

CHAPTER 10.

PUBLIC WORKS

10.1 Coastal Act Policies

30254 New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of this legislature that State Highway Route 1 in rural areas of the Coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal-dependent land use, essential public services, and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

10.2 Coastal Act Definitions

30114 "Public Works" means the following:

- (a) All production, storage, transmission, and recovery facilities for water, sewerage, telephone, and other similar utilities owned or operated by any public agency or by any utility subject to the jurisdiction of the Public Utilities Commission except for energy facilities.
- (b) All public transportation facilities, including streets, roads, highways, public parking lots and structures, ports, harbors, airports, railroads, and mass transit facilities and stations, bridges, trolley wires, and other related facilities. For purposes of this division, neither the Ports of Hueneme, Long Beach, Los Angeles, nor San Diego Unified Port District nor any of the developments within these ports shall be considered public works.
- (c) All publicly financed recreational facilities, all projects of the State Coastal Conservancy, and any development by a special district.

(d) All community college facilities.

30118 "Special District" means any public agency, other than a local government as defined in this chapter, formed pursuant to general law or special act for the local performance of governmental or proprietary functions within limited boundaries. "Special District" includes, but is not limited to, a County service area, a maintenance district or area, an improvement district or improvement zone, or any other zone or area, formed for the purpose of designating an area within which a property tax rate will be levied to pay for a service or improvement benefitting that area.

10.3 Organization of Section

Due to the fact that this section addresses issues pertaining to several separate types of public works, planning issues and policies are organized by the following categories: water supply; sewage facilities; transportation. First, there is a discussion of all issues and, subsequently, all policies are grouped together. Public recreation, which is defined as a public work in the Coastal Act, is discussed in Section 2, as are public facilities for Coastal Access, as required by Coastal Act Section 30254. The demand for public works is determined by the policies of the Land Use Plan, including the Land Use Plan Map. Thus, other sections of this Plan determine needs for public works capacities. The policies in this section respond to these needs and govern the manner in which they will be met, as required by Coastal Act Section 30254.

10.4 Planning Issues

Although there is a substantial interrelationship among the issues involved in all major public works decisions in Half Moon Bay, the following discussion of planning issues is organized in accordance with the three categories of public works cited above. The Coastal Act requires that all new or expanded public works be designed and limited to accommodate the needs generated by the policies contained in other sections of the Plan. This means that capacities should not exceed the build-out potential of the Land Use Plan and should be designed to accommodate build-out over time. Since reasonable requirements for advance planning and design of each individual type of public works often results in some discrepancies among system capacities, as measured by supportable population, perfect correspondence cannot be achieved at any point in time or over time between each system capacity and ultimate needs under the Land Use Plan. The intent of the following discussion and the policies is to provide the background

understanding of these interrelationships and to assure that Coastal Act objectives are fulfilled.

In the case of each public works system, the issues discussion and the policies also address Coastal Act requirements to assure adequate services for priority uses and to limit special district assessments to areas designated for development in the Land Use Plan. General background and issues applicable to more than one public works are presented first.¹

10.4.1 General Issues

Limited Capacity of Existing Facilities

Water supply, sewage treatment, and roads, the basic public works which are required for new development, all have limited capacity at present. New development is presently limited because of the lack of available connections to the public water system.

Table 10.1 summarizes the current situation with respect to critical service capacities and the build-out potential provided for in the Half Moon Bay Land Use Plan and the San Mateo County LCP.

Number of Decision-Making Agencies

Decisions on expansion of public works capacities to serve future development in Half Moon Bay (and in the rest of the mid-coastside) will be shared by a number of agencies other than the City. The most important decision-makers affecting development in the City include the County, the Coastside County Water District, the Sewer Authority Mid-Coastside (SAM), CalTrans, and the Granada Sanitary District. The City of Half Moon Bay provides sewerage facilities to serve most of the City, but the Granada Sanitary District includes that part of the City north of Frenchmans Creek. Decisions by the District on sewage treatment capacity and methods will affect potential development in this part of the City.

The Coastside County Water District is the only provider of public water services in the City of Half Moon Bay. It must make determinations regarding expansion of water supply capacities consistent with the County and City LCP's. With respect to road capacity, CalTrans is the primary decision-making agency with respect to the State Highways, County cooperation will also be required. The City has jurisdiction over City streets.

¹The issues discussed here with respect to water and sewage facilities are discussed in more detail in the Study Paper on Water and Sewer, prepared as background to the Draft Land Use Plan.

The number of decision-makers complicates the development of a unified approach to public works expansion. Each decision-maker has its own criteria for public works decisions and certain sources and availability of revenues. One purpose of the LCP is to attempt to establish a common framework for such decisions; however, this will not eliminate all uncertainty about future agency decisions or potential conflicts among them.

Although the City does not have regulatory control through its zoning ordinance over projects of special districts or State agencies, Coastal Act policies, as applied through adoption and certification of the Local Coastal Program, will apply to such projects. As a result, in implementation of the Land Use Plan, the City (and the County) will be able to regulate the capacity, location, and timing of public works in order to ensure consistency with the LCP.

