D. PUBLIC SERVICES

Purpose: This section recognizes the interrelationships between land use planning and the orderly provision of public services by providing a common set of goals and policies for all public service agencies.

This section identifies the recommended methods by which necessary public services will be provided. This discussion is particularly important in this Plan area due to the lack of adequate existing infrastructure to accommodate new development. Much of the information contained herein is derived directly or indirectly from the "West Roseville Public Facilities Plan" January, 1989, prepared by Psomas and Associates under contract to Placer County. That document, in its entirety, is considered a technical appendix to the Dry Creek - West Placer Community Plan and it should be recognized as providing alternatives for consideration. Alternative financing programs as well as alternative methods of providing basic services are discussed therein.

General Public Service Goals and Policies

GOALS

1. PUBLIC SERVICE AND FACILITIES MUST BE AVAILABLE TO SERVE THE NEEDS CREATED BY THE PRESENT AND FUTURE DEVELOPMENT WHICH OCCURS IN THE PLAN AREA.
2. MAINTAIN THE MOST FEASIBLE AND ACCEPTABLE BALANCE BETWEEN ADEQUATE PUBLIC SERVICES, COSTS OF PROVIDING THOSE SERVICES AND PROJECTED DEMAND.
3. PREVENT THE COMMITMENT OF LAND USE THROUGH PREMATURE PUBLIC SERVICE FACILITY CONSTRUCTION.
4. MAKE URBAN SERVICES AVAILABLE ONLY TO THOSE LANDS WHICH, UNDER THE LAND USE PLAN, WILL NEED THEM.
5. INSURE THAT THE RATE OF DEVELOPMENT SHALL NOT EXCEED THE CAPACITY OF COUNTY, COMMUNITY, SPECIAL DISTRICTS (INCLUDING SCHOOL DISTRICTS), AND UTILITY COMPANIES TO PROVIDE ALL NEEDED PUBLIC SERVICES IN A TIMELY, ORDERLY, AND ECONOMICALLY FEASIBLE MANNER.

Policies

1. Coordination of city, county, and district public works planning and land use planning are essential. A major problem is to design major water, sewer and road extensions, intended to serve urban areas, in such a way that they do not also serve intervening non-urban areas, and thereby encourage their urbanization.
2. Relate the financing base to the areas or people served. This can be done in several ways: (a) adjusting taxing agency boundaries to areas served; (b) greater use of service charges rather than property taxes where "a" is not feasible; (c) charging the full cost of the local component of adequate sewer and water facilities to the local area or development, with no subsidy from the service agency as a whole (this is generally the practice already); and (d) use of zone charges/fees to reflect different service levels (this may be relevant to storm drainage, parks and recreation, fire protection and sheriff's services).
3. Discourage over-development of facilities, services, and systems in advance of demand to insure that no inequitable financial burden is imposed and to prevent the commitment of land use through premature public facility construction.
4. Ensure that adequate services will be available for proposed development before granting approvals.
5. The County or other public entity should be responsible to operate sewer, water and major drainage services, not a developer or private landholder.
6. Ensure, through cost-benefit studies, that new development does not place undue burdens upon existing public services.
7. Consider mitigation measures from new development to reduce impacts on local services, i.e., schools, parks, etc.

Sewage Disposal

GOAL: TO PROVIDE SEWAGE DISPOSAL FACILITIES WHICH WILL SERVE THE DRY CREEK-WEST PLACER AREA'S PROPOSED DENSITY OF RESIDENTIAL, COMMERCIAL, INDUSTRIAL, AND PUBLIC USES IN A WAY WHICH PROTECTS THE PUBLIC FROM ANY ADVERSE WATER QUALITY OR HEALTH IMPACTS.

Policies

1. Require all new commercial, industrial, institutional, and residential subdivisions to install and connect to a public sewer system.
2. Allow only the number of new on-site sewage disposal systems in the rural areas which, on a cumulative basis, can be accommodated without an adverse impact on ground or surface water quality.
3. Provide for the phasing out of the existing two wastewater stabilization ponds which currently serve the Sabre City development, through connection of that system to a regional sewer system.
4. Adopt and implement a financial plan that will construct the wastewater collection, treatment, and disposal facilities needed to serve the Dry Creek-West Placer area.

