively be little, if any, net change in land use distribution within the service area of each basin (that is constructed at or near a "Conservation" area) and no significant increase in vehicle trips generated within each service area. Because the proposed redesignation generally is not expected to result a substantial increase in traffic volumes, it should not have a significant impact on the existing or future operating conditions on Visalia's circulation network.

"Conservation" areas that will be redesignated but not "replaced" with a basin include a site south of Evans Ditch at the McAuliff Road alignment and a site east of Mooney Boulevard and north of Ferguson. The redesignation of these areas to LDR uses will result in a net increase in traffic volumes on local roadways. At an assumed density of four units per acre, each of these 10-acre sites should generate approximately 40 peak-hour trips, which is well below the City's 100 peak-hour trip threshold for a project traffic impact study.

Other noteworthy redesignation sites include the 100 acres of excess "Conservation" area adjacent to the existing Modoc Ditch basin north of Riggin at Linwood. The redesignation of this area to LDR uses will generate approximately 400 peak-hour trips. However, it is expected that the future improved street system serving that area, which includes Riggin and Akers, can accommodate the additional trips (that will be generated by the proposed redesignation) as well as the trips that the surrounding planned land uses will generate at build-out. Furthermore, it is expected that any development project involving the redesignated area that will generate more than 100 peak-hour trips will be required by the City to prepare a traffic impact study.

3.4.3 Mitigation Measures

a) Direct Impacts

In the absence of any significant potential direct impacts upon the traffic circulation system attributable to the proposed project, no mitigation measures are required for such impacts.

b) Indirect Impacts

The LUE EIR included a number of measures that are intended to mitigate potentially significant traffic and circulation impacts. Many of the LUE EIR mitigation measures were to be addressed during the current update of the Circulation Element.

3.4.4 Residual Impacts

a) Direct Impacts

The identified impacts of the project are less than significant.

b) Indirect Impacts

The LUE Update EIR concluded that notwithstanding the prospective implementation of the mitigation measures contained in the EIR and the related LUE policies referenced above, it is likely that the potential significant traffic and circulation impacts associated with development of the planned uses cannot be fully mitigated to a level of insignificance. Therefore, the indirect impacts associated with implementation of the Master Plan are considered significant and unavoidable.

3.5 AIR QUALITY

3.5.1 Setting

Wind Patterns

Visalia lies within the San Joaquin Valley Air Basin. This basin is surrounded on the east and south by mountains ranging in height up to 13,000 feet or more and on the west by mountains of up to 4,000 feet in elevation. Although marine air generally flows into the Basin through the San Joaquin Delta, the surrounding mountains restrict air movement into and through the Basin. Persistent high pressure cells over the Valley also result in extended periods of poor air circulation.

During the summer, the prevailing winds within the Basin generally are from the northwest. During the winter, the Basin generally experiences low speed winds from the south-southeast. Temperature inversions, which occur in a stable atmosphere of warm air over cooler air, impede upward air movements, particularly during the winter in the southern portion of the Basin. As a result of the surrounding mountains and poor air circulation, the San Joaquin Valley is subject to poor air quality.

Pollutant Characteristics

The air pollutants of most concern in Tulare County are ozone and PM10. A brief discussion of these pollutants is provided below.

Ozone is not a directly-emitted pollutant. Ozone is formed when so-called "precursors of ozone", specifically nitrogen oxides (NOx) and reactive organic gases (ROG), react to sunlight. Ozone is an invisible, odorless gas, and when concentrated in the lower atmosphere, can cause or aggravate respiratory problems in humans. Ozone concentrations can also result in cracked rubber (e.g. tires) and can interfere with photosynthesis in plants. This latter potential results in ozone being regarded as a substantial risk to agricultural crop production, the growth of ornamental plants, and the sustenance of natural vegetation.

PM10 is fine particulate matter composed of very small particles (less than ten microns, or 1/1,000,000 meter) of such substances as dust, soot, aerosols, fumes and mists. The San Joaquin Valley's PM10 problem is caused in part by the same emissions which cause ozone concentrations: ROG and NOx. In addition, PM10 concentrations are the result of other human activities, including agricultural operations, industrial processes, combustion of fossil fuels, construction and demolition and entrainment of road dust into the air. Natural sources of PM10 include windblown dust and wildfires.

Pollutant Emissions

The State Air Resources Board operates one air quality monitoring station (that measures gaseous pollutants) in Tulare County. The station is located on Church Street in north Visalia. Based on the data collected at the Visalia station, the Air Resources Board has designated Tulare County as a "non-attainment" area for State ambient ozone and PM10 standards. A "non-attainment" designation means the pollutant concentration in the area exceeded the standard established by the State at least once in the last three years. While Fresno, Kern, San Joaquin, and Stanislaus counties were designated "non-attainment" areas for carbon monoxide, it should be noted that this pollutant is not measured in Tulare County. A more comprehensive discussion of the State and Federal air quality standards is presented in Section 4.6.1 of the LUE EIR.

Air Quality Regulations

The California Clean Air Act, passed in 1988, requires regional air pollution control districts to prepare air quality attainment plans that provide for a reduction in ozone precursor and carbon monoxide emissions (Note: PM10 attainment is mandated by federal regulations). The plans must achieve an annual reduction of five percent or more in district-wide emissions. The "baseline" reference for the reductions is the level of emissions that were generated in 1987.

The San Joaquin Valley Unified Air Pollution Control District (APCD), an eight-county agency that was formed in 1990 to address air quality problems on a valley-wide basis, adopted its Air Quality Attainment Plan in January of 1992. As required by the California Clean Air Act, the Plan presents strategies and measures for controlling ozone precursor and carbon monoxide emissions, the control measures for stationary sources and transportation control measures that reduce vehicle emissions.

In addition to the mandates of the California Clean Air Act, State and federal agencies have established standards for ambient air quality which are not to be equaled or exceeded if maintenance of human health and other desirable objectives are to be achieved.

3.5.2 Project Impacts

Overview

The CEQA Guidelines state that a project will normally have a significant effect on the environment if it will "violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations."

Because Tulare County is a non-attainment area for ozone and PM10 standards, any project that results in increased ozone precursor or PM10 emissions could be viewed as having significant air quality impacts. However, if the project includes mitigations measures that implement the best emissions control measures available pursuant to the APCD's 1991 Air Quality Attainment Plan, APCD considers the impacts to be mitigated to a level of insignificance.

a) Direct Impacts

During the construction of the proposed basins, the excavation and grading of the soil may result in suspended dust particles, particularly under windy conditions. The rate of dust generation depends upon soil moisture, clay content, wind speed, and activity level. Dust generated during the installation of the lines may contribute to PM10 levels that exceed short-term standards established by the State Air Resources Board. The proposed widening of channels and installation of Master Plan pipelines also may generate dust that increases ambient PM10 levels.

Because the proposed Master Plan basins and other improvements are expected to generate a minimal number of trips after they have been constructed, as discussed in Section 3.4.2, they should not be considered significant indirect sources of automobile emissions.

b) Indirect Impacts

The potential indirect and cumulative impacts associated with the implementation of the Master Plan consist of the long-term impacts that are directly attributable to the development of the planned land uses of the 2020 Plan. The LUE Update EIR indicated that these long-term impacts are attributed to the emissions that will be produced by stationary (industrial) sources and mobile (vehicle) sources.

The LUE EIR did not include an analysis of the emissions that will be produced by stationary sources due to the lack of specific information on future projects. However, the EIR indicates that the long-term vehicle emissions associated with implementation of the updated LUE are considerable, and these additional emissions will exacerbate the existing local and regional air quality problems. Therefore, the air quality impacts associated with the 2020 Plan are characterized as significant in the LUE EIR.

3.5.3 Mitigation Measures

a) Direct Impacts

In order to mitigate the potential short-term impacts associated with the construction of Master Plan basins, the proposed widening of channels, and the installation of Master Plan lines, the City should ensure that the following dust control measures are implemented:

1) All material excavated or graded should be sufficiently watered to prevent excessive dust generation. Watering should occur at least twice a day, preferably in the late morning and at the end of the work day.

2) All clearing, grading and excavation activities should cease when the wind speed exceeds 30 mph for one hour.

3) All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive dust.

4) The area disturbed by clearing, grading, and excavation activities should be minimized at all times.

5) On-site vehicles speeds should not exceed 15 mph.

6) All internal combustion engines operating on the site should be properly maintained and well tuned.

Because implementation of the Master Plan is not expected to result in any significant long-term impacts, no post-construction mitigation measures are required.

b) Indirect Impacts

The 2020 Plan included a number of policies that were intended to reduce the significance of the air quality impacts that would result from the development of the planned land uses. The LUE Update EIR also contained several mitigation measures to reduce the significance of the impacts of the Plan. Many of these mitigation measures are consistent with the transportation control measures (TCMs) contained in SJVUAPCD's recently adopted Air Quality Attainment Plan.

3.5.4 Residual Impacts

a) Direct Impacts

With the recommended mitigation measures, the short-term impacts associated with the construction of Master Plan improvements will be reduced to a level of insignificance. The long-term, post-construction impacts of the Master Plan are less than significant.

b) Indirect Impacts

The LUE Update EIR indicates that even with the implementation of the LUE policies and the recommended mitigation measures, the air quality impacts of future vehicle emissions are expected to remain significant. The EIR also indicates that these vehicle emissions, together with emissions from future stationary sources, are expected to contribute to the continued non-attainment of state and federal air quality standards in the Visalia area.

3.6 WATER RESOURCES

3.6.1 Existing Setting

This section presents a discussion of existing surface drainage, groundwater, water supply/demand, and water quality conditions in the Visalia area.

a) Surface Drainage

The southern end of the San Joaquin Valley is part of the Tulare Basin, which has no external drainage. The Kaweah River, Tule River and other channels on the east side of the southern Valley historically drained to the Tulare Lake Bed, located approximately 30 miles southwest of Visalia. With the flood control/water supply projects that have been constructed along the foothills on the east side of the valley, water in these channels typically reach the Lake Bed only under high flow conditions.

Visalia is within the Kaweah River drainage area, which includes a 560-square mile watershed that drains into Lake Kaweah, located approximately 20 miles east of Visalia. Flows into Lake Kaweah, which is operated for flood control, irrigation and water conservation purposes, are controlled by Terminus Dam.

The Kaweah River splits into the Lower Kaweah River and the St. Johns River at McKays Point, approximately three miles below Terminus Dam. The Lower Kaweah River is the main channel in a distributary system that includes numerous channels in the Visalia area. These distributary channels, which include natural channels like Mill Creek, and man-made ditches like Evans Ditch and Persian Ditch. The St. Johns River, which feeds several irrigation ditches, traverses northeast Visalia.

These channels deliver irrigation water to farm lands and surplus water to recharge basins. Many of these channels also receive storm water runoff discharges from the City's storm drainage system. Treated effluent from the City's waste water treatment plant, located west of S.H. 99, also is discharged into the Mill Creek, typically during the spring and summer.

Prior to the completion of Terminus Dam in 1962, the Kaweah River drainage area on the valley floor had flooded on numerous occasions. Although Lake Kaweah has not spilled uncontrollably since the Dam was completed, high flows on unregulated channels tributary to the Kaweah River have resulted in the flooding of mostly agricultural land in December of 1966 and January of 1969. The U.S. Army Corps of Engineers currently indicates that Lake Kaweah is expected to spill approximately once every 50 years, i.e. a two percent probability of spilling in any given year.

b) Groundwater

Groundwater in the Visalia area is found in largely unconfined aquifers composed of alluvial fan deposits that normally have moderate to high well yields. The major source of groundwater replenishment in this area is the infiltration and percolation of surface water from the Kaweah River system.

The groundwater level in the Visalia area fluctuates somewhat in response to variations in precipitation and availability of surface water, and the magnitude of groundwater withdrawals. The depth to static water level generally ranges from 70 to 90 feet in the Visalia area. Since 1940, when CWSC began recording groundwater levels, the water table in the Visalia area has dropped approximately 30 to 40 feet.

Kaweah Delta Water Conservation District reports that the Kaweah River Basin is in a long-term groundwater overdraft condition as a result of average annual groundwater withdrawals (and other losses) exceeding the average annual volume of groundwater replenishment. This overdraft condition is expected to continue indefinitely unless the supply of surface water that is available to the basin can be increased. In the Visalia area, while water levels will continue to rise and fall in a cyclical fashion (in response to meteorological conditions), the overdraft condition is expected to result in a long-term decline in water levels.

c) Water Supply/Demand

Municipal Water

The primary municipal water purveyor in the Visalia area is the California Water Service Company (CWSC). CWSC maintains approximately 60 wells in service with an overall rated capacity of approximately 40,000 gallons per minute (60 million gallons per day). CWSC reports that the average demand for residential, commercial, and institutional customers in the Visalia area is approximately 22,000 acre-feet per year. Based on a current population of 86,000, the current city-wide average per capita demand is approximately 230 gallons per day per capita.

In response to the low-rainfall conditions that have existed in the San Joaquin Valley since the late 1980's, the City of Visalia has implemented a Water Conservation Program. The City currently is enforcing Stage 2 restrictions, which require residences with even-numbered addresses to irrigate landscaping on Monday, Wednesday and Friday, while residences with odd-numbered addresses irrigate on Tuesday, Thursday and Saturday. Other Stage 2 restrictions include no watering of lawns between 10 a.m. and 7 p.m., adding to or refilling of pools, hosing down sidewalks, driveways or parking lots, and washing cars on allotted days. The City also has initiated a program of water meter installation and retrofitting water meters on all post-1987 residential development. The City expects that these measures will result in a 25 percent reduction in usage by the affected residential units.

Agricultural Water

Water is used to irrigate agricultural lands in the Visalia area. Ground water and surface water both are used to irrigate crops. Ground water is pumped from the underlying aquifer system, while surface water is delivered from Lake Kaweah through a network of natural channels and man-made, privately-owned ditches. The natural channels that are used to deliver irrigation water in the Visalia area include the St. Johns River, Mill Creek

and Packwood Creek. The local ditch channels that deliver water to the farm lands include Modoc Ditch, Evans Ditch, Persian Ditch and Watson Ditch.

Irrigators generally use surface water to the maximum extent possible to conserve groundwater supplies and minimize their pumping costs. Groundwater typically is used when surface water supplies are not available or cannot fully satisfy the water demand of the irrigated crops. On the average, surface water deliveries satisfy approximately one-half of the crop demand. However, during below average water years, irrigators may receive very little of their normal surface water delivery, which means they must rely primarily on groundwater to irrigate their crops.

The LUE EIR estimated that there are approximately 13,000 acres of irrigated farm land within the City's UDB that currently are in agricultural production. If it is assumed that the net demand for irrigated crops is three acre-feet per year and 50 percent of the demand is satisfied with groundwater, the current average agricultural demand for groundwater within the planning area is approximately 20,000 acre-feet per year. However, as discussed above, agricultural pumping of groundwater generally increases in drought conditions and decreases in wet years. It should be noted that excess irrigation water, i.e. water not consumed by the crop or evaporated, percolates down to the underlying groundwater table.

d) Water Quality

Groundwater

Because of the region's intensive agricultural activities, of particular concern in the San Joaquin Valley is groundwater pollution resulting from infiltration of contaminated agricultural drainage. The soil fumigant dibromochloropropane (DBCP) is the most prevalent groundwater pesticide contaminant in the Valley.

The majority of wells supplying water to Visalia produce water of sufficient quality to meet State drinking water standards. Section 4.10.2.3 of the LUE EIR identifies the CWSC wells that have detectable levels of organic chemicals, including the wells that exceed State standards.

In and around the City of Visalia, a number of sites of with soil and groundwater contamination. These sites include the Stanley Bostitch facility located at the intersection of N. Shirk Road and W. Goshen Avenue; the Southern California Edison Visalia Pole Yard on Ben Maddox Way north of Center Street; and the former Green Acres Airport. The LUE EIR reported that all three sites are being remediated under the California Hazardous Substance Cleanup Bond Act (state superfund).

Surface Water

It generally is recognized that urban storm water runoff potentially carries metals, oils, greases, and other contaminants. As a means to control the contamination of urban storm water runoff, the Environmental Protection Agency (EPA) has established storm water discharge regulations under the National Pollutant Discharge Elimination System (NPDES) program. These regulations currently require municipalities with populations exceeding 100,000 to obtain a permit for storm water discharges. The EPA is expected to require municipalities with populations under 100,000 to obtain permits within the next two to three years.

The EPA regulations also requires specific industrial facilities to obtain a permit, as are construction sites where five acres or more are disturbed by grading or excavation. At this time, the State Water Board is enforcing the EPA regulations and issuing the permits.