Allocation of Public Works Capacity

During periods when the capacity of public works is not adequate to serve all development allowed by the Land Use Plan, Section 30254 of the Coastal Act requires that certain priority land uses not be precluded from public services by other development. These Coastal Act priority land uses are: coastal-dependent land uses, essential public services, basic industries, and recreation and visitor-serving facilities.

One approach, in order to assure that all available public works capacity is not consumed by non-priority land uses, is to reserve a certain minimum capacity for priority land uses. The amount of capacity reserved would vary for each public work, but the basic intent of all the reservations would be to protect some public works capacity for these priority land uses.

Phasing Capacity Increases

The demand for public works over a long time-period cannot be known with great certainty. The theoretical build-out potential of the Land Use Plan may not occur until at least 2020. During this period, some changes in the factors influencing demand for services could occur, including household size, work hours, energy costs, and consumption patterns. The high degree of certainty regarding this prediction is due to the fact that the Land Use Plan only provides for a portion of the growth projected for the City by the Association of Bay Area Governments, based on regional population and housing projections. Once an adequate water supply is made available, it is anticipated that growth will proceed fairly rapidly to absorb land allocated for new development under the Plan. Policies in Section 9 provide for both phasing growth and monitoring annual growth to ensure that it is in line with available services. Policies in this section are intended to

assure availability in accordance with estimated needs as projected.

While it is not desirable to construct more public works capacity than required, it is also not cost-effective to underestimate potential demand by such an amount that subsequent costly expansions will be needed within a short time-period. Construction of excessive capacity poses problems of excessive financial burden and pressure for growth in excess of that proposed to be accommodated. On the other hand, provision of inadequate capacity to accommodate expected needs within a reasonable time horizon related to the useful life of the facilities can result in overburdened facilities and "stop" and "start" development practices resulting from unexpected service moratoria which are detrimental to orderly growth. Of even greater importance is coordinated phasing of public works capacity increases so that expansion of one service does not result in growth which cannot be accommodated by another. This is also essential in order to provide for reasonable, orderly growth in increments which the City and special service districts can monitor and handle without a burden on other services, such as fire and police services. The necessary response to this problem is coordination of facility expansions and management of new development on an incremental basis.

The Plan proposes to phase both public works capacity increases and new development in order to maintain balance between them. The phasing of development over time is incorporated in the policies of Section 9, Development. The policies in this section are intended to support and reinforce this phased development plan. However, it is neither desirable nor feasible to phase or limit all early capacity expansions in line with a specific target period of growth, such as 10 years or 20 years. The appropriate amount of capacity to be provided depends on the relative costs and financial impacts associated with construction of varying levels of capacity in relation to future potential demand. In the case of water supply improvements, major projects required to increase overall available supply cannot be undertaken in small increments, either technically or cost-effectively. However, some types of water delivery facilities can and may appropriately be phased in order to minimize additional cost and possible growth-inducing pressures. Road improvements are susceptible to a more refined phasing approach, within limits. There are a variety of potential improvements, and moderate increases in capacity can be achieved prior to commitments to significant changes in highway facilities, pending greater certainty about needs and possibly increased transit patronage. Generally, sewage treatment plant capacities can be expanded in increments, although detailed cost analysis is necessary to determine the relative benefits of commitments to specific capacities.

The Plan contemplates phased expansion of public works capacities to meet foreseeable needs through buildout. Since the Plan proposes to accommodate less than the potential demand for development

during this period, there is virtual certainty that projected development will occur at the rates indicated in Section 9, if adequate public works capacity is available.' Thus, the Plan proposes that the City engage in those projects under its control and support those under the control of others which will accommodate but not exceed the amount of growth proposed through buildout, except where there is a documented showing of significant cost efficiencies.

Boundaries of Special Districts and Assessment Districts

The Coastal Act requires that special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with the Land Use Plan. At present, the Water District's boundaries include a substantial amount of rural land outside the City. The County LCP discusses the practical problems for floriculturists in reducing the district's boundaries and is not primarily concerned with their extent outside the City. Within the City, most of the land use will be urban. Therefore, it would not be desirable or feasible to exclude any area within the City from the Water District. On the contrary, adequate water supplies must be guaranteed to flower growers. Floriculturists and greenhouse operators have even indicated a desire to pay a standby fee to assure an adequate supply during droughts. They also must be charged fair rates for water use.

The City itself is the primary sewage service agency in the City. Detachment of areas from the City service raises issues other than those pertaining to sewage services. Detachment would only be appropriate for land which is to remain in open uses (excluding greenhouses), if any. In reality, as a result of Proposition 13, no substantial benefits for such land would result from exclusion from the City. Other methods can be used to assure that such lands are not assessed for urban services until ready for development. It is not desirable to remove greenhouses from the jurisdiction of the City or from its tax base and they generally require sewage services when located in the City.

An issue does exist with respect to the overlapping of the Granada Sanitary District and the City. It would be desirable to consolidate the City's position as sole sewer service agency for the entire City. This would require detachment of northern Half Moon Bay from the Granada Sanitary District and a transfer of sewer lines and ancillary facilities to the City. A corresponding shift

¹As indicated in Section 9, regional projections indicate a potential demand for 3,700 new dwelling units by 1990 and an additional 2,000 in the City by the year 2000. The Plan's phasing proposes to accommodate 2,500 by 1992 and an additional 2,927 - 3,073 by the year 2000. It is anticipated that growth will not exceed 5,427 - 5,573 new units by 2000.

in the allocation of SAM Phase 1 capacity from the Granada Sanitary District to the City would also be required to ensure the City's ability to serve this area.