Discussion/Implementation

Due to poor soil conditions and ground water contamination problems, the Placer County Health Department has mandated that all development in the Dry Creek-West Placer Plan area, with individual lot sizes less than 7 acres, should be connected to a public sewer system rather than using individual soil disposal systems. The Plan proposes a configuration of land densities that will generate grouped or clustered areas of development that will require public sewer. These densities start adjacent to the Roseville City limits and extend to the west to the boundary of the Dry Creek watershed. The Plan then proposes a change to very large agricultural parcels continuing west to the Riego area and the Sutter County line. It is assumed, therefore, that most of

the new parcels proposed will be on parcels smaller than 2.3 acres, thus requiring public sewers. It is also assumed that the large acreage parcels to the west would continue to receive wastewater service through individual soil disposal systems.

Availability of Public Wastewater Treatment and Disposal Systems

In 1988, realizing that any proposed increase in density in the Plan area would require a public sewer system, the Placer County Community Development Department - Planning Division hired the Engineering firm of Psomas and Associates to prepare a Facilities Plan to study the needs for Wastewater Treatment and Disposal, Water Supply and Drainage. That "West Roseville Public Facilities Plan" was published in January 1989 and is hereby referenced by this report.

Conceived before the proposed Plan was developed, the Facilities Plan studies the wastewater needs for two plans as follows:

PLAN "A"	4,847 Dwelling Units
PLAN "C	10,767 Dwelling Units

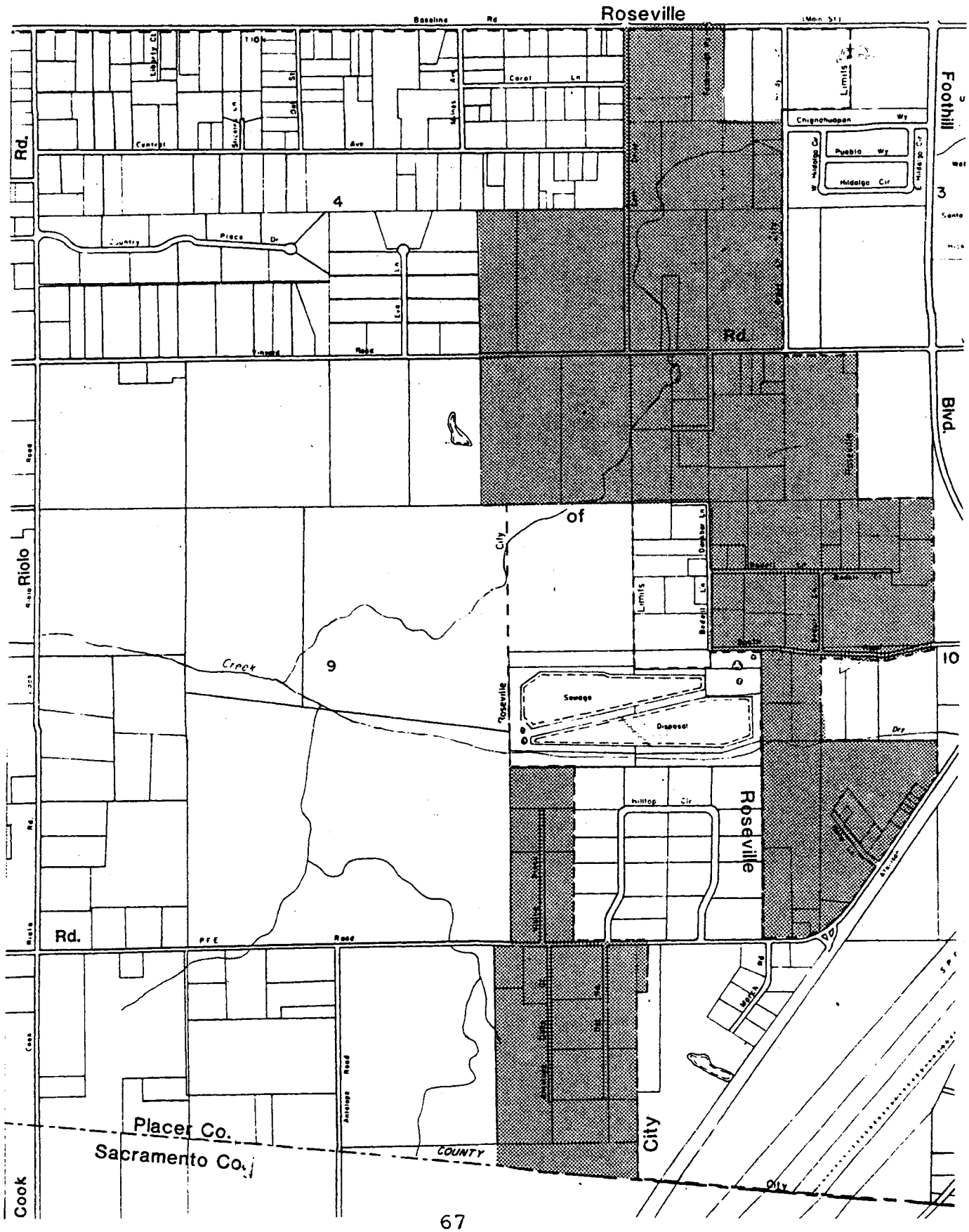
It can be noted that Plan "A" closely matches the dwelling units proposed in the Proposed Plan and Plan "C" closely matches the dwelling units in an Alternative Plan "X" discussed in the Plan E.I.R. Therefore, it is assumed that the conclusions developed in the facilities plan can be considered valid for this report.