The intent of the EPA regulations is to encourage cities and other discharges to develop storm water management programs that will control the contamination of urban runoff at the source, rather than costly "end-of-the pipe" treatment-oriented solutions. Examples of source control measures that are favored by the EPA include the elimination of illicit discharges, the control of sediment at construction sites, street cleaning, and public awareness programs. The EPA also considers low-cost structural control measures, such as retention basins, to be effective management techniques.

The State permits require discharges to establish water quality monitoring programs in order to assess the effectiveness of their control measures.

3.6.2 Project Impacts

a) Direct Impacts

The following direct "project" impacts are discussed below: surface drainage, water quality and irrigation flows.

Surface Drainage

The proposed Master Plan provides a long-range, integrated approach to serving the planned land uses of the updated LUE without adversely effecting downstream water users. More specifically, construction of the recommended improvements will result in greater control of the additional storm water runoff that will be generated by the development of the LUE planned land uses. This control is expected to result in design storm event City discharges that do exceed the capacities of the receiving channels. The recommended improvements also are expected to accommodate the net volume of City runoff that will be discharged into the channels.

Therefore, the Master Plan should not have a significant adverse effect on the local drainage conditions in Visalia. In addition, the proposed Master Plan generally does not result in flows in the main conveyance channels that are significantly higher than the design flows of the 1987 Master Plan, and where the proposed Master Plan flows do exceed the 1987 Plan flows, the channels typically will be widened to accommodate the additional runoff.

Water Quality

As discussed above, storm water runoff generated by urban development in Visalia is a potential source of oils, greases, heavy metals and other contaminants. Therefore, as the planned land uses of the updated LUE develop, there will be an increased potential for the loading of oils, greases, heavy metals and other contaminants in City runoff. However, the proposed Master Plan recommends a number of measures that are expected to reduce the significance of this potential problem.

The proposed Master Plan recommends routing runoff though "in-town" storage basins, which provides an opportunity to improve the quality of runoff by allowing heavy metals, nutrients and other suspended solids to settle out. The effectiveness of this settling

process depends on the length of time the runoff is detained in the basin. The Master Plan also indicates that oil and grease separators can be incorporated into basin pump stations.

It is expected that all proposed Master Plan "in-town" basins constructed in the future will have a fenced, deep "low-flow" area that is used strictly for storm water storage purposes. These areas generally will have sufficient capacity to retain runoff from low intensity storms which means that potentially contaminated runoff would not have to be pumped out and discharged into a channel.

It should be noted that the Goshen Drainage Area is served by a large-diameter pipeline that discharges into the Goshen "Ocean", a terminal basin that has no outlet. Therefore, runoff from the Goshen Drainage Area is not conveyed in an open channel or discharged into "waters of the nation". This means that downstream waters in the channels of the Kaweah River system should not be contaminated by runoff from the Goshen Drainage Area.

It also should be noted that many of the other Master Plan drainage areas are served by open channels that terminate at a basin, such as Modoc Ditch, or channels with downstream "off-channel" basins, such as Evans Ditch. The Master Plan recommends utilizing these basins as the ultimate disposal site for the City's runoff. This means that potentially contaminated runoff from the City can be routed to or diverted into basins immediately downstream of Visalia and effectively retained without contaminating waters in the channels downstream of the "terminal" basins.

Based on the measures provided in the proposed Master Plan and the City's anticipated compliance with the EPA's storm water regulations, the long-term potential water quality impacts that are directly attributable to the implementation of the Master Plan are not expected to be significant.

During the construction of the recommended basins, sediment from the site potentially may be conveyed off-site by storm water runoff and discharged to a conveyance channel. However, because basins will effectively function as "sinks", it is likely that runoff from the basin sites will be retained on-site and not drain to an established waterway. In accordance with the EPA storm water regulations for construction activities, the City expects to apply for coverage under the State's General Permit for Construction Activities when the basin sites are five acres or larger.

The proposed widening of downstream reaches of Modoc Ditch, Mill Creek, and Cameron Creek also potentially will introduce additional sediments (from the newly cut banks) into these channels. However, the long-term impact of this action is not considered significant because the banks will stabilize under the ambient flow conditions in a relatively short period of time. After the banks have stabilized, there should not be a significant net increase in sediment erosion from the banks. It also should be noted that the flows in these channels typically carry high suspended sediment loads under normal conditions.

Based on the considerations discussed above, the potential impacts associated with the introduction of sediments into the conveyance channels used the City are not expected to be significant.

Another water quality-related impact that warrants attention is the potential accumulation of storm water runoff contaminants in soils at the bottom of storage basins. As runoff is retained in basins and disposed of by infiltration and evaporation, heavy metals and

other contaminants that may be present in the runoff can accumulate in the bottom soils over time. The greatest potential for the accumulation of contaminants is expected to be in the deep portions of the basins that retain nuisance runoff and runoff from low intensity storms.

Irrigation Flows

The proposed widening of reaches of Modoc Ditch, Mill Creek, Persian Ditch and Cameron Creek is expected to result in an increase in "seepage" losses during the irrigation season. This increase in channel losses includes a short-term increase due to an increase in permeability immediately following the widening of the channel and a long-term increase due to a greater "wetted" perimeter. The short-term losses should diminish with time as the newly graded sediments stabilize and the banks "seal" back-up.

The potential increase in channel losses is expected to impact the Modoc Ditch and Persian Ditch channels and the irrigators that receive water (from the ditch companies) downstream of the channel reaches that will be widened. It should be noted that recent agreements between the City and the ditch companies state that the City shall compensate the ditch companies for in-channel irrigation water losses that occur as a result of City activities in the channels.

Because the Mill Creek channel widening will occur downstream of the diversion headgate for the Persian-Watson Ditch system and historically there has been little irrigation with Mill Creek water downstream of the headgate, a potential increase in water losses on Mill Creek should not have a significant impact on downstream water users. The water losses in Cameron Creek also should not have a significant impact on irrigators because there are no established non-riparian water rights on the channel and water generally only is diverted into the channel for recharge purposes when excess flows are available on the Lower Kaweah River system.

b) Indirect Impacts

The LUE EIR identified several potentially significant drainage impacts that are attributable to the development of the planned land uses. The potential impacts include an increase in impervious area, an increase in surface water discharges, a decrease in groundwater recharge, contamination of receiving surface waters, an increase in groundwater withdrawals, and contamination of ground water in the Visalia area.

Development within the Land Use Element development boundary will result in an increase in residential, commercial and industrial water demands and a decrease in agricultural water demands. For the purpose of evaluating the increase in total water supply demand, a city-wide average demand of 250 gpd per capita was used. Therefore, the projected 2020 population of 165,000 people will have an average city-wide water demand of approximately 4.1 mgd, which is equivalent to 45,000 acre-feet per year. However, it should be noted that the demand during the warmer summer months will be approximately 50 percent higher than the average demand (due to the irrigation of lawns and other landscaping).

As discussed above, the current city-wide average demand is approximately 20 mgd (22,000 acre-feet per year). Therefore, the additional demand that will result from the development of the planned land uses of the updated LUE is approximately 23,000 acre-feet per year. It is assumed that all of the future additional water demand in Visalia will be satisfied with groundwater.

Based on the estimated current average agricultural ground water demand of 20,000 acre-feet per year within the City's 2020 UDB, approximately 87 percent of the groundwater that will be needed to satisfy the additional water demand of future development in Visalia currently is used to irrigate farm lands that will be converted to urban uses.

Therefore, the net impact of the development of the planned land uses of the updated LUE will be an increased ground water demand of approximately 3,000 acre-feet per year. However, the significance of this impact is reduced somewhat if the surface water that historically has been used to irrigate the farm lands the will be converted to urban uses is used to irrigate other lands that currently are irrigated to some extent with ground water. Such an application of the "displaced" surface water could reduce the expected net increase in ground water pumping (with the Kaweah River Basin).

However, the LUE EIR indicates that continued and increased groundwater extraction to satisfy the demand of future development will be expected to lower groundwater levels, especially during drought conditions, which may result in future overdraft conditions. Additionally, localized high rates of groundwater extraction can effect the production of adjacent or nearby wells. Therefore, pumping of the groundwater basin to meet future water demand may result in significant impacts to the underlying aquifer system.

Conversion of agricultural land to urban uses will serve to mitigate water quality impacts related to agricultural chemical use. The LUE EIR stated that because DBCP usage is no longer allowed, concentration levels will decrease as the pesticide is dispersed throughout the environment. Water quality monitoring will assure drinking water supplies are maintained below state action levels. However, the potential for groundwater quality impacts from percolation of contaminated urban runoff into groundwater from surface water channels and holding basins exacerbated by decreased recharge will increase.

3.6.3 Mitigation Measures

a) Direct Impacts

Because the potential drainage impacts that are directly attributable to the implementation of the Master Plan are not considered significant, no related mitigation measures are required.

The only identified water quality-related impact is the potential accumulation of heavy metals and other contaminants in the soils at the bottom of the storm water basins. As mitigation for this impact, the City shall establish a program to monitor the bottom soils in storm water basins to determine if unacceptable concentrations of contaminants are accumulating at the bottom of the basins. As necessary, the bottom soils shall be removed and disposed of in an environmentally sound manner. The recommended monitoring program shall be established and implemented within 12 months of the City's submittal of an application for coverage under the State's General Permit for municipal storm water discharges.

As mitigation for the expected increase in water losses in Modoc Ditch and Persian Ditch, the City shall compensate the ditch companies in accordance with the terms of the 1992 agreement between the City and ditch companies.

b) Indirect Impacts

The LUE Update EIR indicated that the updated LUE contains policies that are intended to mitigate the potential impacts associated with the development of the planned land uses. The LUE EIR also contains several measures to mitigate the impacts of the LUE. These mitigation measures include strategies to enhance groundwater recharge capabilities and control the level of contaminants in storm water discharges. The LUE EIR also recommends that a study should be conducted to determine the safe yield of the local groundwater system, and no development should occur unless water supplies are available to adequately serve the project.

3.6.4 Residual Impacts

a) Direct Impacts

The identified potential direct impacts associated with the Master Plan will be reduced to a level of insignificance with the implementation of the recommended mitigation measures.

b) Indirect Impacts

The LUE EIR indicates that with the recommended mitigation measures, the potential drainage impacts associated with implementation of the 2020 Plan are reduced to a level of insignificance. However, the LUE EIR also indicates that it cannot be determined at this time whether the impacts associated with increased groundwater pumping can be mitigated. The LUE EIR considered this to be a potentially significant and unavoidable impact.

3.7 BIOLOGIC RESOURCES

3.7.1 Existing Setting

a) Planning Area Overview

A description of the vegetative and wildlife communities in the Visalia area, as presented in the LUE EIR, is provided below.

Native Communities

Historically, the natural vegetation of the Visalia area was characterized by park-like stands of Valley Oaks (Quercus lobata) among vast stretches of savanna traversed by the riparian stands of the Kaweah River and its tributaries. The broad savannas were dominated by Valley Oak Woodland, Valley Needlegrass Grassland, Valley Sacaton Grassland, and Non-native Grassland natural vegetation communities. The riparian corridors of the Valley portion of the Kaweah River and its distributaries were dominated by Great Valley Mixed Riparian Forest and Great Valley Oak Riparian Forest natural vegetation communities. The range of these natural vegetation communities has been significantly reduced from historic levels as a result of conversion to urban and agricultural uses. Only remnants of these natural communities presently exist in the

Central Valley. Little of the historic natural communities remain in the Visalia area, having largely been replaced with agricultural fields and urban/suburban developments. Section 4.9.2 of the LUE Update EIR contains a description of the these native vegetative communities.

Agricultural Communities

The predominant cover type likely to be impacted by overall community growth is agricultural land. The habitat value and attendant species associated with agriculture are dependent on the crop produced, cropping patterns, and availability of other life requisites (water, roosting and nesting sites, and escape cover).

Although not prime habitat, crop lands in the area provide a source of food, water, and shelter to both native and introduced wildlife species. The lack of hedgerows, shelterbelts, wind breaks, and natural vegetational buffers severely limits the habitat value of these man-made environs. In addition, agricultural practices such as herbicide and pesticide application, monocultural cropping, and intensive tillage significantly reduce the habitat value of these lands to wildlife.

Urban Communities

Three general urban wildlife categories are recognized (Mayer and Laudenslayer 1988): 1) heavily developed downtown area; 2) urban residential zone; and 3) suburban areas. The heavily developed downtown areas have very low species populations and diversity. Typically, rock dove, house sparrow and starling comprise the predominant bird fauna. House mouse, black rat, and Norway rat are the predominant wild mammals. Reptiles and amphibians are rare.

The urban residential zone has a more dense and varied mosaic of vegetation, including shade trees, lawns, hedges, and gardens. Approximately, over 40 percent of the surface area is impervious materials. Species commonly associated with this zone include the scrub jay, mockingbird, raccoon, opossum. Other species that are found in this zone include the alligator lizard, slender salamander, and western toad. The suburban area may occasionally have deer along the edges and striped skunk, western fence lizard, side-blotched lizard, and tree frogs.

Sensitive Species

A query of the California Natural Diversity Database (CNDDB), conducted in April, 1990 for the LUE EIR identified five species of concern within the area of the 7.5-minute Visalia quadrangle. These sensitive species consist of the black-shouldered kite, San Joaquin kit fox, Hoppings blister beetle, California jewelflower, and Tulare pseudobahia. A description of these species is presented in Section 4.9.2.2 of the LUE EIR.

Sensitive Habitats

The State Department of Fish and Game (DFG) cites that during the past century nearly 95% of California's riparian habitat has been lost, resulting in a significant decrease in the number of associated fish and wildlife. Both the state legislature and DFG have recognized and are giving priority to maintaining and improving the state's remaining riparian habitat. The Department's policy on riparian habitat is that development projects should not reduce either the quality or quantity of the riparian habitat.

Most of the remaining stands of old trees and much of the undisturbed or re-vegetated riparian corridors are found in northeast and west Visalia and along the St. John's River. There are reaches on all the waterways that flow through Visalia in which riparian vegetation exists or could be reintroduced.

Habitat surveys conducted in conjunction with the West and Northeast Visalia Specific Plans identified several sites in the Visalia that support significant natural habitats. A description of these habitats is contained in Section 4.9.2.2 of the LUE EIR.

b) Master Plan Project Areas

Water Storage Facilities

As discussed earlier, the proposed new water storage basin sites generally are located in rural, agricultural environments while the existing basins that the proposed Master Plan recommends expanding are located in urbanized areas. Many of the these facilities are in close proximity to "significant habitat areas", as identified in the City's 1989 Conservation, Open Space, Recreation and Parks (COSRP) Element. A field survey was conducted in January 1993 to evaluate the proposed Master Plan water storage basins sites.

A discussion of the habitat resources in the vicinity of the proposed new "in-town" basin sites is provided below.

(1) **McAuliff n/o Houston** - Construction of the basin is in-progress to serve existing and planned development. The development area and basin site previously were in agricultural production.

(2) **w/o Ben Maddox e/o St. Johns River** - The basin site currently is farm land that is in close proximity to the St. Johns River. It should be noted that this portion of the St. Johns River is identified as a "natural riparian corridor" by the City's COSRP Element.

(3) **Modoc Ditch e/o Court** - Construction of the basin is in-progress to serve existing and planned development. The development area and basin site previously were in agricultural production.

(4) **Mill Creek w/o Lovers Lane** - This recommended basin site currently is largely vacant with limit rural residential uses. The site is adjacent to a reach of Mill Creek that is identified as a "natural riparian corridor" in the COSRP Element.

(5) **Mill Creek w/o Ben Maddox** - This recommended basin site currently is a largely undeveloped pocket within an area developed with commercial and other urban uses. The site is adjacent to an area along Jennings Ditch commonly known as "hobo jungle" that supports native plant species and groves of mature oak trees and is identified as a "significant habitat area" in the COSRP Element. Because the ditch is no longer used to convey irrigation water, the supply of water to the "hobo jungle" has been diminished and, as a result, the vegetation appears to be receding. The basin site also is near a reach of Mill Creek that is identified as a "natural riparian corridor" in the COSPR Element.

(6) **Highway 198 w/o Akers** - This recommended basin site currently is in agricultural production. The site is adjacent to identified "significant tree groupings" along S.R. 198.

(7) **Roeben Road at Whitendale** - Construction of the basin is in-progress to serve existing and planned development. The development area and basin site previously were in agricultural production.

(8) **Packwood Creek @ Road 148** - The recommended basin site and most of the surrounding lands are in agricultural production. This site is in close proximity to "significant tree groupings" along Packwood Creek.