10.4.2 Water Supply Issues

Inability of CCWD to Serve LCP Build-Out from Existing Supplies During Years of Below-Normal Precipitation

CCWD has sufficient capacity to meet projected annual and peak daily water demands for the first 10 years of phased development provided for in the Plan only during years of normal or higher precipitation. At present, the District does not, however, have transmission capacity even to deliver peak available supplies. Floriculture requires assured supplies.

The District's major problem involves protection against future drought and years of below-average precipitation. Even if supplies were increased by the Crystal Springs Project and another 100-year drought occurred, inadequate local supplies would be available to meet normal demand under County and City LCP build-out. This inadequacy would probably occur in about 20 years. Rationing or use of imported supplies would be required. District-wide rationing of 33% would be required if the drought occurred in 2000. If floriculture were assured normal supplies, rationing for other uses would have to be 41%. These are not reasonable levels for planning purposes. The alternative to rationing would be emergency availability of Crystal Springs water, for which a pipeline would have to be constructed in any event.

The major issues to be resolved involve reasonable levels of risk regarding future drought, long-term availability of Crystal Springs water, methods of assuring adequate supplies for Coastal Act priority uses even during drought years, and the appropriate timing of investment in some type of Crystal Springs pipeline.

Planning for Safe Yield

Current CCWD policy for granting water connections and developing new capacity is based on a policy of assuring more than minimal needs of water during a severe drought (100-year drought similar to 1976-77). This policy results in the District having a large surplus of water in years of normal precipitation. The presence of this large surplus and even a larger surplus as new facilities are developed has the potential to generate pressure on the District to use this water to accommodate new growth, ignoring the original intent of ensuring a hedge against drought. Pressure will intensify as the drought years become more distant in people's minds. The LCP must ensure that surplus water held by the District

during normal years is not used to support new growth beyond the limits set by the LCP.

Crystal Springs Pipeline

Under two alternatives available for increasing CCWD capacity, a pipeline would be built connecting CCWD service areas with the Crystal Springs reservoir. Depending upon the relationship of the pipeline's capacity to the LCP-based need for water, a pipeline could be growth-inducing beyond LCP limits. For example, if Crystal Springs were the sole source of new water, a pipeline (14 inch) with an approximate daily peak capacity of 7.3 mgd will be required with any additional peak demand accommodated by installation of booster pumps.

Such a pipeline would have to be constructed at some time before 1990, and probably well before. For 10 or more years it would have a capacity in excess of that required, thereby generating potential pressure for more growth than is intended to be accommodated under the Phased Development policies. Thus, there is a potential growth-inducing effect in terms of the timing of new development. The Plan proposes to mitigate these potential effects (if such an alternative were selected) by phased development of pumping and treatment facilities to accommodate the amount of growth intended to be accommodated within a reasonable time horizon and in line with the availability of other public works, especially waste-water treatment capacity and roads. Such phasing will also result in a reduced financial burden in the early years of development. The District plans to phase construction of the pipeline and limit capacity as close as possible to that required by the City and County LCP phases.

Floriculture Water

Availability and quality of water are critical for floriculture. Field flower growers cannot afford Coastside County Water District water even at current prices (see Section 8). At present, greenhouse operators cope with the high price of water by using it sparingly and by recycling. The primary concern, therefore, is with the availability and quality of water to ensure that the vital greenhouse industry in Half Moon Bay can continue to survive. The Plan is intended to ensure that the guaranteed availability of such water for floriculture is assured in the expansion of water supply capacity.

Allocation of Water Supplies to Priority Uses

The Coastal Act requires that priority be given to certain land uses with regard to the allocation of public works capacities, including water. The Plan proposes a phased reservation of CCWD water for priority uses in Half Moon Bay. Priority uses include Commercial Recreation, Public Recreation, and Floriculture (Table 10.3). These amounts are based on the allocation of land use in the Land Use Plan and proposed development phasing. Most of the irrigational needs for local recreation (local parks and playfields) will be met through the use of reclaimed waste-water from the sewage treatment facilities.

10.4.3 Sewerage Facilities Issues

Adequacy of Existing Capacity

The SAM Phase 1 project capacity of 2 mgd will lack .7 - 1.0 mgd to meet County and Half Moon Bay needs by the year 2000.¹ It is thus inadequate to meet growth projected for the next 20 years.

Ultimate build-out will occur after 2000. How much development will take place over the next 20 years is unclear. ABAG projects a population increase of 15,200 persons in Half Moon Bay over the next 20 years, while the Plan allows for an increase of from 14,775 to 15,165 persons. Table 9.3 indicates the maximum annual new dwelling units based upon a maximum annual population growth of 3%. The numbers could vary with household size and other public works capacities. Changes in household size and reduction in usage by existing customers, for example, could significantly affect residential estimates. Commercial and industrial sewage generation figures could vary even more, because they are based on data from limited existing development and generalized generation factors.