The facilities plan studies three Wastewater Treatment and Disposal options for the Dry Creek - West Placer area and selected the following as the most feasible:

Alternative 1: Connection to the Sacramento Regional Wastewater Treatment Plan (SRWTP) by the extension of a Sacramento County Sewer Interceptor into Placer County; the buy-in, by Placer County, into the proposed expansion of Sacramento County's existing Sewer Interceptor system; and the buy-in, by Placer County, into the Sacramento Regional Wastewater Treatment Plant.

FIGURE 7

POTENTIAL GRAVITY FLOW AREA - ROSEVILLE WASTEWATER TREATMENT PLANT



Alternative 2 reviewed, but not recommended by the "Study", looked at connection to the Roseville Regional Wastewater Treatment Plant by the construction of new sewer interceptors. Due to the topography of the area, closest to the Roseville Plant, the easternmost portion of the Plan area (see Figure 7 preceding this page) can be served by gravity flow lines to this treatment facility.

Consideration should be given to providing service to these areas by the City of Roseville's Plant.

Water Supply

GOAL: TO PROVIDE A SOURCE OF TREATED AND UNTREATED SURFACE WATER FOR ALL FUTURE DEVELOPMENT IN THE PLAN AREA INCLUDING AGRICULTURE.

Policies

1. Require that a new surface water source for domestic use be developed along with the first new residential development in the Plan area and ensure that all future commercial, industrial, residential, or public use provide for the extension of such a system.
2. Encourage continued and potentially increased agricultural activities on agricultural lands by providing reasonably priced surface water for irrigation.
3. Monitor area wells for quality and quantity as the surrounding area continues to develop and impacts present residents.
4. To encourage water conservation wherever possible.
5. Where possible, identify possible groundwater recharge areas and retain these as valuable open space necessary for the continued conjunctive use of groundwater.
6. Detained peak runoff or flood flows should be used for purposes of aquifer recharge in order to attempt to maintain the level of available groundwater.

Discussion and Implementation

Existing water supply within the Plan area consists of mostly private wells. As the Plan area develops, a public water system will be required to meet increasing water demands. Estimated maximum demand, at build out for the proposed Plan, is 11.21 million gallons per day (MGD). The region generally to the west of Watt Avenue which is planned for mostly Agricultural development should continue to use groundwater for their water supply.

Depletion of the groundwater basin in and around the Plan area has created concern about continued use of groundwater for public water supply. Further drawdown of the water table in the area could create increased costs for pumping as well as deterioration of the groundwater quality. Therefore, a long-term, consistent surface water supply with the reasonable conjunctive use of groundwater is the best alternative for the Plan area. (West Roseville Public Facilities Plan - June 1989).

Long-Term Water Supply

The apparent best long-term alternative project for water supply is wheeling PCWA water from Folsom Lake through the City of Roseville Water Treatment Plant (WTP). The proposed project will provide a long-term surface water supply to the Dry Creek-West Placer area and is the most cost effective alternative.

Components of the recommended project include construction of a new primary pumping plant at Folsom Dam, construction of a new raw water transmission line, expansion of the City of Roseville WTP, upsizing of proposed City of Roseville water transmission mains, and construction of a water distribution system in the Plan area.