(9) **Pinkham Road s/o Walnut** - The recommended basin site and most of the surrounding lands are in agricultural production. There are no identified "significant habitat areas" in the vicinity of the site.

(10) **Pinkham Road s/o K Road** - The recommended basin site and most of the surrounding lands are in agricultural production. There are no identified "significant habitat areas" in the vicinity of the site.

(11) **Caldwell e/o Santa Fe** - The recommended basin site and most of the surrounding lands are in agricultural production. There are no identified "significant habitat areas" in the vicinity of the site.

(12) **Goshen Avenue w/o Demaree** - The recommended basin site and most of the surrounding lands are in agricultural production. There are no identified "significant habitat areas" in the vicinity of the site.

(13) **Goshen Avenue e/o Shirk** - The recommended basin site currently is open land that appears to be used for grazing horses. The land to immediately the west supports a single residence and horse stables. The land to the east and south (across Goshen Avenue) are developed with residential uses and the land to the north is agricultural production. There is an identified "significant tree grouping" on the site. This grouping consists of approximately three to four oak trees that are scattered over the site.

A discussion of the habitat resources in the vicinity of the existing "in-town" basins that the Master Plan recommends expanding is provided below.

(1) **Blain Park** - The existing park site is adjacent to a reach of Packwood Creek that is identified as a "natural riparian corridor" with "significant tree groupings". The surrounding lands are developed with residential uses.

(2) **Packwood Creek e/o Mooney** - The proposed basin expansion site is south of Packwood Creek and east of Mooney Boulevard. The site and most of the surrounding lands (south of Packwood Creek) currently are in agricultural production. The site is adjacent to a reach of Packwood Creek that is identified as a "natural riparian corridor".

(3) **Packwood Creek at County Center** - The proposed basin expansion site is south of Packwood Creek at the alignment of County Center Drive. The site and most of the surrounding lands (south of Packwood Creek) currently are in agricultural production. The site is adjacent to a reach of Packwood Creek that is identified as a "natural riparian corridor" with "significant tree groupings".

(4) **Willow Glen School Park** - The existing park site is surrounded by developed urban uses. There are no identified "natural riparian corridor" areas or "significant tree groupings" near the basin.

(5) **Evans Ditch at Linwood Park** - The existing park site is surrounded by developed urban uses. There are no identified "natural riparian corridor" areas or "significant tree groupings" near the basin.

(6) **Evans Ditch at Pinkham Park** - The existing park site is surrounded by developed urban uses. There are no identified "natural riparian corridor" areas or "significant tree groupings" near the basin.

A discussion of the habitat resources in the vicinity of the proposed new "terminal" basin site and the existing "terminal" basins that the Master Plan recommends expanding is provided below.

(1) **Mill Creek Terminal Basin at Road 68** - The recommended basin site currently is in agricultural production and adjacent to the City's Wastewater Treatment Plant. The remaining surrounding area also is farm land. The site is within the "potential kit fox habitat" area identified in the COSRP Element.

A reconnaissance-level survey was conducted at the WWTP site by a qualified biologist for the Wastewater Treatment Plant Expansion EIR (1992). The EIR indicated that "a significant number of waterfowl and shorebirds were observed using the wastewater plant's evaporation/percolation ponds". The EIR further states that although the WWTP's evaporation/percolation ponds are not actively managed for wildlife, it appears that they are a significant resource for shorebirds and waterfowl."

(2) **Modoc Ditch Terminal Basin (expansion)** - The land immediately adjacent to the existing basin is in agricultural production. The basin site is within the area along S.R. 99 that is identified as "potential kit fox habitat" in the COSRP Element. The Modoc Ditch channel upstream of the basin is not identified as a "natural riparian corridor", nor are there "significant tree groupings" identified near the basin.

(3) **Packwood Creek Terminal Basin (expansion)** - The land immediately adjacent to the existing basin is in agricultural production. Upstream and downstream of the basin, Packwood Creek is identified as a "natural riparian corridor" with "significant tree groupings". The existing basin site is outside of (but in close proximity to) the identified "potential kit fox habitat" area along S.R. 99. The existing basin site itself is not identified as a significant habitat area.

(4) **Persian-Watson Terminal Basin (expansion)** - The land immediately adjacent to the existing basin is in agricultural production. Upstream of the basin, the ditch channel is identified as a "natural riparian corridor". The existing basin site is within the identified "potential kit fox habitat" area along S.R. 99.

Channel Widening

Modoc Ditch - The downstream 18,000 feet of the main Modoc Ditch channel that the Master Plan recommends widening is considered a relatively sterile environment that does not support significant habitat resources due to the channel maintenance practices of the ditch company. This reach of the ditch is not identified as a "natural riparian corridor" nor are there identified "significant tree groupings" along the channel. The segment of the channel west of Shirk Road is within the identified "potential kit fox habitat" area along S.R. 99.

Mill Creek - The 9,600 feet of Mill Creek that the Master Plan recommends widening includes a 2,800 foot reach between Linwood and Akers and a 6,800 foot reach between Roeben and the Road 88 alignment. These two reaches are identified as "natural riparian corridors" with "significant tree groupings" in the COSRP Element. The tree groupings include mature valley oak tree along the channel.

Persian Ditch - The 700 feet of the Middle Fork of the Persian Ditch immediately downstream of S.R. 99 that the Master Plan recommends widening is not identified as a "natural riparian corridor" in the COSRP Element. However, this reach of the channel is flanked by mature oak trees and lined with other riparian vegetation.

Cameron Creek - The 3,500 feet of Cameron Creek upstream of Mooney's Grove that the Master Plan recommends widening also is identified as a "natural riparian corridor" with "significant tree groupings" in the COSRP Element. The tree groupings include mature valley oak trees along the channel.

Redesignation of "Conservation" Areas"

The "Conservation" areas that the City is proposing to redesignate are not considered significant habitat areas. As discussed in Section 2.7, each of the subject areas were designated for "Conservation" uses based on the fact that the 1987 Storm Drain Master Plan recommended a water storage basin at that location. Most of these areas currently are in agricultural production. Although the "Conservation" site at Demaree and Ferguson currently is in agricultural production, it should be noted that there are mature oak trees on the site along Demaree and Ferguson.

The proposed redesignation does not apply to areas, such as the "hobo jungle" and the waterways that traverse Visalia, that were designated for "Conservation" uses in order to protect significant habitat areas.

3.7.2 Project Impacts

a) Direct Impacts

Basin Construction/Expansion

The recommended new "in-town" basins generally will be constructed (or construction has started) on lands that are not considered "significant habitat areas". Most of the future basin sites currently are in agricultural production and do not support riparian habitat or stands of mature oak trees.

However, it appears that the construction of the proposed new basin north of Goshen and east of Shirk potentially could require the removal of oak trees. In this case, the City intends to design the basin in such a way that a minimum number, if any, of the oak trees will have to be removed or damaged during the construction of the basin. In cases where a new basin site is adjacent (or in close proximity) to a riparian habitat area, the City intends to design the facility in such a way that the basin can be constructed and operated without disturbing the adjoining habitat. Therefore, construction of the new "in-town" basins it not expected to have a significant impact on oak trees and other biological resources in the community.

The recommended expansion of selected existing "in-town" basins also should not have a significant impact on biological resources. Four of the expansion sites are surrounded by urban uses and, as such, there will be no increase in the "footprint" of the existing basin. The remaining two basin expansions involve construction on lands that are currently in agricultural production. Again, in the cases where an existing basin will be expanded adjacent to a habitat area, the City intends to design the expansion in such a way that the adjoining habitat will not be disturbed.

The "terminal" basin sites that the Master Plan recommends expanding and the recommended new basin site are within are within or in close proximity to the identified "potential kit fox habitat" area along S.R. 99. Therefore, the disturbance of these sites potentially could impact kit fox habitat. In the interest of avoiding these impacts, the City intends to conduct a "pre-construction" survey (in accordance with Department of Fish and Game guidelines) of the basin sites to determine if they are actively used by kit fox and other sensitive wildlife species.

Channel Widening

The proposed widening of channels potentially could impact mature valley oak trees and riparian habitat along the channels, particularly along Mill Creek, Persian Ditch, and Cameron Creek. In the interest of minimizing the significance of the impact, the City intends to conduct a survey of the channels to establish the location of oak trees and other significant riparian habitat. This information will permit the City to develop channel widening plans that accommodate existing mature oak trees to the greatest possible extent and reduce the impact to other significant habitat.

Following the development of the widening plans, the City will, in accordance with the State Department of Fish and Game (DFG) Code, notify DFG of its intention to widen the channels. In response to this notification, DFG will indentify the channel segments for which the City will be expected to obtain a Stream Restoration Permit prior to commencing with the widening. These permits will identify the measures that the City will be expected to implement in order reduce the potential for impacting habitat along the channels.

Redesignation of "Conservation" Areas

Because the proposed redesignation of "Conservation" areas involves largely farm land that is not identified as "significant habitat areas", the proposed redesignation generally is not expected to have a significant impact on important biological resources in the Visalia area.

b) Indirect Impacts

The indirect and cumulative effects associated with implementation of the Master Plan consists of the potential impacts that are attributed to the implementation of the 2020 Plan in the LUE EIR. As described in Section 4.9.3 of the LUE EIR, these potential impacts include the loss of agricultural habitat (with the conversion of farm lands to urban uses), loss of habitat for San Joaquin kit fox and other sensitive species, and loss of native vegetation communities.

3.7.3 Mitigation Measures

a) Direct Impacts

1) The City shall conduct pre-construction biological surveys for the construction/expansion of "terminal" basins. If the results of the surveys indicate that the basin sites provide habitat for kit fox or other sensitive wildlife species, the City shall consult with the Department of Fish and Game to establish a plan for constructing/expanding the basins without adversely effecting the animals.

2) The City shall conduct pre-construction biological surveys of the channel segments that the City intends to widen. Based on the information obtained during the surveys, the City shall develop widening plans that accommodate mature oak trees to the greatest possible extent and reduce the impact to other significant habitat.

   Prior to commencing construction, the City shall notify DFG of its intention to widen the channels and apply, as necessary, for a Stream Restoration Permit. During construction, the City shall comply with the measures identified in the Permit.

   In the event that any oak trees are removed or severely damaged during the widening of the channels (or any other actions related to the implementation of the proposed Master Plan), the City shall plant and maintain a minimum of three oak trees as mitigation for each tree that is removed or damaged.

b) Indirect Impacts

The LUE EIR contains nine mitigation measures that are intended to reduce the significance of the potential impacts on biological resources that are attributed to the development of the planned land uses of the updated LUE. These mitigation measures are identified in Section 4.9.4.1 of the LUE EIR.

3.7.4 Residual Impacts

a) Direct Impacts

The potential impacts directly associated with the Master Plan will be reduced to a level of insignificance with the implementation of the recommended mitigation measures.

b) Indirect Impacts

The LUE EIR states that implementation of the updated LUE will result in significant impacts on biological resources that cannot be mitigated to levels of insignificance. The impacts that cannot be adequately mitigated include the loss of wildlife foraging habitat (associated with the conversion of agricultural lands), and the encroachment of urban uses upon existing riparian habitats in the Visalia area.

3.8 NOISE

3.8.1 Existing Setting

a) Planning Area Overview

The major sources of noise in Visalia include major roadways, railroads, the Visalia Municipal Airport, and various industrial and commercial facilities. Noise measurements collected for the 1986 update of the City's Noise Element and LUE EIR.

The LUE EIR concluded that the noise measurements indicate that the background noise levels near "noise-sensitive" land uses typically are in the range of 45 to 55 dB L_{dn} (Day-Night Average Level). Near major roadways, the noise levels (at a typical residential setback) are in the range of 55 to 65 db L_{dn}. The maximum noise levels generally were caused by vehicles.

b) Project Areas

The proposed Master Plan basin sites currently are dominated by agricultural uses, which generally are not considered "noise-sensitive" receptors. Future basin sites that are in close proximity to existing residences and other potential "noise-sensitive" receptors include the site north Goshen Avenue and east of Shirk Road that is immediately west of a residential development, and the site north of Mill Creek and west of Lovers Lane that also is near residential dwelling units.
One of the channel reaches that the Master Plan recommends widening also is in close proximity to potential noise-sensitive receptors. The reach of Mill Creek between Linwood and Akers traverses a noise-sensitive residential area with lots that have a "back-on" orientation to the channel. The downstream reach of Mill Creek and the reaches of Cameron Creek and Modoc Ditch that will be widened flow through lands that are dominated by non-sensitive agricultural uses.

3.8.2 Impacts

a) Direct Impacts

The recommended construction/expansion of basins and the widening of channels will result in a short-term rise in the ambient noise levels in the vicinity of the project sites. These noise level increases will be due to the operation of heavy equipment during the construction process. However, the noise-generating equipment generally will be operated only during the day on weekdays. After the construction has been completed, the operation of the Master Plan improvements is not expected to increase the ambient noise levels in the vicinity of the project sites.

Because the noise generated by the "project" generally will be limited to short-term construction-related noise, the direct noise impacts of the project are not considered significant.

As discussed earlier, it is recognized that parks may be developed on some of the recommended "in-town" basins sites and a park would be expected to generate more noise than a site that was used only for water storage purposes. However, as was the case with vehicle trips, the noise that would be generated by the parks was not considered in the evaluation of the project because of the lack of specific information on the types of recreational uses that each park will accommodate and the type of noise

each use will generate. The noise impacts associated with the future development of a park facility at a basin site will be evaluated at the time an improvement project is proposed and the specific recreational uses of the site can be defined.

b) Indirect Impacts

The LUE EIR indicates that the development of the planned land uses of the updated LUE will result in significant increases in traffic noise levels on the major roadways in the community. The EIR also indicates that the LUE can result in potential noise-related land use conflicts. The proposed "community center" commercial areas and Visalia Parkway are identified as new noise generators that could effect existing noise-sensitive uses.

3.8.3 Mitigation Measures

a) Direct Impacts

Because implementation of the Master Plan is not expected to result in any significant direct noise impacts, no mitigation measures are required.

b) Indirect Impacts

To mitigate the potentially significant increases in community noise levels that are attributed to the development of the planned land uses of the 2020 Plan, the LUE EIR set out four noise-related mitigation measures. These measures are presented in Section 4.5.4 of the LUE EIR.

3.8.4 Residual Impacts

a) Direct Impacts

The potential impacts directly associated with the implementation of the Master Plan are less than significant.

b) Indirect Impacts

The LUE EIR states "noise impacts which cannot be mitigated are those which will result from increases in overall ambient noise levels in the community as the population of the Visalia area continues to increase." Therefore, implementation of the recommended mitigation measures is not expected to reduce the potential impacts attributable to the development of the planned land uses to a level of less than significant.

3.9 AESTHETICS/VISUAL RESOURCES

3.9.1 Existing Setting

a) Planning Area Overview

The City's updated LUE and the LUE EIR indicate that Visalia is a community of substantial scenic value and numerous aesthetic resources of importance. These documents identify the following as significant resources:

- o Agricultural and rural lands;
- o Valley Oak trees;
- o Scenic corridors (including west SR 198, east SR198, SR 63, Riggin Avenue, Walnut Avenue, Avenue 272, Shirk Road, Akers Road, Demaree Road, Ben Maddox Way and McAuliff Road);
- o The original "urban core" of the community, with its historic homes and significant architectural character; and
- o The views of the Sierra Nevada Mountains to the east.

b) Project Areas

As indicated in Section 3.2, most of the recommended future water storage basin sites currently are dominated by farm lands that typically provide rural, open space views, while the channel reaches that the proposed Master Plan recommends widening provide varying degrees of scenic resources. The reach of Mill Creek between Linwood and Akers is a meandering channel with shading provided by the high canopy of oaks and other trees along the channel and vegetated rolling banks that are rarely maintained. The reach of Modoc Ditch west of Akers typically is a well-maintained straight channel with graded sterile banks and unpaved service roads along the banks. The reach of Cameron Creek and the downstream reach of Mill Creek typically are maintained and have established service roads along the channel. Although there is little ground cover on the banks, mature oaks and other large trees flank the channels.

3.9.2 Impacts

a) Direct Impacts

Because the Master Plan basins generally will be constructed with minimal, if any, relief above the adjoining ground level, they should not have a significant direct impact on the area-wide viewsheds. However, in the immediate vicinity of a basin, they can be viewed as a "hole-in-the-ground" that detracts from the appearance of the surrounding area, particularly where homes have a direct line-of-sight to the basin or the basin has extensive street frontage.