Expansion of the existing treatment plant only in accordance with interim allocations of outfall capacity to the City would probably result in the need for further expansion by 1990, only 10 years away, based on the Plan's provisions for phased growth. It would be necessary to construct additional treatment capacity to accommodate projected 20-year growth, even at the lowest likely increase in population provided for in the Plan and the San Mateo County LCP.

¹Although the County LCP estimates a demand by build-out (beyond year 2000) of 1.3 - 1.8 mgd in the unincorporated area, it establishes a need of 1.0 mgd by the year 2000; this Plan indicates requirements of from 1.7 - 2.0 mgd within the City by the year 2000; thus, total demand by the year 2000 will range from 2.7 to 3.0.

Phasing New Sewer Capacity

Generally, it is not cost-effective to phase sewage treatment expansion in increments that are very small. Typically, facilities are constructed to accommodate demand over a period of 20 years. However, where uncertainty exists regarding the precise timing and level of future demands, incremental construction may be desirable.

Both local and non-local funding sources are limited. The State Water Resources Control Board has determined that treatment facilities providing a capacity of 2.0 mgd average dry weather flow (adwf) are eligible for Federal and State funding. Additional capacity may have to be paid for locally. The Plan proposes that first-phase sewage treatment capacity be related to outfall capacity and foreseeable 20-year needs, on the basis of evaluation of the potential additional costs and long-term savings related to alternative project sizing. This evaluation must also consider the need for adequate capacity to meet priority use reservations, along with reasonable development needs, which will probably require first-phase treatment capacity in excess of interim allocated outfall capacity.

The Sewer Authority Midcoastside (SAM) has received a Coastal Development Permit to construct the 2.0 mgd treatment facility. The facility is under construction with an estimated completion date of May, 1984.

Reservation of Capacity for Priority Land Uses

As in the case of water, some sewer capacity must be reserved for priority land uses. One approach would be to reserve the same proportional amount of capacity for priority land uses as that needed when ultimate build-out occurs. In other words, if 10% of facility capacity will be needed at build-out to serve priority land uses, then 10% of existing and incremental capacity could be reserved for priority land uses. This approach protects priority land uses by ensuring that if other land uses develop more quickly, capacity for priority land uses will not be precluded. Enough capacity can be reserved to allow these uses to develop at least at the same rate as non-priority land uses. The sewage generation figures for priority land uses could be monitored and revised as development provides a more accurate estimate of sewage demand for each of these uses.

10.4.4 Transportation Issues

Highways 1 and 92 are the only roads connecting Half Moon Bay with the rest of the region. Highway 1 also serves as the key north-south collector road, providing for local traffic connections among neighborhoods and between them and the downtown commercial core. To a lesser extent, Highway 1 provides for local circulation in and around downtown.

Limited road capacity for movement into, out of, and within the City, has long been recognized as a problem and constraint on new development, as indicated in past studies and the former General Plan's Circulation Element.¹ The Coastal Act requires that limited road capacity not be consumed by new, non-priority development, at the expense of adequate service for priority uses, such as public recreation and visitor-serving commercial uses. The major issue involves potential conflict for transportation capacity between new residential development and reservation of adequate capacity for visitor travel to coastside beaches. The issue involves two components: commuter traffic and visitor traffic on Highways 1 and 92, and competition between local resident traffic and visitor traffic on local streets and Highway 1 (with some possible effect on Highway 92). In addition, the commuter-visitor traffic conflict issue is related to the Coastal Act policy that Highway 1 be limited to two lanes in rural areas, which could include portions of Highway 1 which link Half Moon Bay to San Francisco and other employment centers to the north. Therefore, the overall capacity of the existing transportation system to accommodate resident population growth must be considered.

Transportation Capacity to Accommodate New Commuters

At the present time, due to highly limited transit service to Half Moon Bay, commuter transportation capacity is primarily a function of the capacity of Highways 1 and 92. Road capacity is determined by roadway characteristics (curves, lane widths, pavement conditions, signalization, etc.); traffic characteristics (buses, recreational vehicles, local and long-distance movements, pedestrian traffic, turning frequencies, and intersecting roads, etc.); and expectations regarding service levels (smooth flow, stop-and-start, long waits at intersections). The level where actual delays are relatively short and traffic generally moves at speeds of 35-40 miles per hour without congestion is defined as

¹The following studies were used as sources for this analysis: the ABAG/MTC San Mateo Coast Corridor Evaluation, October, 1975, and the Dickert and Sorensen Study for Sea Grant, Collaborative Land Use Planning for the Coastal Zone; Half Moon Bay Case Study, December, 1978. The Circulation Element of the former General Plan also indicates traffic problems and potential solutions.

Level "C". However, during peak commuter and recreational travel periods, roads generally function "at capacity," which is defined as Level "E", when vehicles rarely travel at speeds above 30 mph, long lines occur at intersections, and there is frequent stop-and-go traffic. Commuters' reasonable expectations are generally related to conditions they frequently experience; this is often Level of Service E. Often, commuters choose to travel outside the peak commuter period (e.g. 4:00-6:00 p.m.) in order to obtain a higher level of service; this results in a lengthening of the commuter travel period.