Short-Term Water Supply Phasing: PCWA anticipates using a phased approach in order to supply water to the Plan area during the initial stages of development. This phased approach would

provide a short-term water supply until the long-term water supply project can be completed. The short-term water supply would include:

- Use of the extra capacity of an expanded Water Treatment Plant in order to supply treated water to the Plan area through the proposed intertie between the PCWA and City of Roseville water systems.
- Conjunctive use of groundwater in the Plan area in order to meet peak demands. (West Roseville Public Facilities Plan - January 1989)

Education - Schools

GOALS

1. TO PROVIDE THE MOST TIMELY AND BEST POSSIBLE EDUCATIONAL FACILITIES TO THE RESIDENTS OF THE PLAN AREA.
2. TO CONSTRUCT NEW SCHOOLS TO MEET CURRENT NEEDS AND AS THEY ARE NEEDED TO AVOID EVEN TEMPORARY OVERCROWDING WHEREVER POSSIBLE.
3. TO MINIMIZE THE NEED FOR BUSSING AND TO INCREASE THE SAFETY OF CHILDREN GOING TO AND FROM SCHOOL THROUGH THE PROPER LOCATION OF SCHOOL FACILITIES.
4. TO ESTABLISH SCHOOL DISTRICT BOUNDARIES WHICH BEST SERVE THE NEEDS OF THE STUDENTS IN THE AREA.

Policies

1. County, developer, and school district personnel should continue to work together closely to monitor population increases in the area and to ensure that new school facilities are provided as needed. Adequate school facilities must be shown to be available, in a timely manner, before approval will be granted to new residential development including subdivisions, rezonings, and General Plan Amendments.
2. New development in the area must, along with the State of California, continue to provide the funding necessary to meet the demand for new school facilities in a timely manner.

3. New school sites should be centrally located within areas of the highest population densities, and where roads and pedestrian paths provide the safest access to the sites. These sites should be separated and buffered from commercial and industrial properties and from major roads.
4. Joint use of school facilities for recreation and other public uses which do not conflict with the primary educational use are to be encouraged.
5. Levy developer impact fees to the fullest extent possible and, if necessary in order to meet the school needs in this area, create other appropriate funding mechanisms to ensure that the goals and policies of this Plan are met.
6. Designate future school sites on the Plan area map, identified by general location, type, size requirements, and likelihood of development.
7. Encourage continued use of educational programs in schools, service clubs, industry, etc. to foster public awareness of local fire and safety hazards, the benefits of agriculture in Placer County and California, and the need to identify and protect a community's unique natural and cultural resources.

Discussion/Implementation

The Plan area is served by several different school districts. These include the Dry Creek Joint Elementary School District, the Elverta Joint Elementary School District, the Center Unified School District, the Roseville Joint Union High School District, and the Grant Union High School District. (See map in E.I.R. for district boundaries.)

New development in the area will heavily impact the Roseville High, Dry Creek, and Center Unified School Districts. The Grant Union and Elverta School Districts will be less impacted due to the lack of any increase in densities proposed for the portion of the Plan area included within those two districts.

Approximately 70% of the proposed residential units, included in the Plan, fall within the Dry Creek School District boundaries. The school district (through their consultant, Sage Institute Inc.) has provided the following information for consideration in the Dry Creek - West Placer Plan. Upon applying student yield and facility size criteria against the proposed housing inventory, it is projected that two elementary schools and one middle school will be required to house students at total buildout of the Plan area.

Site Location and Size Criteria

The following general criteria should be applied in designating school facilities within the Community Plan:

1. Sites should be centrally located within proposed single family developments.
2. Size requirements are ten useable acres for elementary school and eighteen to twenty useable acres for middle schools, on flat terrain.
3. Site should not be adjacent to major roadways, thoroughfares, commercial or industrial areas.
4. Development tracts and street systems should be designed to accommodate school bus pick-up, drop-off and turnaround areas.
5. Maximize joint use opportunities by locating school facilities adjacent to or in close proximity to park sites, public open space, community buildings and other public recreation facilities.
6. Schools should be linked to planned pedestrian and/or bikeway path systems.

Site Acquisition Mechanisms and Incentives

The following are among the vehicles which have been successfully used by School Districts and local planning jurisdictions to facilitate the provision of needed school sites.

1. Dedication of land by developer.

2. Condemnation by school district (in some instances this can provide tax benefits to the property owner or developer).
3. Encourage cooperative site acquisitions and joint use arrangements between the District and other public or quasi-public agencies.
4. Negotiation of lease/purchase agreements between the school district and property owners/developers.
5. To allow for continued residential development only where adequate allowance has been made for the timely provision of public school facilities.