The "hole-in-the-ground" appearance generally is expected to be a short-term impact that will exist while the surrounding lands develop. In the long-term, the basins will be landscaped and, in many cases, be considered a visual amenity.

The type of landscaping that will be installed at a basin site will be based on the ultimate use that is established at the site. At a minimum, the landscaping will consist of trees and ground cover planted around the basin perimeter. Basins that are to be used for active recreational purposes will be landscaped with turf, ground cover, and trees.

The proposed channel widening work is expected to change the current appearance of the channels. The channels will be somewhat wider and most, if not all, of the existing ground cover along the channel banks will be removed. The loss of bank ground cover will be most evident along the reach of Mill Creek between Linwood and Akers. The other channel reaches, particularly the reach of Modoc Ditch west of Akers, have been actively maintained and have very little ground cover on their banks.

However, in the case of the upper reach of Mill Creek, the City intends to "soften" the appearance of the newly graded banks by planting native ground cover along the top portion of the banks (following the widening). As discussed above, it is expected that very few, if any, of the existing mature oak trees along the channels will be damaged or removed during the widening work.

b) Indirect Impacts

The LUE EIR indicates that implementation of the City's updated LUE will result in several potentially significant impacts on the visual resources in the Visalia area. The identified significant impacts include a decrease of agricultural and rural lands, particularly along designated scenic corridors; and a loss of views of major oak tree stands lining significant watercourses and scenic corridors that are seen through agricultural parcels.

The LUE EIR states that the impacts associated with development of the planned land uses will decrease the field of vision, diminish the existing community form and unique small-town character, and decrease the scenic variety of the natural features within the community.

3.9.3 Mitigation Measures

a) Direct Impacts

Because there are no identified significant impacts directly associated with implementation of the Master Plan, no mitigation measures are required.

b) Indirect Impacts

The LUE EIR indicates that the updated LUE contains a number of policies that are intended to help mitigate the potential impacts associated with development of the planned land uses of the Plan. The LUE EIR also recommends that a series of mitigation measures are implemented to reduce the significance of the Plan's impacts. Refer to Section 4.20.4 of the LUE EIR for the recommended mitigation measures.

3.9.4 Residual Impacts

a) Direct Impacts

The potential impacts directly associated with the implementation of the Master Plan are less than significant.

b) Indirect Impacts

The LUE EIR states that the conversion of scenic views of agricultural open space to urban landscapes cannot be mitigated to a level of insignificance.

3.10 PUBLIC SERVICES

3.10.1 Existing Setting

Public services consist of the services that public agencies and utility service companies provide, such as police protection, sewer service, storm drain service, and electrical service. The City of Visalia provides many of the public services to the community. The service area boundaries for the City's services generally coincide with the city limits of Visalia.

Sections 4.13 and 4.14 of the LUE EIR contain a description of the Fire and Police protection services that the City currently provide. Electrical and natural gas utility services in the Visalia area are described in Section 4.17 of the LUE EIR. Solid waste disposal in Visalia is described in Section 4.12 of the LUE EIR. The City's storm drain system is described in Section 4.8 of the LUE EIR.

3.10.2 Direct Impacts

a) Direct Impacts

In general, implementation of the proposed Master Plan is not expected to have a significant direct impact on the ability of the City of Visalia (and other utility providers) to deliver public services.

The construction of new storm drain facilities currently is funded with developer impact fees. However, it is expected that the proposed Master Plan improvements will be funded with a combination of developer impact fees and an increase in the city-wide monthly storm drain utility rates. The City does not expect to fund the construction of Master Plan improvements with monies from the City's general fund.

The construction of Master Plan improvements will increase the storm drain system operating and maintenance commitments of the City. These increased commitments include the maintenance of new basins and widened channels. However, the cost of operating and maintaining the City's storm drain system currently is paid for with monies from the city-wide Storm Drain utility fund. As the O&M costs for the system increase, it is expected that the monthly utility rate will be increased to cover the cost increases.

Based on the ability of the City to fund the Master Plan improvements and O&M cost increases (associated with the improvements) without monies from Visalia's General Fund, implementation of the Master Plan should not create any significant budgetary problems for the City.

b) Indirect Impacts

The development of the planned land uses of the updated LUE potentially could have a significant impact on local public service capabilities. The LUE EIR documents the potential public service impacts associated with implementation of the 2020 Plan. These impacts include sewage flows that exceed the capacities of the City's existing sewer collection lines; a decrease in the effective life of the County's landfills; demands that exceed the service capacities of the City's police and fire departments; and student enrollments that exceed the current capacity of the local school system.

3.10.3 Mitigation Measures

a) Direct Impacts

Because implementation of the Master Plan is not expected to result in any significant direct public service impacts, no mitigation measures are required.

b) Indirect Impacts

Mitigation measures for the significant potential public service impacts associated with implementation of the updated LUE are described in the LUE EIR. In general, the mitigation program outlined to reduce the impacts to less than significant levels consists of increasing public agency personnel resources, constructing new public service facilities, and meeting increased service demands incrementally as they develop.

3.10.4 Residual Impacts

a) Direct Impacts

The potential direct impacts associated with implementation of the Master Plan are less than significant.

b) Indirect Impacts

The LUE EIR indicates that, if adequate funding programs are established by the affected public agencies and the recommended mitigation measures are implemented, there will be no significant residual public service impacts attributable to the updated LUE. If, however, adequate funding is not available to underwrite the costs associated with expanded public service delivery capacities, the significant impacts of the LUE cannot be mitigated to a level of insignificance.

3.11 CULTURAL/HISTORICAL RESOURCES

3.11.1 Existing Setting

a) Planning Area Overview

Section 4.21.2.1 of the LUE EIR provides a discussion of Visalia's archaeological and historic background. Section 4.21.2.2 indicates that due to the long history of use and land disturbance, first from agricultural activities, and then from urban development, it is unlikely that there are any undisturbed significant archeological sites in the Visalia area. There are, however, residual sites containing artifacts and tool remnants scattered throughout Tulare County, reflecting the occupancy of the area by Native Americans throughout prehistoric and historic time.

Based upon research conducted during the preparation of the LUE EIR, it was determined that a total of eight recorded archaeological sites exist within a two-to-three mile radius of the City's Urban Area Boundary (UAB) but that no sites have been recorded within the UAB. That does not necessarily mean that there are no potentially significant archaeological sites within the UAB, since little archaeological survey work actually has been performed in the area. In this regard, it should be noted that the

buried remains of a Native American recently were uncovered during the construction of improvements for a residential development project near Packwood Creek in southeast Visalia. Although the examination of the remains is not complete, the project archeologist speculated that the remains may be hundreds of years old.

There are a number of structures of historic and architectural significance located throughout the city, including several buildings that are listed in the National Register of Historic Places. Many of these historic structures are located within the City's Historic Preservation District in central Visalia.

b) Project Areas

Because most of the recommended basin sites (and the surrounding lands) currently are farm land, it is unlikely that any undisturbed significant cultural resources exist near the ground surface at and around the basin sites. However, there potentially could be Native American remains or artifacts deposited below the surface at some of the basin sites, particularly sites located near established waterways.

It should be noted that there is some evidence that the area in the vicinity of the proposed basin site west of Ben Maddox and north of Mill Creek was utilized by early white settlers for recreational pursuits and as an encampment by Native Americans. In a memo to the Visalia Historic Preservation Board (dated July 25, 1980), Visalia Heritage provided information regarding past activities on the site (see Appendix C).

3.11.2 Project Impacts

a) Direct Impacts

Because it is unlikely that there are any undisturbed cultural resources near the surface of most of the recommended basin sites, construction of the basins generally is not expected to have a significant impact on cultural resources in the Visalia area.

However, it is recognized that unreported significant cultural resources potentially could be uncovered below the ground surface during the excavation of basins or installation of pipelines.

b) Indirect Impacts

The LUE EIR indicates that development of the planned land uses of the updated LUE could have potentially significant impacts on cultural and historic resources in the Visalia area if construction activities for new development disturbed a previously unknown site of artifacts.

3.11.3 Mitigation Measures

a) Direct Impacts

No specific mitigation measures are recommended at this time. However, should any cultural resources be uncovered during the construction phase of the project, all activity in the vicinity of the "find" should be stopped and the steps described in Appendix J of the CEQA Guidelines should be followed.

b) Indirect Impacts

In the interest of avoiding cultural resource impacts as the 2020 Plan land uses are developed, the LUE EIR refers to policies in the 2020 Plan that are intended to mitigate potentially significant impacts. The LUE EIR also recommends two mitigation measures to reduce the significance of the identified potentially significant impacts.

3.11.4 Residual Impacts

a) Direct Impacts

No significant residual impacts are expected.

b) Indirect Impacts

All potential impacts can be mitigated to a less-than-significant level.

40 PROJECT ALTERNATIVES

The CEQA Guidelines state that a draft EIR must describe a range of reasonable alternatives to the project which could feasibly attain the basic objectives of the project, and evaluate the comparative merits of the alternatives.

As discussed in Section 2.3, the primary objective of the project is the adoption and implementation of an update of Visalia's 1987 Storm Drain Master Plan that identifies the improvements needed to accommodate the planned land uses of the City's recently updated Land Use Element. Therefore, alternatives to the project also must provide a long-range plan for expanding the existing storm water system to serve future development.

As discussed in Section 2.0 of this document, the second objective of the project is the approval of a General Plan Amendment that will establish a new "Storm Water Basin" land use category and re-designate selected "Conservation" sites. However, because the proposed GPA generally is not expected to result in any potential significant environmental impacts, there is no discussion of alternatives to this component of the project.

4.1 PROJECT ALTERNATIVES

There are two identified alternatives to the proposed project that provide different approaches to managing the storm water runoff that will be generated from future development. The first alternative involves the adoption and implementation of a long-term storm water master plan that recommends the extensive use of "in-town" storage basins (with reduced direct discharges to the channels that convey the storm water beyond Visalia). The second master plan alternative recommends discharging runoff from future development directly into the conveyance channels (with minimal use of "in-town" storage basins). A discussion of these alternatives, as well as a "no-project" alternative, as required by CEQA, is presented below.

The discussion of project alternatives does not consider alternative locations for the planned "in-town" basins because precise locations have not been determined at this time. The proposed General Plan Amendment will establish the "generalized" basin locations on the LUE Map and criteria for subsequently selecting the final location of each planned basin. The project alternatives discussion also does not consider alternative "park" uses for the planned basins because the proposed uses identified in Section 2.6 were tentatively established for the purpose of determining the total development cost of the basins. The actual configuration, depth, and recreational use of each planned basin will be determined in the future based on recreational "needs" in the vicinity of the park and the availability of funding to construct and maintain park improvements.

Alternative No. 1 - Increased "In-Town" Storage

Project Alternative No. 1 consists of the adoption and implementation of a long-term master plan that recommends the extensive use of "in-town" storage basins to serve the planned land uses of the updated LUE. This approach would result in less direct discharges into the conveyance channels used by the City and reduced peak storm water flows in the channels.

The primary potential benefit of increased storage is that the conveyance channels can better accommodate the reduced storm water flows (without an increase in their capacity). This is particularly important if it would be difficult to widen the channels because of limited right-of-way, the presence of significant habitat resources or other constraints along the channel.

With regard to the three channels that the proposed Master Plan recommends widening, one of the channels, Modoc Ditch downstream of Akers, is a relatively sterile, straight, graded channel that could be widened without significant environmental effects. On the other two channels, Cameron Creek and Mill Creek, the recommended widening potentially could impact identified significant habitat resources, primarily oak trees. Therefore, any reduction in the extent to which these channels need to be widened (to accommodate runoff from the planned land uses of the updated LUE), should decrease the severity of the potential impacts. However, it should be noted, as discussed in Section 3.7.2 of this document, that the City intends to take measures prior to the proposed widening of the channels that should reduce the significance of the impacts.

Other potential benefits of an increase in the use of "in-town" storage basins include an increased opportunity for groundwater recharge and additional open space/park area in the community. However, the potential groundwater recharge benefits that could be derived from additional basins in Visalia are not expected to be significant because the incremental volume of runoff from new development that could be "captured" in additional basins is not expected to be significant.

It should be noted that most of the City's existing basins are designed to be operated as detention facilities that are drained within one or two days of each storm event and this short-term detention generally does not provide sufficient holding time to have any significant recharge occur. The City historically has been reluctant to construct basins that can be used for retention purposes because retention basins require more capacity (and typically more land) than detention basins, and detention basins generally can more readily be used for recreational activities than retention basins. In addition, there have been safety and aesthetic concerns with dedicated retention basins in the community.

Nevertheless, the City recently has begun constructing basins that can be operated as retention facilities, which makes recharge with the stored water more feasible. In this regard, the City expects that some of the future new basins recommended in the Master Plan will be constructed and operated as retention facilities.

With respect to the issue of additional open space/park area, there could be an increase in open space/park acreage in the community if the number of "in-town" basins was increased. However, that the City's COSPR Element established a population-based acreage standard for open space/park land in Visalia and the subsequent update of the LUE provides the acreage needed to comply with the standard. Therefore, additional unplanned open space/park land is not needed in Visalia in order to comply with the community's open space/park land standard. Furthermore, additional open space/park land would mean increased maintenance costs for the City.

The primary downside with the "increased storage" alternative plan is its relatively high land and construction costs (as discussed in Section 4.0 of the proposed Master Plan). This potentially is significant because increased master plan improvement costs translate to higher development impact fees which impacts the affordability of housing

in the community. The "increased storage" alternative plan also will result in higher on-going maintenance costs if pumps are used and the basins have landscaping that requires regular maintenance.

In conclusion, the "increased storage" alternative plan generally is expected to have environmental consequences that are not significantly different than the consequences associated with adoption and implementation of the proposed Master Plan (with implementation of the identified mitigation measures). However, the alternative plan would have significantly higher construction and maintenance costs than the proposed Plan.

Alternative No. 2 - Direct Discharge to Conveyance Channels

Project Alternative No. 2 consists of the adoption and implementation of a long-term master plan that recommends discharging runoff from future development directly into the conveyance channels utilized by the City with minimal use of "in-town" basins. This approach to storm water management generally would result in higher storm water flows in the conveyance channels used by the City, which could necessitate a need to increase the capacity of the channels in order to accommodate the increased flows.

The primary benefit of this alternative is a substantial reduction in the cost of the "in-town" basins improvements needed to serve the planned land uses of the updated LUE, specifically reduced "in-town" basin costs. Because storm water would be discharged directly to the conveyance channels without routing the water through "in-town" basins, the number of new basins that are needed and the number of existing basins that have to be expanded to serve future development could be reduced. This reduction would result in a savings in the initial land, excavation, and landscaping costs and the on-going cost of maintaining the basins.

However, it should be recognized that the widening of a channel to increase its capacity may not be feasible due to limited right-of-way, the encroachment of improvements, undersized culverts, the presence of sensitive riparian habitat, or resistance from adjoining property owners. If any of these constraints preclude the widening of a channel, the peak rate of City discharges can not exceed the existing capacity of the channel.

Because many of the constraints identified above exist along the channels that receive City storm water discharges, it would be difficult to implement the "direct discharge" alternative on a large-scale. The proposed Master Plan has recommended the "direct discharge" approach where the existing conditions along the channel make it feasible. These conditions primarily occur in areas that have not been developed with urban uses.

Other environmental issues associated with this alternative include the loss of groundwater recharge opportunities, loss of open space/park land in the community, and an increase in irrigation water losses. With regard to groundwater recharge, a reduction in the number of "in-town" basins potentially means that there are less opportunities to "hold" runoff for recharge purposes. However, the volume of storm water runoff from new development that would not be "captured" (with a reduction in basins) is not expected to be significant.

Furthermore, as discussed above, storm water generally has to be stored in a basin for an extended period of time in order to obtain maximum recharge benefits. Based on current City policies, it is expected that most of the future basins constructed by the City

will be designed and operated as detention basins that provide a relatively short holding time for storm water. These considerations mean that a reduction in the number of future basins should not result in significant adverse groundwater recharge impacts.

With a reduction in the number of "in-town" basins, there could be loss of open space/park land in the community because it is expected that many of the City's future basins also would serve as park facilities. However, as discussed previously, the LUE designates future park sites (in compliance with the COSPR Element park land standard) and parks can be developed at these sites regardless of whether storm water basins are constructed.