Past studies agree that the maximum capacity for each highway serving Half Moon Bay is about 1,400 vehicles per hour in each direction (Service Level E). If the desired service level were "C", the capacity drops to 1,100 vehicles per hour. Unused road capacity is the difference between total capacity (according to the chosen Level of Service) and current use, and represents the capacity available to serve new commuters without highway improvements. At the present time, peak periods of use occur on weekdays during the morning and evening commute hours and on weekends and holidays during mid-day and early evening hours.

Many employed people commute daily from Half Moon Bay to jobs in San Francisco or Bayside San Mateo County. It is estimated that just less than half the population of the City is in households containing one or more commuting workers. This pattern is expected to continue, with some expected decline in the share of the population associated with commuting workers as a result of an increase in the retired resident population, a higher proportion of workers, including commuting workers, per household and an increase in local employment opportunities (and housing to go with them provided for in the Plan).

Due to the fact that visitor travel occurs at different periods from commuter travel, there is little, if any, direct conflict between these two sources of demand for road capacity. However, there is existing and potential future competition for road capacity between commuters from Half Moon Bay and commuters from northerly areas, such as the Montara-Moss Beach El Granada area and Pacifica, and between commuters and others making local work trips on the Coastside on Highway 1. Growth in all of these trips will increase the level of congestion and decrease the population growth which can be accommodated at a desired level of service, without expansion of road capacity. The desired level of service and resultant road capacity will depend on the amount of delay motorists will accept, whether motorists will shift the time of their commute, and potential shifts to transit use. Table 10.2 indicates the range of total population growth which could be accommodated in Half Moon Bay, based on existing road capacity for commuters and variations in factors affecting available road capacity and its relationship to commuter-based population. This Table indicates that available, unused road capacity could support new City population growth in a wide range from 7,960 to 22,270 new

persons without significant road improvements. This wide range results primarily from variations in assumptions regarding the period of commuting (e.g. 2 or 3 hours) and the amount of unused capacity consumed by Pacifica (0-25%). In addition, this projection assumes that available road capacity is split equally between growth in the unincorporated mid-coastside and growth in Half Moon Bay. Since the certified County LCP provides for only a total population of 12,000 by the year 2000, the projections of road capacity available to accommodate growth in the City are extremely conservative.

Based on the projected development proposed in this Plan and the certified County LCP, estimates of growth by the year 2000 can be handled on the existing highway system. However, the development projected to the year 2000 could cause lowest service levels and longest commuting time periods.

Given the wide range in the projection of supportable growth based on commuter use of available road capacity, early commitment to major expansion of Highway 1 or Highway 92 to meet commuter needs is neither required nor appropriate and could have growth-inducing impacts, contrary to Coastal Act policies.

The Plan also proposes several measures to minimize interference between local traffic and visitor traffic. These include (1) construction of the first link of Foothill Boulevard to provide a connection from Highway 92 to Highway 1 north of the current intersection for access to major State Beach facilities which will be located north of the highway; (2) relocation of the Venice Avenue beach access route to provide a future direct connection with the Foothill Boulevard bypass route; (3) restrictions on the creation of new streets connecting to Highway 1 and provisions for frontage roads as a part of new residential development in Planned Development Districts (Section 9); (4) installation of additional left-turn bays on Highway 1 at all primary and secondary access routes to the beach; (5) focusing new commercial development on downtown along the Main Street corridor and controlling access to Highways 1 and 92 where alternative access is available for new commercial developments; (6) increased separation of local traffic and visitor traffic along beach access routes to increase the flow of visitor traffic and installation of traffic diverters to keep visitor traffic out of the neighborhoods and encourage local residents to take alternative routes; (7) encouraging the use of remote parking facilities and beach transit service to accommodate peak recreation travel demands providing for better local circulation on City streets without encroaching on sensitive habitats or public recreation areas; and (8) enforcing the ban on parking along Route 1.

These measures should protect visitor access capacity by road and by transit at least until 1992 and even beyond, given the few days of the year during which peak congestion occurs. However, such improvements may not suffice, especially after that time. After

1992, if traffic conditions warrant, major improvements should be considered, including extension of the four-lane section of Highway 1 to the City Limits in order to improve visitor access to the high-intensity areas of the State Beach. This Phasing Plan would appear to accord with policies incorporated into the MTC Regional Transportation Plan. Similar policies and the Coastal Act may limit improvements outside the City to operational and safety improvements proposed by the County for Highways 1 and 92.

Given uncertainty regarding the actual seriousness of potential conflicts in the future and the effect of the proposed mitigating measures, a phased approach is proposed to be taken with respect to improved local circulation and accommodation of local and resident traffic. Traffic conditions must be monitored to ensure that residential development does not consume road capacity required for visitors. Periodic evaluations should take into account establishment of a standard based on available recreation parking spaces on the shoreline, as provided in the Plan; the effect of improvements made during the prior period; the number of days each year that available road capacity is used to capacity; and the effect of improvements to Highway 92 in the unincorporated area on access to the City.