Financing Programs

Subsequent to the approval of a Community Plan Land Use Map, and prior to finalizing the implementing zoning regulations, a comprehensive finance plan will need to be developed which takes into consideration the following opportunities:

1. Development and Building Permit fees, of which a predetermined portion shall accrue to the School District.
2. Assessment districts, such as the formation of a Mello-Roos community Facilities District to fund school facilities and other infrastructure.
3. School construction bonds.
4. State School Building Program assistance.
5. Other mechanisms as may be applicable.

A detailed financial analysis will be undertaken and presented to the County by the Dry Creek School District upon the selection of the recommended land use plan. (The proposed Public Facilities Plan School component is included as a separate appendix to this Plan.)

Of significance to the financing plan is the fact that the California State School Building Program has depleted its financial resources and therefore School Districts can expect little, if any, State funding assistance in the years to come. As a result, School Districts and local jurisdictions must find alter-

native ways to provide the necessary funds; therefore, our continued working relationship and mutual cooperation is crucial to the delivery of adequate education facilities.

The Roseville Joint Union High School District serves a portion of the Plan area; the same area that Dry Creek Joint Elementary School District serves.

The High School district is faced with the problem of providing school facilities for this area, the Antelope area of Sacramento County and the large new developing areas of Roseville.

The existing facilities at Roseville High School and Oakmont High School are currently operating at 123% of capacity. The 10 year facility needs projection as shown in the 1989 Mello-Roos Financing Plan indicates that the district needs to acquire 3 high school sites and 1 continuation high school site and build 2 high schools and 1 continuation high school

On April 25, 1989, the district asked the voters at a special election to approve a Mello-Roos District to help fund these facilities. The program essentially proposed to collect developers fees (currently .60 cents/square foot for residential and .10 cents/square foot for new commercial plus the tax which would make up 50% of the need. The other 50% would come from the State. The tax rate was $2.60/month for existing residential and $5.95/month for future residential dwelling units (single family). However, after two years of work and planning, the measure failed to get the necessary two-thirds vote.

In light of the district's facility needs, the district offers the following comments as a part of the Community Plan:

The district is planning a future high school in Northwest Roseville at the extension of Cook-Riolo and Junction Boulevard. This site is in the city limits of Roseville. In the short-term, this site will serve the Dry Creek School District area of Placer County and the Antelope area of Sacramento County. Because of

this, consideration should be given to the traffic pattern needed to transport students from Dry Creek and Antelope to this high school.

The district is investigating alternative locations for an additional 40 useable acre high school site to serve the Dry Creek and Antelope areas. The most appropriate location appears to be a 40 acre site located near the northwest corner of P.F.E. Road and the Don Julio extension, situated 150 feet west of the existing north/south electric utility easement.

A recent court case, Mira vs. City of San Diego, greatly expands the powers of cities and counties in the area of school facilities. Since the adoption of AB 2926, the legislature created developer fees statewide but prohibited any additional fees for school facilities. The Mira decision now allows cities and counties to deny rezonings and General Plan amendments for lack of school facilities. The decision further explains that the General Plan of each city and county should recognize school facility impactions and should state specific policies which ensures development would be "coordinated with provisions of public services".

Alternative Financing

The Roseville Joint Union High School District will start negotiating with the Northwest Roseville property owners in order to establish a mitigation program for the district. It is hoped that whatever mitigation program is adopted, will be appropriately applied to other development within the district. Once a solution is reached, the district will request that it be applied to all future projects.

The Center Unified School District has also identified future school facility needs in order to adequately serve future residents of the Plan area. Center Unified expects that a new school, to be built in '95-'96, southeast of Watt and PFE Road, in Sacramento County, will serve as the first school in the area for Placer County students. The school will be built to serve

for Placer County students. The school will be built to serve 600 students. Two other schools in the area, Center Joint Elementary and a new school to be completed in '90 will be at capacity by the time the Plan area develops.

Center Unified anticipates that they will need one (1) additional elementary school for each 1200 homes built. Some of the initial construction in the Plan area will use the school to be completed in '95-'96. Additional developments will need new school sites.

Center Unified will eventually want to locate a Junior and Senior High School within Placer County. Preferably, these schools would be adjacent to a larger community park facility, if one is developed. Ideally, the school district would like to identify these school sites concurrent with the development in and around Watt Avenue and Baseline Road within the Community Plan. The district would like to have these sites located and designated for schools in and around 1996-1998.

The consultant for the school district would like to propose an ordinance through development agreements, specific plans, PUD's, or some similar mechanism, which triggers the automatic siting of the necessary schools concurrent with proposed development.