The widening of the conveyance channels used by the City (to accommodate the increased flows that would occur under the "direct discharge" alternative), could result in an increase in seepage losses that would potentially impact deliveries to downstream irrigators. However, as discussed in Section 3.6.2, there will be short-term losses that occur due to the disturbance of the soil and long-term losses that occur due to the increased "wetted" perimeter of the channels. The magnitude of the short-term losses should diminish as the newly cut sediments stabilize and the banks "seal" back up. However, the City intends to compensate ditch companies that incur water losses due to City activities in accordance with the terms of agreements between the City and local water interests. Therefore, the potential water loss impacts associated with the widening of channels are not expected to be significant.

In conclusion, implementation of the "direct discharge" alternative plan on a large scale is considered infeasible due to the lack of right-of-way, the presence of significant habitat, and other constraints along the channels. The other identified environmental issues associated with this alternative are not considered significant.

"No Project" Alternative

With the "no project" alternative, the proposed Master Plan would not be adopted and the recommended improvements would not be constructed. Without an updated master plan, it is likely that the recommendations of the 1987 Master Plan would be implemented as development occurred within the boundaries of its planning area, which is significantly smaller than the area within the City's 2020 UDB. As development occurred outside of the planning area of the 1987 Master Plan, it is likely that improvements would be planned and constructed on a project-by-project basis.

As Visalia grows, the risks associated with future development without a city-wide comprehensive master plan increase. Without the large-scale coordination that a master plan provides, there potentially could be a proliferation of small basins that only serve individual development projects, which would represent a distinct change in the City's current policies on storage basins. It also is more likely that as development occurs, the City's discharges could exceed the capacities of the receiving channels, and trunk lines that are expected to serve future development may be undersized to accommodate all of the runoff that the planned land uses will generate. In addition, without a long-range capital improvement program, it may be difficult for the City to establish a rate/fee schedule that will consistently fund the total cost of individual projects.

In the event that "no project" alternative results in a partial or full moratorium on future development (beyond the planning area of the 1987 Master Plan), the direct impacts attributed to the implementation of the Master Plan would be substantially reduced. In addition, the indirect and cumulative impacts associated with development of the planned land uses of the 2020 Plan would be significantly reduced, if not avoided

entirely. However, a moratorium also would potentially result in a tightening of the local housing market, an increase in housing costs, and a reduction in economic growth and employment opportunities.

In the event that the "no project" alternative results in the installation of improvements on a project-by-project basis (as the planned land uses develop), the individual projects would have comparable environmental consequences as the proposed Master Plan projects. The individual projects also would have many of the same "indirect" impacts as the Master Plan projects.

4.2 "ENVIRONMENTALLY SUPERIOR" ALTERNATIVE

The CEQA Guidelines require that an EIR identify the "environmentally superior" alternative. Of the alternatives considered, the environmentally superior alternative is the "No Project" Alternative with a moratorium on development (outside of the planning area of the 1987 Master Plan) because, as discussed above, the direct and indirect impacts associated with the implementation of the Master Plan would be largely eliminated.

Of the remaining alternatives, the proposed Master Plan and the Alternative Project with an increased use of "in-town" basins, which have comparable direct impacts, are considered the superior alternatives. However, as discussed above, the cost of implementing the proposed Master Plan is significantly lower than the cost of the implementing the "increased storage" alternative. The indirect and cumulative impacts associated with these alternatives also are comparable.

The "No Project" Alternative without a moratorium is considered somewhat inferior to the two alternatives identified above because its lacks a comprehensive approach to serving the planned land uses of the updated LUE (outside of the planning area of the 1987 Master Plan). As discussed above, this alternative could result in a proliferation of small storage basins that cannot be developed into parks because of their size and could become an "eyesore" because they are not adequately landscaped and maintained. In addition, this alternative could result in less efficient drainage conditions in the community and adversely effect downstream land owners.

It should be noted that the Alternative Project with a master plan that recommends discharging runoff from new development directly to conveyance channels with minimal use of new "in-town" storage basins, is considered infeasible on a large-scale due to constraints that preclude comprehensive widening of the channels.

5.0 CONSEQUENCES OF PROJECT IMPLEMENTATION

5.1 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Direct Impacts

The potential direct environmental impacts of the project and recommended mitigation measures are identified in Section 3.0 of this document. With the implementation of the recommended mitigation measures, all of the identified direct impacts will be reduced to a level of insignificance.

Indirect Impacts

The cumulative impacts attributable to the development of the planned land uses of the updated LUE and recommended mitigation measures are identified in Section 4.0 of the LUE EIR. These LUE impacts, which are considered "indirect" impacts of the Master Plan, are referenced in Section 3.0 of this document, as are the LUE EIR mitigation measures. The LUE EIR indicates that with the implementation of the mitigation measures, many of the updated LUE cumulative impacts are reduced to a level of insignificance.

However, other potential cumulative LUE impacts can not be mitigated to a level of insignificance. These unavoidable and significant impacts as follows:

- Loss of approximately 13,000 acres of farm land to the development of urban land uses.
- Creation of conflicts between agricultural activities and adjacent urban land uses.
- Increase in vehicle traffic and congestion.
- Generation of substantial levels of mobile source air pollutant emissions and a corresponding decrease in local air quality.
- Increase in ground water pumping that may contribute to a long-term overdraft condition.
- Loss of habitat for various wildlife species by urban development.
- Increase in ambient noise levels which may affect potentially sensitive land uses.

5.2 SHORT-TERM VS LONG-TERM PRODUCTIVITY

The proposed project has the inherent purpose of emphasizing the long-term productivity of the Master Plan service area, as opposed to emphasis on short-term usages. The long-term value of agricultural production in portions of the service area will be replaced with the equally long-term productivity of urban uses. The intensification of employment generation and economic return from such uses, in comparison to agricultural operations, represents an economic benefit to the community and surrounding region.

The proposed adoption and implementation of the Master Plan will result in several identified potential "direct" adverse impacts. However, with the implementation of the recommended mitigation measures, all of the identified direct impacts will be reduced to a level of insignificance. With the recommended mitigation measures, the identified "direct" impacts are not expected to narrow the range of long-term beneficial uses of the environment.

A number of the cumulative impacts attributed to the development of the planned land uses of the updated LUE, which are considered "indirect" impacts of the Master Plan project, will reduce or eliminate long-term beneficial uses of the environment. As discussed in Section 6.0 of the LUE EIR, these potential significant adverse impacts include deterioration of air quality, increased traffic volumes, loss of agricultural land, increased groundwater consumption, and the loss of habitat for sensitive wildlife species.

With regard to the timing of the proposed Master Plan, the City is proposing to adopt the Plan at this time in order to comply with the policies of the City's recently updated Land Use Element, which encouraged the update of Visalia's 1987 Storm Drain Master Plan. In addition, development is occurring outside of the planning area of the 1987 Master Plan and the City felt it would be prudent to update the Master Plan in order to identify the improvements that are needed to serve these developing areas.

Although the Master Plan identifies the improvements that are needed to serve the planned land uses of the updated LUE, as well as the area between the 2020 UDB and the UAB, many of the improvements will not be needed until after the year 2000, and in some cases, after the year 2010. Therefore, the Plan is not committing natural resources 30 years into the future, but merely establishing a long-range capital improvement program. It also is understood that the Master Plan will be revisited every 5 to 10 years and updated as necessary to insure that the recommended improvements are consistent with future land use development plans.

5.3 GROWTH INDUCING IMPACT OF THE PROJECT

As discussed earlier in this EIR, the proposed adoption and implementation of the Master Plan will accommodate urban growth within the development boundaries of the City's updated LUE. The adoption and implementation of the Master Plan is not, by itself, considered growth-inducing because a comprehensive, long-range storm water master plan is one component, among many, of the City's planning and development policies that promote orderly growth and development. It should be recognized that much of the future growth accounted for in the updated LUE could very well occur without an updated storm water master plan, which means that the proposed Master Plan can be considered a tool for facilitating the orderly development of the planned land uses rather than growth-inducing.

The City's updated LUE established development boundaries for the community through the year 2020 and the distribution of residential, commercial, industrial, and other urban uses within those boundaries. To ensure that the development of the planned land uses is not constrained by infrastructure restrictions, the LUE included a policy that encouraged the update of the City's 1987 Storm Water Master Plan. In response to this policy, the City updated the existing Master Plan to identify the improvements that are needed to serve the planned land uses of LUE.

As discussed in Section 3.2.2 of this EIR, the proposed Master Plan generally is not expected to have significant potential growth-inducing impacts because most of the recommended improvements only will serve a relatively small area and there should not be pressures to construct the improvements until the land within the service area is ready to develop. As an example, the "in-town" basins generally have tributary services areas that are less than one square mile in size. Furthermore, because most of the "in-town" basins are within the 2000 UDB, the areas that these basins will serve are expected to develop by the year 2000, i.e. during the current growth period of the 2020 Plan. This means that any pressure to prematurely develop lands (served by the basins) will be short-lived.

The major pipelines recommended in the Master Plan typically will serve areas that are less than one square mile in size on a "stand-alone" basis. This means that the maximum area that can develop with the installation of a single line is relatively small. Although most of the individual pipeline service areas are within a single growth period, a few of the pipelines do extend across an urban development boundary and serve lands in two growth periods, generally with the downstream end of the line being in the later growth period. However, this is not seen as a significant growth inducing measure because land not designated for development (in the current growth period) could be readily developed without a connection to a off-site storm drain line if a temporary on-site basin was used to retain runoff.

The recommended expansion/construction of "terminal" basins are not perceived to be growth inducing because the downstream storage capacity has not been a issue in the evaluation of serving new development. Furthermore, the City expects that the actual expansion/construction of these basins will occur in a phased manner by growth period. This means that the basins generally would not have a significant amount of unused capacity allocated to serve development during a future growth period.

Although no potential significant growth inducing impacts are directly attributable to proposed implementation of the proposed Master Plan, a mitigation measure related to growth-inducing pressures is recommended in Section 3.2.3 of this document. This measure consists of adherence to the growth phasing policies of the updated LUE.Plan.

5.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Direct Impacts

As discussed in Section 5.1, all of the potential direct environmental impacts of the project identified in Section 3.0 of this document will be reduced to a level of insignificance with the implementation of the mitigation measures.

Indirect Impacts

Several of the "indirect" impacts described in Section 5.1 as unavoidable consequences of the proposed project theoretically could be reversed, if conditions in the community changed, allowing for the restoration of the pre-project conditions. Other environmental consequences of the plan, however, should be regarded as practically irreversible. The "indirect" impacts that potentially are irreversible include the loss of agricultural land, the loss of wildlife habitat, an increase in noise levels, and a change in scenic resources.

6.0 SOURCES CONSULTED

Documents

1) City of Visalia (Boyle Engineering Corp.); Storm Water Master Plan; February, 1994.

2) City of Visalia (James M. Montgomery, Consulting Engineers, Inc. & Michael Knopf & Associates); Storm Drainage Master Plan; May, 1991.

3) City of Visalia (McClelland Consultants, Inc.); Final Environmental Impact Report for the Visalia General Plan Land Use Element Update; July, 1991.

4) City of Visalia (McClelland Consultants, Inc.); Draft Environmental Impact Report for the Visalia General Plan Land Use Element Update; September, 1990.

5) City of Visalia; Land Use Element Update to the Visalia General Plan; March, 1991.

6) City of Visalia (Quad Consultants, Inc.); Final Environmental Impact Report for the Expansion of Municipal Wastewater Treatment Facilities; October, 1992.

7) City of Visalia; Conservation, Open Space, Recreation, and Parks Element of the Visalia General Plan; June, 1989.

8) State of California; Office of Planning and Research; State CEQA Guidelines; as currently amended.

Individuals and Organizations

1) George Weddle, City of Visalia, Design Engineer

2) Britt Fussel, City of Visalia, Public Works Director

3) Phyllis Coring, City of Visalia, Assistant Community Development Director

4) Lewis Nelson, City of Visalia, Utility Engineer

5) John Biane, City of Visalia, Real Estate Manager

6) California Water Service Company personnel

7.0 AUTHORS OF THE EIR

This EIR was prepared by the following City of Visalia staff:

- John Dutton, City Engineer
- Richard Luther, Redevelopment Project Manager
- Walter Bricker, Civil Engineer
- Chriss Phipps, Computer Technician

APPENDICES

A) Notice of Preparation

B) NOP Comments Received by the City

C) Visalia Heritage Correspondence

APPENDIX A

NOTICE OF PREPARATION

NOTICE OF PREPARATION

TO:

FROM: City of Visalia
900 W. Oak Street
Visalia, CA 93291
(209) 738-3414

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report

PROJECT TITLE: Storm Water Master Plan and Management Program

The City of Visalia (Engineering Department) will be the Lead Agency and will prepare an Environmental Impact Report for the Visalia Storm Water Master Plan. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the probable environmental effects are contained in the attached materials. A copy of the Initial Study is attached.

Due to the time limits mandated by state law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your responses to Richard Luther at the address and phone number shown above. We will need the name for a contact person in our agency.

DATE: 12/23/92 Signature Richard Luther
Project Manager

Attachments:

(a) Initial Study
(b) Environmental Checklist

C:EIRS03.

NOTICE OF PREPARATION
MAILING LIST

State Offices:

State of California
Department of Fish and Game
1234 E. Shaw Avenue
Fresno, CA 93710

State of California
Department of Transportation
District 6
P.O. Box 12316
Fresno, CA 93778

State of California
Regional Water Control Board
3614 E. Ashlan Avenue
Fresno, CA 93720

State of California
Water Resources Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95801

State of California
Office of Planning and Research
400 Tenth Street, Room 121
Sacramento, CA 95814

State of California
Air Resources Board
1131 S Street
Sacramento, CA 95814

State of California
Native American Heritage Commission
915 Capitol Mall, Room 288
Sacramento, CA 95814

Utilities:

Continental Cablevision
111 N. Mooney Boulevard
Tulare, CA 92374

The Gas Company
P.O. Box 591
Visalia, CA 93279

Pacific Telephone
217 W. Acequia
Visalia, CA 93291

Southern California Edison
P.O. Box 900
Visalia, CA 93279

California Water Service Co.
216 N. Valley Oak Drive
Visalia, CA 93291

Local Agencies:

Visalia Redevelopment Agency
900 W. Oak Street
Visalia, CA 93291

Kaweah Delta Water Conservation
District
1110 N. Cain Street
Visalia, CA 93291

Dave Fishel
County of Tulare
Environmental Health
County Civic Center
Visalia, CA 93291

Herb Knierim
County of Tulare
Flood Control
County Civic Center
Visalia, CA 93291

County of Tulare
Department of Planning
and Development
County Civic Center, Room 111
Visalia, CA 93291

Bill Appleby
Tulare County Agricultural
Commissioner
County Civic Center - Ag Building
Visalia, CA 93291

Dave Bryant
County of Tulare
Public Works Department
County Civic Center
Visalia, CA 93291

Phyllis Coring
City of Visalia
707 W. Acequia Street
Visalia, CA 93291

John Dutton
City of Visalia
707 W. Acequia Street
Visalia, CA 93291

Persian Ditch Company
P.O. Box 98
Goshen, CA 93227

Evans Ditch Company
P.O. Box 676
Tulare, CA 93275

Modoc Ditch Company
11878 Ave 328
Visalia, CA 93277

Tulare Irrigation District
1350 W. San Joaquin
Visalia, CA 93274

Special Interest Groups:

Dr. Jim Sellers
Natural & Environmental Sciences
College of the Sequoias
915 S. Mooney Boulevard
Visalia, CA 93277

Rob Hansen
Nature Conservancy
1428 W. Howard
Visalia, CA 93277

Frank Lewis
Tulare County Audubon Society
P.O. Box 4402
Visalia, CA 93278-4402

Marcie Williams
Tulare County Citizens for a
Healthy Environment
P.O. Box 506
Visalia, CA 93279

CITY OF VISALIA - INITIAL STUDY
STORM WATER MASTER PLAN
AND MANAGEMENT PROGRAM

Project Location:

The City of Visalia, located in Tulare County, is situated in the southeastern portion of the San Joaquin Valley (Figure 1). The City is approximately 40 miles southeast of the City of Fresno and approximately 90 miles northwest of the City of Bakersfield. State Route 99, passing at the western edge of the City, and State Route 198, which bisects the City west to east, are the major access routes to Visalia.