Transportation Capacity to Accommodate Ox Mountain and Lone Star Quarry

Another significant factor in providing adequate road capacity to the coastside, particularly on Highway 92, is the pending impact of the Ox Mountain regional solid waste disposal site one mile east of the City Limits on Route 92. By 1984 all bayside disposal sites will have been phased out and Ox Mountain will become the receptacle for all solid waste generated in San Mateo County. Most of the waste will be carried to Ox Mountain in 5-axle semi-trailer/tractor combination transfer trucks with a 22-ton (112 cubic yard) capacity measuring almost 60 feet long. When fully loaded, these large transfer trucks will use an amount of road capacity equal to approximately 20 passenger cars, or 1,500 new car equivalencies per weekday based on the 75 new truck trips per day expected by 1984.¹ When combined with the existing slow truck traffic now emerging from the Lone Star rock quarry site just one mile to the east, the impacts on road capacity and level of service due to the expected new Ox Mountain traffic will be severe, and these impacts are exclusive of any future arrangements that would allow the City and County of San Francisco to dispose of a similar volume of solid waste at Ox Mountain. As a result of these pending impacts, all options for increasing the safe capacity, particularly

¹Report titled "Truck Access Study for Ox Mountain Disposal Site" dated May 3, 1982, prepared for San Mateo County by P.R.C. Voorhees Consultants.

of Highway 92, in the near future should be left open while monitoring of these expected impacts is being carried out by the responsible agencies.

10.5 Policies

10.5.1 General Policies

Policy 10-1

After certification of the LCP, the City shall require a permit from any public utility, government agency, or special district wishing to undertake any development in the City, with the exceptions of State Universities and Colleges and development on public trust lands or tidelands as described in Section 30519(b) of the California Coastal Act.

Policy 10-2

As a condition of permit approval, special districts, public utilities, and other government agencies shall conform to the City's zoning ordinance and the policies of this Plan.

Policy 10-3

The City shall limit development or expansion of public works facilities to a capacity which does not exceed that needed to serve build-out of the Land Use Plan, and require the phased development of public works facilities in accordance with phased development policies in Section 9 and the probable capacity of other public works and services.

Policy 10-4

The City shall reserve public works capacity for land uses given priority by the Plan, in order to assure that all available public works capacity is not consumed by other development and control the rate of new development permitted in the City to avoid overloading of public works and services.

Policy 10-5

The City shall confine urban level services provided by governmental agencies, special districts, or public utilities to areas approved for urban development, except for water and sewer services required for recreational uses and road improvements provided for in the Plan.

Policy 10-6

The City shall limit the size of each permitted public work facility to that size and capacity required for the extent and amount of development existing and proposed within the first two phases of development as shown on Table 9.3.

Policy 10-7

The City shall request all agencies providing major (water, sewer roads) utilities to monitor their services. Based upon actual use (reported annually to the City) of services, the City shall determine the need and timing for additional services. The City will coordinate all involved agencies to establish the ability of individual service system capacities to expand further and identify prospective funding sources for such expansion.

10.5.2 Water Supply Policies

Policy 10-8

The City shall request the Coastside County Water District to annually inform the City of current system capacity, surplus available to new users, and scheduling for a Crystal Springs pipeline or other capacity increases.

Policy 10-9

The City will support an increase in the water supply to capacity which will provide for, but not exceed, the amount needed to support build-out of the Land Use Plan of the City and County within the Coastside County Water District.

Policy 10-10

The City will support phased development of water supply facilities (chiefly pumping stations and water treatment facilities) so as to minimize the financial burden on existing residents and avoid growth-inducing impacts, so long as adequate capacity is provided to meet City needs in accordance with the phased development policies (including expected development to the year 2000) and allocations for floriculture uses.

Policy 10-11

The City will support expansion of water supplies by those sources and methods which produce the highest quality water available to the area in order to assure the highest possible quality of water to horticulture. All such supplies shall, at minimum, meet potable

water standards for domestic use and the highest practicable quality for floriculture.

Policy 10-12

The City will support equal water rates for agricultural users and residents.

Policy 10-13

The City will support and require reservation of water supplies for each priority land use in the Plan, as indicated on Table 10.3 for build-out, and shall monitor and limit building permits accordingly. The amount to be reserved for each phase of water supply development shall be the same percentage of capacity for priority uses as that needed at build-out, until a determination is made that a priority use need is satisfied by the available reservation.

Policy 10-14

If new or increased well production is proposed to increase supply, the City shall require that:

- (a) Water quality be adequate, using blending if required, to meet the water standards of Policy 10-12.
- (b) Wells are installed under inspection according to the requirements of the State and County Departments of Public Health.
- (c) The amount pumped be limited to a safe yield factor which will not impact water-dependent sensitive habitats, riparian habitats, marshes, and agricultural water use.
- (d) Base the safe yield and pumping restriction on studies conducted by a person agreed-upon by the City and the applicant which shall (1) prior to the granting of the permit, examine the geologic and hydrologic conditions of the site to determine a preliminary safe yield which will not adversely affect a water-dependent sensitive habitat; (2) during the first year, monitor the impact of the well on groundwater and surface water levels and quality and plant species and animals of water-dependent sensitive habitats to determine if the preliminary safe yield adequately protects the sensitive habitats and what measures should be taken if and when adverse effects occur.

Policy 10-15

The City will encourage the use by Coastside County Water District of user fees and standby fees to assure the availability of water to horticulture without assessment for water supply facilities designed to serve urban users.

Policy 10-16

The City will support pricing of reclaimed water at an economic level beneficial to all parties concerned.