The location of the existing boundary line between the Center Unified and Dry Creek School Districts appears to pass through property which is likely to be developed as a single project. It may be advisable for the two school districts to adjust the district boundaries in a way which avoids future residents of one neighborhood having to attend different schools.

Fire Protection

GOAL: PROTECT THE CITIZENS AND VISITORS OF THE PLAN AREA FROM LOSS OF LIFE WHILE PROTECTING PROPERTY AND WATERSHED RESOURCES FROM UNWANTED FIRES THROUGH PREPLANNING, EDUCATION, FIRE DEFENSE IMPROVEMENTS, AND FIRE SUPPRESSION.

Policies

1) Ensure that all proposed developments are reviewed for fire safety standards by local fire agencies responsible for its protection, including providing adequate water supplies and ingress and egress.
2) Maintain strict enforcement of the County Zoning Ordinance, Uniform Building Code and the Uniform Fire Code.
3) Encourage and promote installation of smoke detectors in existing residences which were constructed prior to the requirement for their installation.
4) Establish a program whereby new development pays the cost of new capital improvements necessary to provide the fire district with new fire stations, equipment and apparatus necessary to achieve the desired level of service to serve new development in the Dry Creek area.
5) For those portions of the plan area that are served by the Dry Creek Fire Protection District and that are to be developed in rural-low density residential, low density residential, medium or high density residential, commercial, professional office or industrial, adopt a four minute maximum response time to as much of the new development as possible.
6) Adopt a policy that provides for the response of no fewer than three engines with nine personnel and a chief officer to all structure fire calls within ten minutes of the receipt of an alarm. Automatic and mutual aid agreements will be used to supplement district resources when deemed appropriate by the district staff.

Discussion/Implementation

The Dry Creek Fire District (DCFD) serves most of the Plan area except for the region west of Locust Road which is serviced by the Rio Linda District (RLD). The DCFD staff of 16 is strictly a volunteer fire department. Dry Creek does have mutual aid agreements with other nearby fire departments.

As the population in the Dry Creek area increases, the existing fire protection facilities and services will be inadequate. Increased fire protection in the area will require new fire stations, new fire fighting equipment, and a full-time fire fighting staff.

The cost for capital improvements to serve new developments cannot be met by the district without additional revenues. The County and/or district should adopt an ordinance which requires the payment of fees in order to provide an adequate level of fire protection services to the Plan area. It is the County's position that the Fire District is the appropriate agency to adopt such an ordinance. Such an ordinance needs to be based on specific capital improvement needs of the district such as new fire station sites, new engines and other needed equipment. It is estimated that the development included in the proposed Plan will require 2 fire stations with 2 pumper trucks and 2 grassland trucks with a total capital cost in excess of $2,000,000. The proposed new fire station sites shown on the Community Plan map are based on the proposed land use designations and are intended to be acquired as development of these properties occurs. The locations are intended to designate general areas and not specific parcels of land.

Public Protection

GOAL: TO PROVIDE ADEQUATE SHERIFF'S SERVICES, THROUGH THE PLACER COUNTY SHERIFF'S DEPARTMENT, TO DETER INCREASES IN CRIME AND TO MEET THE GROWING DEMAND FOR SERVICES WHICH THE INCREASING POPULATION AND COMMERCIAL/ INDUSTRIAL ENTERPRISES IN THE AREA REQUIRE.

Policies

1) Identify a means by which new development in the area can be charged with the increasing criminal justice services costs which they generate.
2) Attempt to reduce response time and increase service levels through circulation system improvements.

3) Seek to maintain Sheriff's Department staff levels at an acceptable level as determined by the Board of Supervisor's and County Executive Office.

4) Consider public safety issues in all aspects of commercial and residential project design.

Implementation

The Placer County Sheriff's Department currently provides services to the Dry Creek-West Placer area through the Sheriff's substation in Roseville. Due to the budget/personnel constraints and the impacts of rapid growth in the surrounding Antelope and Roseville areas, response times are not as rapid as they should be and are getting worse. It is recommended that the County seek alternative means of funding the increased level of service which the population density of the area requires.

As the Plan area develops, and surrounding areas continue to grow, population increase will require additional deputies, additional support personnel (dispatch, records, clerical), and additional equipment (vehicles, weaponry, jail facilities, court facilities). The "West Roseville Public Facilities Plan" estimates the annual operation and maintenance costs for the Plan area at approximately $1.5 million at build out.