Background:

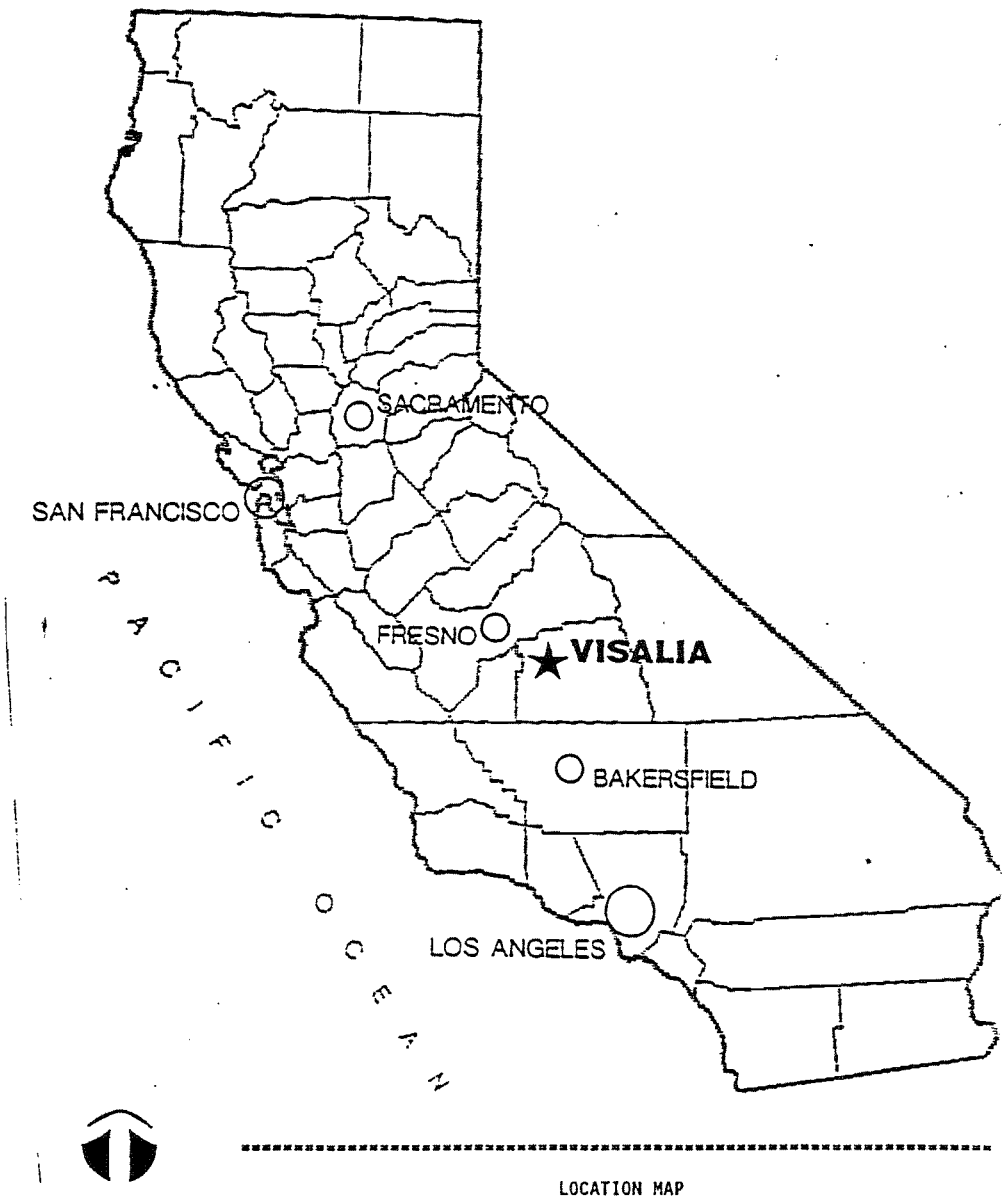
Visalia has developed from agricultural land on an alluvial fan. Historically, runoff has been disposed of by directing it to the natural creeks/rivers and irrigation ditches that flow through the City. However, the irrigation companies responsible for the operation and maintenance of many of the channels have indicated that they can no longer accept additional storm runoff from urban development, citing their inability to handle the flows downstream as the channels narrow and lose capacity. This policy has caused the City to reevaluate their storm water facilities and policies. Additional runoff associated with development will further tax existing storm water facilities. Currently the City is requiring developers to build temporary drainage basins to detain their storm runoff for later disposal. At such time as connection to a permanent facility is possible, land utilized for the temporary basins be reclaimed and developed.

The proposed Storm Water Master Plan and Management Program is in response to needs relating to:

(a) Updating of the 1987 Storm Water Master Plan which was based on the 1976 City General Plan Land Use Element development boundaries.

(b) Provision of a comprehensive master plan to manage the increased runoff expected from urban development based on the 1991 City General Plan Land Use Element update through the year 2020.

(c) Identification of the projected costs for acquisition and development of storm water facilities and alternatives for financing such costs.



LOCATION MAP

Figure 1

Project Description:

The study area of the Storm Water Master Plan and Management Program, shown in Figure 2, includes the existing city and area planned for development through the year 2020. The study area has been divided into 8 major drainage basins and improvements have been planned for the major drainage system that manages runoff in these basins. Systems that collect and convey runoff to the major drainage system are considered minor drainage facilities.

This study has been conducted to provide City officials with a planning tool for future drainage improvements. The Storm Water Master Plan and Management Program is an update and expansion of the existing Master Plan as adopted by the City in 1987 to include the year 2020 development boundary. Relevant sections of the existing Master Plan have been incorporated into the proposed Master Plan in order for it to be self-contained. Some design methodologies and proposed improvements have been changed to reflect current conditions. These include:

(a) More extensive mapping of the existing drainage system and associated boundaries of the drainage basins. As part of the project, all existing storm drains were digitized and Storm Water Atlas Sheets were submitted to the City.

(b) Uniform hydrologic parameters were developed (where applicable) to enable consistent results and to make use of Geographic Information System (GIS) modeling techniques.

(c) A more detailed analysis of the conveyance capacity of the major drainageways was accomplished using City surveyed cross-sections.

(d) A design level of protection was established for different elements of the drainage system without using the concept of "conditional probability". The "conditional probability" refers to the probability that channels and ditches needing to convey both upstream flood flows and runoff from the town itself at the same time is greater than either single event. However, because there is an ability to control flow below a 5,500 cfs threshold existing upstream flood control facilities there is a reduced potential of coincident upstream and intown flow generation.

(e) The 1987 Plan divided the study area into five drainage basins: St. John's River, Modoc Ditch, Mill Creek, Evans Ditch, and Packwood Creek. This Master Plan includes additional basins: Cameron Creek, Goshen, and Persian/Watson Ditch System.

The Storm Water Master Plan and Management Program has been organized into the following major topic areas:

1.	Introduction	Presents the study background, a summary of the 1987 Plan and the report scope and limitations.

2.	Existing Conditions	Provides an overall view of the City's storm water system including general descriptions of each major basin.
3.	Basis of Design	Describes the hydrologic and hydraulic models used in the analysis, available data and modeling approach.
4.	Storm Water Management Alternatives	Evaluates the major alternatives considered for the City's Storm Water Master Plan
5.	Entitlement Flow Management Alternatives	Evaluates the concepts of storage and diversion of entitlement flows to provide additional capacity for storm water runoff.
6.	Proposed Improvements	Provides a discussion of the proposed facilities.
7.	Financing	Provides a discussion of financing the drainage improvements.
8.	Water Quality Measures	Discusses the measures that can be taken to improve the quality of storm water discharge.
9.	Appendices	Contains detailed reports for each basin.

Note: There may be additional topic areas contained in the final report as a result of new information generated as a result of the public review and environmental review process.

The Storm Water Master Plan and Management Program identifies eight drainage basins which correspond with natural waterways and irrigation channels (Figure 2) along with proposed storm drainage improvements as follows:

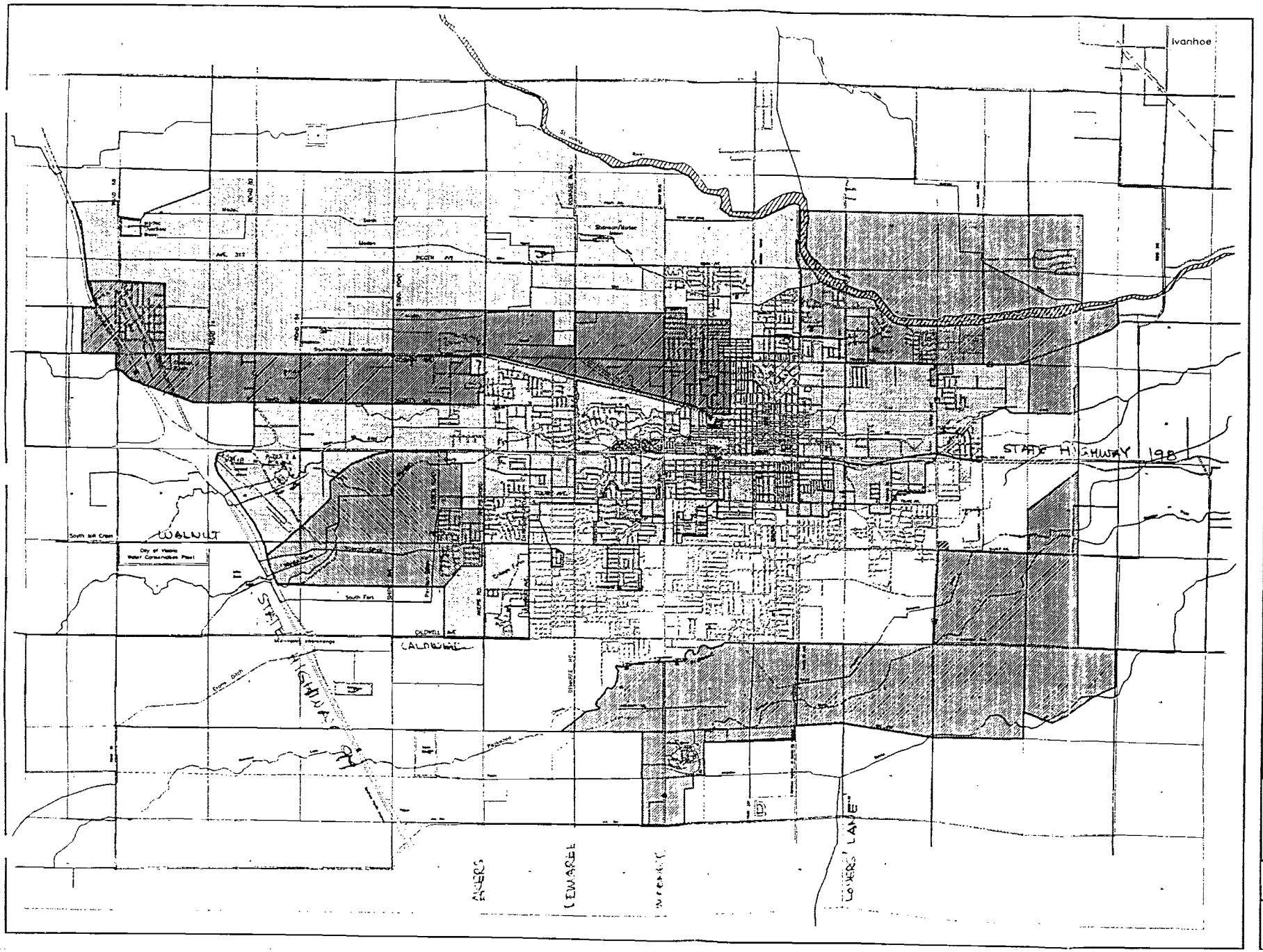
(a) St. John's Basin

Service Area: 3,388 acres
Developed Area: 1,472 acres (43%)
Existing Improvements:

1 Storage Basin
4 Pump Stations

Proposed Improvements:

2 Storage Basins
35,030 feet - Collector Drains
11,635 feet - Main Drains (unlined channel)



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Legend

- Urban Boundary
- Streams / Ditch
- Section lines
- Basin Boundary

Drainage Basins

- St Johns River
- Modoc Ditch
- Goshen Drain
- Mill Creek
- Evans Ditch
- Packwood Creek
- Cameron Creek
- Persian/Watson

FIGURE 2

City of Visalia

BOYLE ENGINEERING CORPORATION

Drainage Basin Map

(b) Modoc Basin

Service Area: 8,332 acres
Developed Area: 640 acres (8%)
Existing Improvements:

4 Storage Basins
2 Pump Stations

Proposed Improvements:

2 Storage Basins
1 Pump Station
101,261 feet - Collector Drains
14,771 feet - Improvements to Existing Channel

(c) Mill Creek Basin

Service Area: 8,262 acres
Developed Area: NA (predominantly developed)
Existing Improvements:

2 Storage Basins
9 Pump Stations

Proposed Improvements:

5 Storage Basins
1 Pump Station
25,260 feet - Collector Drains
9,606 feet - Improvements to Existing Channel

(d) Evans Ditch Basin

Service Area: 2,157 acres
Developed Area: NA (predominantly developed)
Existing Improvements:

4 Storage Basins (including 1 expansion)
5 Pump Stations

Proposed Improvements:

1 Storage Basin
1,363 feet - Collector Drains

(e) Packwood Creek Basin

Service Area: 5,229 acres
Developed Area: 3,392 acres (65%)
Existing Improvements:

4 Pump Stations
6 Storage Basins

Proposed Improvements:

5 Storage Basins (including 1 expansion)
3 Pump Stations
40,721 feet - Collector Drains

(f) Cameron Creek Basin

Service Area: 5,077 acres
Developed Area: NA (predominantly undeveloped)
Existing Improvements:

No existing storage basins or pump stations

Proposed Improvements:

No proposed storage basins or pump stations
49,707 feet - Collector Drains

(g) Persian/Watson Basin

Service Area: 1,549 acres
Developed Area: NA (predominantly undeveloped)
Existing Improvements:

No existing pump stations
2 Storage Basins

Proposed Improvements:

1 Storage Basin (potential expansion of an existing basin)
3,136 feet - Collector Drains

(h) Goshen Basin

Service Area: NA
Developed Area: NA
Existing Improvements:

2 Storage Basins

Proposed Improvements:

3 Storage Basins (including 1 expansion)
25,115 feet - Collector Drains
31,342 feet - Main Drains (unlined)

Environmental Setting:

The City of Visalia lies within the southeasterly portion of the San Joaquin Valley. The City is situated upon the alluvial fan created by runoff deposition from the Sierra Nevada Mountain Range which rises approximately 20 miles to the east. The major water course affecting the project is the Kaweah River. Because of its location near the base of the Sierra Nevada and in the midst of the Kaweah River's delta system, Visalia is traversed by a number waterways. The natural intermittent streams which flow through the City include the St. John's River, Packwood Creek, Cameron Creek, and Mill Creek. Because of soil and climatic conditions, almost all of the undeveloped land within the City's planning area is used for agricultural purposes. Visalia's Mediterranean climate is characterized by dry summers and wet winters with mild year-round temperatures. Prevailing winds are from the northwest.

While significant portions of non-urbanized lands have been disturbed by agricultural activities, the Visalia planning area contains remnants of the original Great Valley Valley Oak Woodlands and riparian forests.

Potential Impacts (potential areas for mitigation):

The Environmental Checklist Form which follows this Section of the Initial Study identifies several areas for potential environmental impacts. However, the purpose of the Checklist is to identify such impact areas and does not provide a level of information necessary to make any determinations as to potential mitigation measures. As such, the following general topics should be addressed in more detail through the CEQA review process:

1. Soil disruption during construction of storm drainage facilities and impacts to natural features.

2. Impacts to surface and groundwater associated with storm water capture and storage (including use of lined and unlined channels).

3. Impacts to natural plant and animal systems through the construction of storm water facilities within currently undeveloped areas and significant changes to existing facilities.

4. Impacts to water quality and human health associated with concentrations of pollutants in storm water.

5. Impacts to community aesthetics, cultural resources, and recreation activities.

The EIR prepared for this project will be a focused EIR and build on the Land Use Element EIR (SCH #90020160) which was certified in August 1991 as part of the City's 30-year growth plan update. The EIR will concentrate on issues or impacts related to implementation of the Master Plan which were not covered under the Land Use Element EIR.

Consistency with Adopted Zoning, Plans, and Other Applicable Land Use Controls:

The Storm Water Master Plan and Management Program is in response to needs identified under the City General Plan Land Use Element update as adopted in 1991. The Storm Water Master Plan and Management Program is an infrastructure implementation policy document to be adopted by the City in order to update the current Master Plan and to provide for adequate infrastructure improvements for both existing and newly developing areas. As such, implementation of the Storm Water Master Plan and Management Program will be consistent with applicable City Zoning, land use regulations, and development standards.

Person Preparing the Initial Study:

Richard Luther, Redevelopment Project Manager
900 W. Oak Street
Visalia, CA 92192 (209) 738-3414

C:EIRS05.