10.5.3 Sewer Facility Policies

Policy 10-17

The City will support and permit an increase in capacity of Half Moon Bay and/or Sewer Authority Mid-Coastside Sewage Treatment Plant and related facilities to provide for, but not exceed, the amount required to support build-out of Land Use Plan of the City and any other district within the Coastal Zone participating in the provision and utilization of sewage treatment facilities, with an ultimate allocation to the City of a share of capacity not less than its share of build-out permitted under the City Coastal Land Use Plan for the area currently within the City's service area. The area identified as being within the Urban/Rural Boundary by the Land Use Plan is the sewer service area for Phase 1 Sewer Authority Mid-Coastside Development.

Policy 10-18

The City will support and require phased development of the treatment plant to minimize the financial burden on existing residents, to avoid growth-inducing impacts not consistent with the phased development policies in the Plan and consult with San Mateo County when determining the timing and capacities of service expansion.

Policy 10-19

Outfall capacity of Phase 1 shall continue to be limited by the Joint Powers Agreement of Sewer Authority Mid-Coastside to average dry weather flows of 2.0 mgd until a determination is made that additional capacity will be required. Treatment plant capacity may be permitted to exceed this amount, in accordance with Policy 10-17 and 10-18, if it is determined that it would be cost-effective to construct larger capacity in the first phase of expansion to serve development expected by the year 2000.

Policy 10-20

The City may extend its sewer service boundary to include that part of the City of Half Moon Bay within the Granada Sanitary District, provided that (1) the corresponding share of outfall and treatment plant capacity allocated for growth in such area is transferred to the City; (2) the area is detached from the Granada Sanitary District; and (3) an agreement is reached between the City and the District regarding transfer of facilities, equipment, other assets, and corresponding obligations.

Policy 10-21

The City will reserve sewage treatment capacity for priority land uses as provided on Table 10.4. The amount to be reserved for each phase of sewage treatment capacity shall be the same percentage of capacity for priority uses as that needed at build-out, until a determination is made that a priority use need is satisfied by the available reservation.

Policy 10-22

Sanitary sewer connections shall be limited to areas designated for urban development on the Land Use Plan Map, with the exception of connections required to serve priority land uses, including on-farm residences, greenhouses, equestrian facilities, and other commercial recreation, and public recreational uses.

Policy 10-23

Prior to construction or additions to the Half Moon Bay Treatment Plant, SAM shall submit a plan for noise and odor control that mitigates potential impact on air quality or ambient noise levels affecting surrounding areas of residential or recreational use.

10.5.4 Transportation Policies

Policy 10-24

The City shall support expansion of highways connecting Half Moon Bay with the remainder of San Mateo County to capacities which do not exceed that needed to accommodate commuter or recreational traffic required at Plan build-out, while maintaining accepted standards of traffic safety.

Policy 10-25

The City will support the use of Level of Service C as the desired level of service on Highways 1 and 92, except during the peak two-

hour commuting period and the ten-day average peak recreational hour when Level of Service E will be acceptable.

Policy 10-26

The City will support improvements to Highways 1 and 92 outside the City, including phased increases in capacity. First priority being safety improvements to Highway 92; second priority, construction of Devil's Slide bypass.

Policy 10-27

The City will recommend to CalTrans installation of improvements on Highway 1 to improve safety and recreational traffic flow and minimize local and visitor traffic conflicts, including signs and left-turn bays at beach access routes. Request CalTrans undertake the widening of Highway 1 to four lanes within the City.

Policy 10-28

The City will encourage SamTrans to provide weekend arterial bus service to the Half Moon Bay State Beach along Main Street and Kelly Avenue and to consider a downtown-beach shuttle service during periods of peak visitor attraction and recreational use as shown on the Access and Circulation Concept Map.

Policy 10-29

The City will encourage and seek to provide additional parking capacity with a portion reserved for remote parking to serve a transit shuttle service to the beach, and request the high school to make available its parking facilities as feasible. Seek to locate a suitable transit terminal in or near the City, such as the southerly terminus of the proposed Devil's Slide bypass.

Policy 10-30

The City will require that CalTrans, in connection with improvements to Highways 1 and 92 in the City, provide adjacent facilities for bicycles and pedestrians. When the facilities are adjacent to each other, there shall be a physical barrier.

Policy 10-31

The City will require participation in an assessment district for properties for which new development is approved in accordance with this Plan along the designated Foothill Boulevard alignment, as indicated on the Land Use Plan Map, in order to provide funding for this new coastal access and bypass route. This roadway shall provide for through-traffic and local street connections shall be

minimized to the extent feasible and on-street parking shall not be allowed.

Policy 10-32

The City shall require, as a condition of approved private development, the improvement or financial participation in the improvement of all primary and secondary beach access routes indicated on the Land Use Plan Map where development is permitted adjacent to such access route or is served by it.

Policy 10-33

The City will enforce parking regulations on beach access routes which are City streets.

Policy 10-34

The City will limit access to new development from designated beach access routes, Highways 1 and 92, except where no alternative access is possible, consistent with public safety and enhanced circulation of visitors and residents.

Policy 10-35

The City shall seek to improve east-west connections between the downtown core and nearby neighborhoods which will alleviate resident traffic on Highway 1 and shall install traffic diverters to achieve a greater separation of local and visitor traffic.