Flood Control

GOALS

1. PROTECT THE LIVES AND PROPERTY OF THE CITIZENS OF THE DRY CREEK WEST PLACER AREA FROM UNACCEPTABLE IMPACTS FROM DEVELOPMENT IN THE DRY CREEK DRAINAGE BASIN OR OTHER WATERSHEDS IN THE PLAN AREA.
2. RECOGNIZE THE DRY CREEK FLOODPLAIN AS A PUBLIC RESOURCE TO BE MANAGED AND MAINTAINED FOR THE PUBLIC'S BENEFIT.

Policies

1) Continue to work closely with the U.S. Army Corps of Engineers, the Resource Conservation District, and the Placer County Flood Control District, in defining existing and potential flood problem areas.

2) Evaluate potential flood hazards in an area prior to approval of any future development by requiring submittal of accurate topographic information and depiction of the 100-year floodplain boundaries.

3) Continue to implement zoning policies which minimize potential loss of property and threat to human life.

4) Maintain natural conditions within the 100 year flood plain of all streams except where work is required to maintain the stream's drainage characteristics and where such work is done in accordance with the Placer County Flood Damage Prevention Ordinance, Department of Fish & Game regulations and Clean Water Act provisions administered by the U.S. Army Corps of Engineers, or when facilities for the treatment of urban run-off can be located in the flood plain providing that there is no destruction of riparian vegetation. (Also see Policy 14, Page 99.)

5) Designate the 100 year flood plain of Dry Creek, including the major tributaries as open space, and provide for some compatible use of these areas in order to encourage their preservation.

6) Utilize natural channels and roadside ditches for drainage in developments of 1 dwelling unit per acre or less.

7) Encourage upstream improvements in the Dry Creek Watershed which will reduce peak flows.

8) Seek the cooperation of Sacramento County, the City of Roseville, and other jurisdictions impacting Dry Creek to participate in a flood control program, possibly including a jointly funded project.

9) Provide storm drains which can collect water for appropriate conveyance to Dry Creek for developing areas with a higher density than Rural-Residential.

10) Where possible, flood waters should be seen as a resource and subsequently utilized for waterfowl habitat, aquifer recharge, salmon fishery enhancement, agricultural water supply and other pertinent uses.

11) Require a water quality analysis for all projects which have a density in excess of 1 unit per acre and/or have the potential of contaminating surface waters or the aquifer.

12) Require a feasibility analysis of improving the water quality of urban run-off for all commercial and industrial projects and those residential projects with densities of 1 d.u./acre or greater before run-off enters the Dry Creek watercourse. Said analysis shall consider all feasible mitigation measures including, but not limited to, artificial wetlands, infiltration/sedimentation basins, riparian setbacks, oil/grit separaters, or other effective means, where appropriate.

13) Require the allocation of land, when necessary, for all projects which have significant impacts on the quantity and quality of surface water runoff, for the purpose of detaining post project flows and/or for the incorporation of mitigation measures for water quality impacts related to urban runoff.

14) Identify and coordinate mitigation measures with responsible agencies for the control of storm sewers, monitoring of discharges and implementation of measures to control pollutant loads in urban storm water runoff (e.g. California Regional water Quality Control Board, Placer County Division of Environmental Health, Placer County Department of Public Works, etc).

Discussion (This section is derived primarily from the "West Roseville Public Facilities Plan - January 1989)

The Plan area currently has very little in the way of improved drainage facilities. With mostly agricultural and sparse residential development in the area, the majority of the storm run-off is conveyed by roadside ditches and natural channels to the major waterways.

Dry Creek, the main waterway in the Plan area flows in a generally east-west direction through the center of the Plan area before turning south near Watt Avenue. This creek provides an outfall for drainage for nearly 60% of the Plan area and 95% of the potential residential and commercial development permitted by the Plan. The remainder of the area drains through small natural channels to either Curry Creek to the north or the North Natomas drainage channel further to the west.

The Dry Creek 100 year floodplain boundary varies from approximately 1,500 feet wide near Watt Avenue to 600 feet wide at its narrowest.

The floodplain currently inundates land used mostly for agriculture or open space, although several residences have been subject to flooding in the past.

As development increased within the Plan area, so will the need for flood protection. Regional flooding potential will be increased not only in the Plan area but throughout the entire watershed as it becomes developed. Analysis and control of higher run-off into Dry Creek due to greater development upstream of the Plan area will be critical to this project. Flooding of Dry Creek must be addressed on a regional level to ensure safe development within the Plan area.