APPENDIX I

ENVIRONMENTAL CHECKLIST FORM
(To Be Completed By Lead Agency)

I. Background

1. Name of Proponent City of Visalia (Engineering Department)

2. Address and Phone Number of Proponent (209) 738-3414
900 West Oak Street
Visalia, CA 93291

3. Date of Checklist Submitted Navember 30, 1992

4. Agency Requiring Checklist City of Visalia

5. Name of Proposal, if applicable Storm Water Master Plan and Management Program

II. Environmental Impacts

(Explanations of all "yes" and "maybe" answers are required on attached sheets.)

	Yes	Maybe	No
1. Earth. Will the proposal result in:			
a. Unstable earth conditions or in changes in geologic substructures?	___	___	X
b. Disruptions, displacements, compaction or overcovering of the soil?	X	___	___
c. Change in topography or ground surface relief features?	___	X	___
d. The destruction, covering or modification of any unique geologic or physical features?	___	___	X
e. Any increase in wind or water erosion of soils, either on or off the site?	___	X	___
f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?	___	X	___
g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?	___	___	X

	Yes	Maybe	No
2. Air. Will the proposal result in:			
a. Substantial air emissions or deterioration of ambient air quality?	___	___	X
b. The creation of objectionable odors?	___	___	X
c. Alteration of air movement, moisture, or temperature, or any change in climate, either locally or regionally?	___	___	X.
3. Water. Will the proposal result in:			
a. Changes in currents, or the course of direction of water movements, in either marine or fresh waters?	___	___	X
b. Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?	___	___	X
c. Alterations to the course or flow of flood waters?	X	___	___
d. Change in the amount of surface water in any water body?	X	___	___
e. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?	___	X	___
f. Alteration of the direction or rate of flow of ground waters?	___	X	___
g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	___	X	___
h. Substantial reduction in the amount of water otherwise available for public water supplies?	___	___	X
i. Exposure of people or property to water related hazards such as flooding or tidal waves?	___	X	___
4. Plant Life. Will the proposal result in:	___	___	___
a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?	___	X	___

	Yes	Maybe	No
b. Reduction of the numbers of any unique, rare or endangered species of plants?	___	X	___
c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?	___	X	___
d. Reduction in acreage of any agricultural crop?	X	___	___
5. Animal Life. Will the proposal result in:			
a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms or insects)?	___	X	___
b. Reduction of the numbers of any unique, rare or endangered species of animals?	___	___	X
c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?	___	___	X
d. Deterioration to existing fish or wildlife habitat?	___	X	___
6. Noise. Will the proposal result in:			
a. Increases in existing noise levels?	___	___	X
b. Exposure of people to severe noise levels?	___	___	X
7. Light and Glare. Will the proposal produce new light or glare?	___	___	X
8. Land Use. Will the proposal result in a substantial alteration of the present or planned land use of an area?	___	___	X
9. Natural Resources. Will the proposal result in:			
a. Increase in the rate of use of any natural resources?	___	___	X
10. Risk of Upset. Will the proposal involve:			
a. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?	___	___	X

	Yes	Maybe	No
b. Possible interference with an emergency response plan or an emergency evacuation plan?	___	___	X
11. Population. Will the proposal alter the location, distribution, density, or growth rate of the human population of an area?	___	___	X
12. Housing. Will the proposal affect existing housing, or create a demand for additional housing?	___	___	X
13. Transportation/Circulation. Will the proposal result in:			
a. Generation of substantial additional vehicular movement?	___	___	X
b. Effects on existing parking facilities, or demand for new parking?	___	___	X
c. Substantial impact upon existing transportation systems?	___	___	X
d. Alterations to present patterns of circulation or movement of people and/or goods?	___	___	X
e. Alterations to waterborne, rail or air traffic?	___	___	X
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	___	___	X
14. Public Services. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:			
a. Fire protection?	___	___	X
b. Police protection?	___	___	X
c. Schools?	___	___	X
d. Parks or other recreational facilities?	X	___	___
e. Maintenance of public facilities, including roads?	X	___	___
f. Other governmental services?	___	X	___
15. Energy. Will the proposal result in:			
a. Use of substantial amounts of fuel or energy?	___	___	X

	Yes	Maybe	No
b. Substantial increase in demand upon existing sources or energy, or require the development of new sources of energy?			X
16. Utilities. Will the proposal result in a need for new systems, or substantial alterations to the following utilities:			X
17. Human Health. Will the proposal result in:			
a. Creation of any health hazard or potential health hazard (excluding mental health)?		X	
b. Exposure of people to potential health hazards?		X	
18. Aesthetics. Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?		X	
19. Recreation. Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?	X		
20. Cultural Resources.			
a. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archaeological site?		X	
b. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?		X	
c. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values?			X
d. Will the proposal restrict existing religious or sacred uses within the potential impact area?			X
21. Mandatory Findings of Significance.			
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate			

	Yes	Maybe	No
important examples of the major periods of California history or prehistory?		X	
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.)	X		
c. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)	X		
d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X

III. Discussion of Environmental Evaluation
(Narrative description of environmental impacts.)

IV. Determination
(To be completed by the Lead Agency.)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☐

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION WILL BE PREPARED. ☐

I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. ☒

December 21 1992
Date

Signature

For BRITT FUSSEL
COMMUNITY DEVELOPMENT DIRECTOR

(Note: This is only a suggested form. Public agencies are free to devise their own format for initial studies.)

III. STORM WATER MASTER PLAN AND MANAGEMENT PROGRAM EXPLANATION OF CHECKLIST ANSWERS

1. EARTH. Will the proposal result in:

(b) Disruptions, displacements, compaction, or over-covering of soil? Yes.

Development of storm water facilities permitted as a result of the Storm Water Master Plan and Management Program will result in grading, compacting, and disruption of soil.

(c) Change in topography or ground surface relief features? Maybe.

Development of storm water facilities permitted as a result of the Storm Water Master Plan and Management Program may include construction of ponding basins and water channels which would result in minor changes to the predominantly flat topography of the area.

(e) Any increase in wind or water erosion of soils, either on or off the site? Maybe.

Development of storm water facilities permitted as a result of the Storm Water Master Plan and Management Program will include construction activities including grading and excavations which will expose soils to wind and water erosion by removal of vegetative cover and soil disturbance.

(f) Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay inlet or lake? Maybe.

The area served by the Storm Water Master Plan and Management Program is traversed by a number of intermittent water courses which would be affected by increased runoff and soil erosion brought about through area-wide construction activities.

3. WATER. Will the proposal result in:

(b) Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff? Yes.

Implementation of the Storm Water Master Plan and Management Program will provide facilities which will capture and direct storm water runoff into a system of storage basins and waterways. This will change existing runoff and absorption patterns. An

indirect impact will result from increased surface runoff associated with urbanization permitted under the Land Use Element of the City's General Plan.

(c) Alterations to the course or flow of flood waters? Yes.

Implementation of the Storm Water Master Plan and Management Program will capture and direct flood waters into the storm water system.

(d) Change in the amount of surface water in any water body? Yes.

Implementation of the Storm Water Master Plan and Management Program will accommodate additional storm water runoff which could potentially increase the amount of surface water in the water courses which traverse the City.

(e) Discharge into surface waters, or in alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity? Maybe.

Urban storm water runoff may contain various contaminants such as oils, metals, pesticides and fertilizers used in landscaping, and sediments from construction sites. While development of storm water facilities permitted under the Storm Water Master Plan and Management Program will not result in direct impact to surface water quality, such waters from other sources may be captured and directed into the storm water system. Because of potential negative impact to potential groundwater recharge, increased construction costs, and visual impacts; it is the intent under the Master Plan to restrict the use of lined channels.

(f) Alteration of the direction or rate of flow of groundwater? Maybe.

The groundwater aquifer which underlies the area served by the Storm Water Master Plan and Management Program is believed to be replenished both from percolation of surface flow and groundwater migration (in deeper aquifers). Storm water detention facilities proposed under the Storm Water Master Plan and Management Program will increase the potential of such replenishment through increased storage of storm water runoff resulting from area development. Because of potential negative impacts to groundwater recharge, increased construction costs, and visual impacts; it is the intent of the Master Plan to restrict the use of lined channels.

(g) Change in quantity of groundwaters, whether through direct additions or withdrawals, or through interceptions of an aquifer cuts or excavations? Maybe.

The groundwater aquifer which underlies the area served by the Storm Water Master Plan and Management Program is believed to be

replenished both from percolation of surface flow and groundwater migration (in deeper aquifers). Storm water detention facilities proposed under the Storm Water Master Plan and Management Program will increase the potential of such replenishment through storage of increased storm water resulting from area development.

(i) Exposure of people or property to water related hazards such as flooding or tidal waves? Maybe.

Implementation of the Storm Water Master Plan and Management Program is intended to reduce exposure of people or property to flooding hazards. However, as a practical matter, such facilities cannot be designed to fully eliminate flooding hazards and storm events creating storm water in excess of facility capacities may result in flood hazard exposure. Such hazards could include increased risk associated with open channels and drainage basins.

4. PLANT LIFE. Will the project result in:

(a) Change in diversity of species or number of any plants (including trees, shrubs, grass, crops, and aquatic plants)? Maybe.

Stands of large, old trees and some undisturbed vegetation still exist along water courses and open lands which will be subject to development of storm water facilities under the Storm Water Master Plan and Management Program. Such development has the potential to disturb or eliminate these areas.

(b) Reduction in numbers of any unique, rare, or endangered species of plants? Maybe.

The California Diversity Data Base indicates the presence within the planning area of two rare natural plant communities, the Valley Oak Riparian Forest and the Valley Sacaton Grassland. Unique species may be present in these natural areas which could be adversely affected by development of the proposed storm water facilities under the Storm Water Master Plan and Management Program.

(c) Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species? Maybe.

There exists a potential for the introduction of exotic landscape materials into areas developed for storm water facilities. Disturbance or elimination of portions of natural areas for such development may create barriers by breaking up these areas into smaller noncontiguous areas.

(d) Reduction in acreage of any agricultural crop? Yes.

Portions of areas shown for development and expansion of storm water detention facilities under the Storm Water Master Plan and Management Program are within agricultural areas. Development of these facilities will result in conversion of agricultural lands.

5. ANIMAL LIFE. Will the proposal result in:

(a) Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms or insects)? Maybe.

Some natural areas still exist in the planning area which provide habitat for wildlife. There is potential for disturbance of these areas with development of storm water facilities permitted under the Storm Water Master Plan and Management Program.

(b) Reduction of the numbers of any unique, rare or endangered species of animals? Maybe.

Potential San Joaquin kit fox range exists outside of the City's existing developed area and the California Natural Diversity Data Base indicates the presence of the Hoppings Blister Beetle, a candidate species for federal listing. The potential exists for these species to be affected by development of storm water facilities as permitted under the Storm Water Master Plan and Management Program.

(d) Deterioration to existing fish or wildlife habitat? Maybe.

Storm water facilities permitted under the Storm Water Master Plan and Management Program will capture runoff from urbanized areas which may contain pollutants. The degree of concentration and retention of such pollutants may cause some deterioration of the quality of receiving waters.

14. PUBLIC SERVICES. Will the proposal have an effect upon, or result in a need for new or altered governmental services by any of the following areas:

(d) Parks or other recreational facilities? Yes.

Development of storm water facilities as permitted under the Storm Water Master Plan and Management Program will provide area for public park and recreational uses through joint use of storm water detention facilities and potential for pedestrian/bikeway trails along water courses.

(e) Maintenance of public facilities, including roads? Yes.

Development of storm water facilities as permitted under the Storm Water Master Plan and Management Program will require ongoing increased maintenance.

(f) Other governmental services? Yes.

Development and maintenance of storm water facilities as permitted under the Storm Water Master Plan and Management Program will require ongoing inspection and monitoring by various agencies.

17. HUMAN HEALTH. Will the proposal result in:

(a) Creation of any health hazard or potential health hazard (excluding mental health)? Maybe.

Storage of storm water runoff from urbanized areas could result in concentrations of hazardous materials within storm water detention facilities which may create health hazards should exposure occur. In addition, there may be drowning or injury potential in cases were water flow speeds and still water depths present hazardous conditions.

(b) Exposure of people to potential health hazard? Maybe.

There is a potential health hazard to people exposed to concentrations of hazardous materials transported by storm water.

18. AESTHETICS.

Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive sight open to public view? Maybe.

Development of storm water facilities permitted under the Storm Water Master Plan and Management Program will be at existing ground level with minimal berming and improvements. As such, no scenic vistas or view open to the public will be impacted. However, the development of pond areas without adequate screening may create aesthetically offensive sights open to public view.

19. RECREATION.

Will the proposal result in an impact upon the quantity or quality of existing recreational opportunities? Yes.

Development of storm water facilities as permitted under the Storm Water Master Plan and Management Program will provide area for public park and recreational uses through joint use of storm water detention facilities and potential for pedestrian/bikeway trails along water courses.

20. CULTURAL RESOURCES.

(a) Will the proposal result in the alteration of or the destruction of a prehistoric or historic archaeological site? Maybe.

Relatively few archaeological investigations have been conducted in the planning area. Potential unrecorded archaeological sites may exist in the planning area which could be disturbed or destroyed by construction activities related to storm water facilities permitted under the Storm Water Master Plan and Management Program.

(b) Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object? Maybe.

Development of storm water facilities permitted under the Storm Water Master Plan and Management Program will not impact any existing historic buildings, structures, or objects. However, potential unrecorded prehistoric structures may be impacted by such development.

C:EIRS04.

APPENDIX B

NOP COMMENTS RECEIVED BY THE CITY

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO, CA 95814

DATE: Jan 11, 1993

TO: Reviewing Agency

RE: CITY OF VISALIA's NOP for
STORM WATER PLAN
SCH # 93012010

Attached for your comment is the CITY OF VISALIA's Notice of Preparation of a draft Environmental Impact Report (EIR) for the STORM WATER PLAN.

Responsible agencies must transmit their concerns and comments on the scope and content of the EIR, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of this notice. We encourage commenting agencies to respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

RICHARD LUTHER
CITY OF VISALIA
900 WEST OAK STREET
VISALIA, CA 93291

with a copy to the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the review process, call Russell Colliau at (916) 445-0613.

Sincerely,

Christine Kinne

Christine Kinne
Deputy Director, Permit Assistance

Attachments

cc: Lead Agency

NOP Distribution List

S = sent by lead agency

SCH# 95 12

Resources Agency

Judy [illegible]
[illegible] Boating & Waterways
1629 S Street
Sacramento, CA 95814
916/445-6281

Gary L. Holloway
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219
415/904-5200

Reed Holderman
State Coastal Conservancy
1330 Broadway, Suite 1100
Oakland, CA 94612
510/464-1015

Steve Oliva
Dept. of Conservation
801 K Street, MS-24-02
Sacramento, CA 95814
916/445-8733

- Div. of Mines and Geology
- Div. of Oil and Gas
- Land Resources Protect. Unit

Douglas Wickizer
Dept. of Forestry
1416 Ninth Street, Room 1516-2
Sacramento, CA 95814
916/653-9451

Hans Kreutzberg
Office of Historic Preservation
P.O. Box 942896
Sacramento, CA 94296-0001
916/653-9107

Mike Doyle
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P.O. Box 942896
Sacramento, CA 94296-0001
916/653-0547

[illegible]
[illegible] 95814
916/653-9669

Nancy Wakeman
S.F. Bay Conservation & Dev't. Comm.
30 Van Ness Avenue, Room 2011
San Francisco, CA 94102
415/557-3686

Nadell Gayou
Dept. of Water Resources
1416 Ninth Street, Room 449
Sacramento, CA 95814
916/653-6866

Fish and Game - *Regional Offices*

Gary Stacey, Regional Manager
Department of Fish and Game
601 Locust
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916/225-2300 (8-442)

Jim Messersmith, Regional Manager
Department of Fish & Game
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670
916/355-0922 (8-438)

B. Hunter, Regional Manager
Department of Fish and Game
P.O. Box 47
Yountville, CA 94599
707/944-5518

G. Nokes, Regional Manager
Department of Fish and Game
1234 East Shaw Avenue
Fresno, CA 93710
209/222-3761 (8-421)

Fred A. Worthley, Jr., Reg. Manager
Department of Fish and Game
330 Golden Shore, Suite 50
Long Beach, CA 90802
213/590-5113 (8-635)

Independent Commissions

John R. Nuffer
California Energy Commission
1516 Ninth Street, MS 15
Sacramento, CA 95814
916/654-3859

William A. Johnson
Native American Heritage Comm.
915 Capitol Mall, Room 288
Sacramento, CA 95814
916/653-4082

William Meyer
Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
415/703-1540 (8-597)

Betty Eubanks
State Lands Commission
1807 - 13th Street
Sacramento, CA 95814
916/322-2795

Business, Transportation, & Housing

Sandy Hesnard
Caltrans - Division of Aeronautics
P.O. Box 942874
Sacramento, CA 94274-0001
916/324-1833

Tom Mikone
California Highway Patrol
Office of Special Projects
Planning and Analysis Division
2555 First Avenue
Sacramento, CA 95818
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Ron Helgason
Caltrans - Planning
P.O. Box 942874
Sacramento, CA 94274-0001

Department of Transportation
District Contacts

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Caltrans, *District 1*
1656 Union Street
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Aileen Kennedy
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Santa Ana, CA 92705
714/724-2239 (8-655)

Food and Agriculture

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Dept. of Food and Agriculture
1220 N Street
Sacramento, CA 95814
916/322-5227

Health & Welfare

Quy Tu
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601 N. 7th Street, PO Box 942732
Sacramento, CA 94234-7320
916/323-6111

DHSTSCD: _____

State and Consumer Services

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400 P Street, Suite 5100
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916/324-0214

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Jeanie Agpoon
Calif. Waste Management Board
8800 Cal Center Drive
Sacramento, CA 95826
916/255-2439 916/255-2341

State Water Resources Control Board

Allan Patton
State Water Resources Control Board
Division of Clean Water Programs
P.O. Box 944212
Sacramento, CA 94244-2120
916/739-4263

Dave Beringer
State Water Resources Control Board
Delta Unit
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Sacramento, CA 95812-2000
916/322-9870

Phil Zentner
State Water Resources Control Board
Division of Water Quality
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Sacramento, CA 95801
916/657-0912

Mike Falkenstein
State Water Resources Control Board
Division of Water Rights
901 P Street, 3rd Floor
Sacramento, CA 95814
916/657-1377 (8-437)

APCD/AQMD: 37
Tulare

Regional Water Quality Control Board

NORTH COAST REGION (1)
1440 Guerneville Rd.
Santa Rosa, CA 95401
707/576-2220 (8-590)

SAN FRANCISCO BAY REGION (2)
2101 Webster, Suite 500
Oakland, CA 94612
415/464-1255 (8-561)

CENTRAL COAST REGION (3)
81 Higuera Street, Suite 200
San Luis Obispo, CA 93401-5427
805/549-3147 (8-629)

LOS ANGELES REGION (4)
1075 S. Broadway, Rm. 4027
Los Angeles, CA 90012
213/266-4460 (8-640)

CENTRAL VALLEY REGION
3443 Routier Road, Suite A
Sacramento, CA 95827-3098
916/361-5600

- Fresno Branch Office
  3614 East Ashlan Avenue
  Fresno, CA 93726
  209/445-5116 (8-421)
- Redding Branch Office
  415 Knollcrest Drive
  Redding, CA 96002
  916/224-4845 (ATS 441)

LAHONTAN REGION (6)
2092 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150
916/544-3481

- Victorville Branch Office
  15428 Civic Drive, Suite 10
  Victorville, CA 92392-2359
  619/241-6583

COLORADO RIVER BASIN REGION (7)
73-271 Highway 111, Suite 21
Palm Desert, CA 92260
619/346-7491

SANTA ANA REGION (8)
2010 Iowa Avenue, Suite 100
Riverside, CA 92507
714/782-4130 (8-632)

SAN DIEGO REGION (9)
9771 Clairemont Mesa Blvd., Suite
San Diego, CA 92124-1331
619/265-5114 (8-636)

OTHER: _____

OTHER: _____

DOUGLAS C. WILSON
PUBLIC WORKS DIRECTOR

RICHARD L. BROGAN
ASSISTANT PUBLIC WORKS DIRECTOR
ROADS & BRIDGES

LARRY L. AWBREY
ASSISTANT PUBLIC WORKS DIRECTOR
PUBLIC SERVICES

PUBLIC WORKS DEPARTMENT
TULARE COUNTY

ROOM 10, COUNTY CIVIC CENTER
VISALIA, CALIFORNIA 93291

TELEPHONE (209) 733-6291

OPERATING DEPARTMENTS
ROADS & BRIDGES
SURVEYOR
REFUSE DISPOSAL
FLOOD CONTROL

January 22, 1993

City of Visalia
900 West Oak Street
Visalia, California 93291

Attention: Richard Luther, Redevelopment Project Manager

Subject: Storm Water Master Plan and Management Program
Draft EIR Initial Study

Dear Mr. Luther:

Thank you for the opportunity to review the subject document. Our comments are limited to the drainage/flood control aspects of the study. Generally, we feel that many of the items marked as "maybe's" under Section II.1 "Earth" and Section II.3 "Water" of Appendix I could more probably have been marked as "yes" (i.e. 1c, f and 3e,f & g). In addition, Item 3b under Section II of Appendix I would seem to have been inadvertently marked as a "no" when it should more appropriately have been marked as a "yes" when taking into account the scope of the proposal.

Again, thank you for allowing us to review this initial study and should you have any questions in this regard, please call.

Yours very truly,

DOUGLAS WILSON
Public Works Director

By _____
Dennis Speer
Flood Control Engineer

DS:mm

STATE OF CALIFORNIA—THE RESOURCES AGENCY PETE WILSON, *Governor*

DEPARTMENT OF FISH AND GAME
REGION 4
1234 Shaw Avenue
Fresno, California 93710
(209) 222-3761

January 25, 1993

Mr. Richard Luther, Project Manager
City of Visalia
900 W. Oak Street
Visalia, California 93291

Dear Mr. Luther:

Subject: NOP of a DEIR Storm Water Master Plan and Management Program

We believe the proposed project has associated incremental impacts which will have an adverse, although minor, effect upon fish, wildlife or native plants. In this case, the project has been proposed in a manner and/or location which reduces its incremental impacts such that we believe an EIR for the project is not warranted.

From a cumulative standpoint, the Lead Agency should recognize that even minor levels of disturbance or habitat loss can become significant if they are more broadly replicated through successive and permanent land use changes. While it is our position that the cumulative changes associated with this project may not be significant enough to warrant serious analysis or mitigation at this time, the significance of those cumulative effects could change in the future depending upon the number and scope of other projects approved within the geographic area. To the extent possible, we recommend that cumulative impacts be addressed and mitigated in the broader General and Specific Planning processes, rather than in individual projects such as this one. We are prepared to consult with your staff, regarding the scope of fish and wildlife cumulative impacts in your area and measures to avoid or compensate them.

In the event the project or its associated information basis is changed, we request an opportunity to reconsider these comments.

If you have any questions, please contact Mr. Dale Mitchell, Environmental Services Supervisor, at the address and/or telephone as shown above.

Sincerely,

Dale Mitchell

Mr. Dale Mitchell
Environmental Specialist IV

DEPARTMENT OF FISH AND GAME
1234 East Shaw Avenue
Fresno, California 93710
(209) 222-3761

January 25, 1993

Mr. Richard Luther, Manager Planner
City of Visalia
900 W. Oak Street
Visalia, California 93291-4593

Dear Mr. Luther:

Subject: Storm Water Manster Plan and Management Program; De minimis Impact Finding; Responsibility, Pursuant to Fish and Game Code Section 711.4, Filing Fees

Regardless of whether the above project will incrementally have environmental effects which were determined to exceed the CEQA "significant impact" threshold, (therefore warranting specific or general mitigation measures and/or preparation of an Environmental Impact Report), we believe the project will involve elimination or destruction of at least some habitat. These, in combination with similar losses on other projects are becoming cumulatively important. For this reason, the project is not considered by the Department as "De Minimis" with respect to Fish and Game Code Section 711.4. As such, we believe the project is subject to the environmental review fees as therein described. If a Negative Declaration will be filed by the County pursuant to Public Resources Code Section 21080(c), the fee will be $1250, payable to the County Clerk when the Notice of Determination is filed.

We point out that this law is intended to more fairly distribute the cost of protecting and managing fish and wildlife resources among the broad group of Californians who contribute to their short and long term reductions through habitat conversion and development.

If you have questions or wish to discuss these comments, please contact Dale Mitchell, Environmental Services Supervisor, at the above address or telephone.

Sincerely,

Dale Mitchell

Mr. Dale Mitchell
Environmental Specialist IV

cc: Project Applicant

NOP Distribution List

S = sent by lead agency

SCH# 93121

Resources Agency

Judy [illegible]
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1629 S Street
Sacramento, CA 95814
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415/904-5200

Reed Holderman
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1330 Broadway, Suite 1100
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801 K Street, MS 24-02
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- Div. of Mines and Geology
- Div. of Oil and Gas
- Land Resources Protect. Unit

Douglas Wickizer
Dept. of Forestry
1416 Ninth Street, Room 1516-2
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916/653-9451

Hans Kreutzberg
Office of Historic Preservation
P.O. Box 942896
Sacramento, CA 94296-0001
916/653-9107

Mike Doyle
Dept. of Parks and Recreation
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916/653-9669

Nancy Wakeman
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30 Van Ness Avenue, Room 2011
San Francisco, CA 94102
415/557-3686

Nadell Gayou
Dept. of Water Resources
1416 Ninth Street, Room 449
Sacramento, CA 95814
916/653-6866

N/C for MARC S. BIRNBAUM, Chief
Intergovernmental Affairs
Caltrans, District 6

FEB 1 1993

Fish and Game - *Regional Offices*

Gary Stacey, Regional Manager
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601 Locust
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916/225-2300 (8-442)

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Fred A. Worthley, Jr., Reg. Manager
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330 Golden Shore, Suite 50
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Sacramento, CA 95814
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William Meyer
Public Utilities Commission
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415/703-1540 (8-597)

Betty Eubanks
State Lands Commission
1807 - 13th Street
Sacramento, CA 95814
916/322-2795

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Sandy Hesnard
Caltrans - Division of Aeronautics
P.O. Box 942874
Sacramento, CA 94274-0001
916/324-1833

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Office of Special Projects
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Department of Transportation
District Contacts

Guy Luther
Caltrans, *District 1*
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[illegible]8114
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[illegible]Barbara/MARC BIRNBAUM
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Lisa Flores
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619/872-0203 (8-621)

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1220 N Street
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Quy Tu
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601 N. 7th Street, PO Box 942732
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400 P Street, Suite 5100
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Environmental Affairs

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Jeanie Agpoon
Calif. Waste Management Board
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State Water Resources Control Board

Allan Patton
State Water Resources Control Board
Division of Clean Water Programs
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Sacramento, CA 94244-2120
916/739-4265

Dave Berlinger
State Water Resources Control Board
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916/322-9870

Phil Zentner
State Water Resources Control Board
Division of Water Quality
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Sacramento, CA 95801
916/657-0912

Mike Falkenstein
State Water Resources Control Board
Division of Water Rights
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Sacramento, CA 95814
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APCD/AQMD 37
Tulare

Regional Water Quality Control Board

NORTH COAST REGION (1)
1440 Guerneville Rd.
Santa Rosa, CA 95401
707/576-2220 (8-590)

SAN FRANCISCO BAY REGION (2)
2101 Webster, Suite 500
Oakland, CA 94612
415/464-1255 (8-561)

CENTRAL COAST REGION (3)
81 Higuera Street, Suite 200
San Luis Obispo, CA 93401-5427
805/549-3147 (8-629)

LOS ANGELES REGION (4)
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Los Angeles, CA 90012
213/266-4460 (8-640)

CENTRAL VALLEY REGION (5)
3443 Routier Road, Suite A
Sacramento, CA 95827-3098
916/361-5600

- Fresno Branch Office
  3614 East Ashlan Avenue
  Fresno, CA 93726
  209/445-5116 (8-421)
- Redding Branch Office
  415 Knollcrest Drive
  Redding, CA 96002
  916/224-4845 (ATS 441)

LAHONTAN REGION (6)
2092 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150
916/544-3481

- Victorville Branch Office
  15428 Civic Drive, Suite 10
  Victorville, CA 92392-2359
  619/241-6583

COLORADO RIVER BASIN REGION (7)
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Palm Desert, CA 92260
619/346-7491

SANTA ANA REGION (8)
2010 Iowa Avenue, Suite 100
Riverside, CA 92507
714/782-4130 (8-632)

SAN DIEGO REGION (9)
9771 Clairemont Mesa Blvd., Suite
San Diego, CA 92124-1331
619/265-5114 (8-636)

OTHER: [illegible]

OTHER: [illegible]

The Gas Compan

Wayne C. Clark
Division Superintendent

Southern Califor
Gas Company
5000 W. Cypress Ave
Visalia, CA

Mailing Address:
Box 591
Visalia, CA
93279

January 7, 1993

City of Visalia
900 W. Oak Street
Visalia, CA 93291

Attention: Richard Luther
Project Manager

Re: Storm Water Master Plan And Management Program

Southern California Gas Company has reviewed the subject report and has no comments to offer, nor do we anticipate any problems with the proposals therein.

N. H. Atkins

N. H. Atkins
Planning Technician

NHA:cw

CALIFORNIA WATER SERVICE COMPANY
216 N. VALLEY OAKS DR. • VISALIA, CA 93292-6717 • (209) 734-6734

January 4, 1993

Mr. Richard Luther
Redevelopment Project Manager
900 W. Oak Street
Visalia, California 93291

RE: Sewer System Master Plan
Storm Water Master Plan and Management Program

Dear Mr. Luther:

We have reviewed the above projects and have no comment.

Sincerely,

CALIFORNIA WATER SERVICE COMPANY

Steve Toovey
District Manager

ST/lr

Continental
Cablevision

January 4, 1993

Mr. Richard Luther
CITY OF VISALIA
900 W. Oak Street
Visalia, CA 93291

Subject: Storm Water Master Plan and Management Program

Dear Mr. Luther:

We have received your report notice of preparation of a draft environmental impact report for Storm Water Master Plan and Management Program. We at Continental Cablevision do not anticipate being affected by this project as currently shown.

Upon any excavation please notify United Service Alert at 1-800-642-2444.

Respectfully,

Bruce Walters
Construction Supervisor

BW/ac

111 N. MOONEY BLVD. • TULARE, CA 93274 • (209) 688-7593

APPENDIX C

VISALIA HERITAGE CORRESPONDENCE

To: Ronald F. McIntosh, Chairman, Site Review Sub-Committee, Visalia Historic Preservation Board

From: John C. Combs, President, Visalia Heritage, Incorporated

Subject: Proposed City Park Near Ben Maddox and Goshen Avenues

Dated: 25 July, 1980

The beautiful area along the small ditch running from Goshen Avenue to Mill Creek is one with which I am intimately familiar. For thirteen summers, from 1959 through 1972, I walked along the banks spraying the mosquitoes sometimes occasioned by the drainage from the Sales Yard and Walnut concern to the north. It was always a most enjoyable respite from the summer sun, and I always looked forward to munching on the wild grapes and black berries at the south end of the stream as a reward for my labors.

As I wended my way through the tangle of grape vines that formed an arbor within that canopy of oaks which still line its course, I was frequently reminded of our pioneer forebearers. It is one small area left much as it has always been: an area which evokes appreciation for how absolutely beautiful the oak forest must have been. Deer wandered down its course and bear were killed there, perhaps no less irresistibly attracted to the wild grapes and thickets of berries than was I. And, although our historic record of this area is not complete, there are several things that Carl Ferguson, Annie Mitchell and I recalled from our researches on this particular area.

First, this portion of the Jennings Ditch was cleared with the help of Indian laborers in 1854 to increase the Mill Flow to Matthews Flour Mill, located where Putnam-Windh is today located on east Main Street. There was an Indian encampment along the ditch. One of the Indians broke into the home of my great-grand-parents whose residents on the site of what now is Struble's Auto Parts, was the first permanent dwelling outside of the fort. Mrs. Brown was on a ladder at the time attempting to put up a picture. As the Indian lunged up at her she hit him on the head with a hammer. The surprised Yokuts turned and fled in the general direction of his encampment. And, as a matter of fact, he was shot and killed while fleeing along the Mill Creek bank.

Later, Camp Babbitt soldiers trained in this vicinity; and a great many old timers recalled playing and picnicking as children all along the Jennings Ditch and Mill Creek areas, eating copious quantities of black berries and collecting still more for family tables. Bottle collectors have found much evidence of pioneer use of this popular site-----as, unfortunate-ly, as a few remaining pits along its banks attest.

Needless to say, Visalia Heritage commends the City of Visalia for its effort to preserve this important scenic and historic site. It is a very worthwhile project, and one we hope will be given the serious consideration it deserves.

If I may be of any further assistance, please feel free to call.