This regional approach must consider the interrelationships between hydrology, geology, botany, biology and ecology. Solutions which reduce damages from flooding and stream bank instability, while at the same time protect, restore and enhance the natural stream system, including its riparian vegetation and wildlife will be emphasized.

Unlike regional facilities, local facilities are improvements required to convey flow generated only within the Plan area. These improvements will be directly tied to the level of development within the Plan area. Low density residential and agricultural levels of development can be provided for similarly to current means of protection. Roadside ditches and natural

channels would be sufficient to drain any development less than or equal to 1 dwelling unit per acre in density. Maintenance of these facilities would be routine clearing of brush and other obstructions which could cause flooding. In areas left as strictly agricultural or rural estate density, no significant improvements or maintenance of local facilities would be expected.

As development density increases to 2 or more dwelling units per acre, streets with curb and gutter would be expected. In these areas higher runoff due to more impervious surfaces will occur. This situation will create the need for underground conduits to convey the runoff below the streets. Where it is desirable to use open channels for conveyance, improvements to the existing local channels will be necessary due to insufficient carrying capacity. Concrete lining and rip rap are typical engineering solutions, but occasionally in higher density development, channels may be left completely natural where capacity is available, but erosion, public safety and other similar issues must be studied closely. Natural channels or those that are designed to create the appearance of a natural channel should be considered preferable to concrete or rip-rap channels.

Maintenance of regional facilities should be performed by the Placer County Flood Control District, whereas local facilities may require a separate County service area for maintaining the smaller systems.

Implementation

Floodplain Management - Regulation of floodplain development is a basic approach to prevention of flood damages. The Flood Damage Prevention Ordinance addresses general regulations of floodplain development and it is complemented by the Grading Ordinance as well as other ordinances and guidelines.

General Plan policies and the ordinances regarding floodplain management are implemented in review processes at various levels. Plan review and site inspection are routine processes which effect regulation of small, individual projects.

Similarly, plan review under County Land Development Criteria of the Flood Damage Prevention Ordinance effects floodplains regulation at the subdivision level.

At all levels, requirements for approval require identification of flood hazard areas and appropriate setbacks. In cases where the 100-year floodplain has been identified through more detailed comprehensive studies, such as that on Dry Creek, those criteria will be used in review.

The 100-year floodplains will be re-evaluated as warranted by new information and permitted by the availability of funding. Regional studies by the Placer County Flood Control District, FEMA, the Corps of Engineers, and others will be considered in these re-evaluations.

The floodplain of Dry Creek is a particular concern not only because of its significance as a resource but also because of its potential flood hazards and the uncertainty in estimates of the extent of the floodplain, especially when accounting for potential upstream changes. Accordingly, a 3-foot margin of safety should be required for the lowest habitable floor of all structures in or adjacent to the 100-year floodplain.

Stormwater Management - The Planning and design of specific systems for the management of run-off with the plan area is also a key to implementation of this plan. Components of these systems would include streets, gutters, inlets, underground conduits, ditches, road culverts, storage ponds, outfalls, erosion protection and natural channels and their floodplains.

In order to coordinate and optimize the system and to provide for a cumulative and comprehensive effort, a specific watershed plan is needed. This plan should be developed as soon as funding becomes available through the funding portion of this general plan.

Planning and design of more local drainage facilities within specific project areas will be in accordance with general plan provisions as well as the County Land Development Manual and any specific stormwater management plans in existence.

Maintenance - Maintenance of stormwater management systems is also an important measure for providing protection from flooding. Maintenance will be performed by County staff and will be funded through the creation of one or more County Service Areas.

Utilities

Basic utilities such as telephone and power are provided in the Plan area by various companies. Sacramento Municipal Utility District provides electricity to the Southeast portion of the Plan area (south of Vineyard Road). Pacific Gas and Electric Company provides electricity to the balance of the area. Both companies have indicated the ability to serve new development in the area.

Telephone service is provided in the eastern two-thirds of the area by the Roseville Telephone Company and the balance is served by Pacific Bell's Rio Linda exchange.

Other Public Services

Placer County provides a variety of other general public services to this area. Municipal and Superior Courts are a County function. The entire Plan area is within the Roseville Judicial District. Animal Control, Agricultural Standardization and Weights and Measures, Building Inspection, Environmental Health, Planning, Public Works, Welfare, and other services are provided by the County as well. The area is within the Roseville Public Cemetery District.

The Western Regional Sanitary Landfill, located north of the Plan area, provides solid waste disposal facilities, and is planned to accommodate development in Placer County to well beyond the life of this Plan.