Policy 10-36

The City will not permit a north-south roadway to be constructed in the regional recreation area, but will encourage the phased provision of a trail between Kelly Avenue and Venice Avenue usable for beach management and by horses, bicycles, and pedestrians to improve visitor access to beach facilities, if it is determined that there will be no significant adverse effect on the mouth of Pilarcitos Creek.

Policy 10-37

The City encourages the expansion of Highway 92 to four lanes by 1990, should the expected traffic impacts of the Ox Mountain regional disposal site and Lone Star Quarry warrant it. Should this expansion become necessary, it should not be to freeway standards, though it may use sections of the modified freeway alignment if it is determined physically, economically, or environmentally infeasible to widen the existing alignment to four lanes. A possible alternative solution may be a separate service road for truck traffic to Ox Mountain and the Lone Star Quarry.

This service road could also be used for emergency and overflow tourist traffic during weekends and holidays. A second possible alternate solution is the use of some other means of transporting said solid waste to Ox Mountain, e.g. a conveyor system.

TABLE 10.1

COMPARISON OF POPULATION SUPPORTABLE BY SERVICES
WITH LAND USE PLAN POTENTIAL TO YEAR 2000

	Water Supply (Without Crystal Springs) ¹	Sewage (SAM Phase 1 Approved with 2mgd Outfall) ²	Roads (Existing Capacity for Commuters)	Land Use Plan (Max. Pop.)
Half Moon Bay Potential Population	7,582(3)	14,500(4)	15,247- 29,549	22,060- 22,450
Unincorporated Mid-Coastside	7,900(3)	10,500	11,193- 22,189	12,100(5)
Total	15,482	25,000	26,440- 51,738(6)	34,160- 34,550

Notes:

1. Based on difference between safe yield for 100-year drought and yield in years of normal precipitation.
2. Based on allocations of 1.16 mgd into City, 0.47 GSD, and 0.37 to MSD; treatment capacity assumed to be available; consumption at 80 gpdpc.
3. Allocation based on current shares of district consumption; estimate based on supplies; transmission capabilities are currently restrictive of deliverable water.
4. Includes Granada Sanitary District capacity allocated to service development in the City of Half Moon Bay.
5. From County LCP as approved by Board of Supervisors and State Coastal Commission.
6. Range based on level of Service C to Level of Service E (see Table 10.2)

This Table indicates that maximum build-out will require expansion of facilities and service capacities for water and sewage, and possibly for roads. At present, water supply limitations are the most critical constraints to growth, followed by sewage treatment and outfall capacity. Ultimately, resolution of water supply and sewage treatment capacity issues will make road capacity the primary constraint on population growth.

TABLE 10.2

(Page 1 of 2)

FUTURE DEVELOPMENT POTENTIAL IN HALF MOON BAY
 BASED ON COMMUTING WORKERS GIVEN EXISTING REGIONAL HIGHWAY
 SYSTEM AT DIFFERENT HIGHWAY SERVICE LEVELS

	Highways 1 and 92 Service Level C	
	<u>Number of Households</u>	<u>Population</u>
<u>New Growth</u>		
Employment Outside Sub-Region (Half of Mid-Coast Total)	1,500-4,040	4,011-11,126
Local Employment (Half of Mid-Coast Total)	240-380	792-1,238
Non-Working, Retired	1,660-2,710	2,980-4,870
 	<hr/>	<hr/>
SUB-TOTAL	3,400-7,130	7,783-17,234
<u>Existing</u>	2,726	7,282
 	<hr/>	<hr/>
TOTAL AT BUILD-OUT	6,126-9,856	15,065-24,516

Service levels correspond to assumptions concerning the capacity of the roads. At Service Level C, it is assumed that the highways can accommodate a maximum of 1,100 cars per hour and maintain a relatively stable low of traffic. Service Level E represents a condition at which the highway is "at capacity", 1,400 vehicles/hour. At this volume, the flow would be unstable, speed would be less than under "C", and there would be occasional stop-and-go traffic.

See calculations in Notes to Table 10.2

TABLE 10.2

(Page 2 of 2)

FUTURE DEVELOPMENT POTENTIAL IN HALF MOON BAY
 BASED ON COMMUTING WORKERS GIVEN EXISTING REGIONAL HIGHWAY
 SYSTEM AT DIFFERENT HIGHWAY SERVICE LEVELS

	<u>Highways 1 and 92</u> <u>Service Level E</u>	
	<u>Number of</u> <u>Households</u>	<u>Population</u>
<u>New Growth</u>		
Employment Outside Sub-Region (Half of Mid-Coast Total)	2,190-5,420	5,951-15,607
Local Employment (Half of Mid-Coast Total)	240-380	792-1,238
Non-Working, Retired	920-3,240	3,460-5,840
	-----	-----
SUB-TOTAL	4,350-9,040	10,203-22,085
<u>Existing</u>	2,726	7,282
	-----	-----
TOTAL AT BUILD-OUT	7,076-11,766	17,485-29,367

Service levels correspond to assumptions concerning the capacity of the roads. At Service Level C, it is assumed that the highways can accommodate a maximum of 1,100 cars per hour and maintain a relatively stable low of traffic. Service Level E represents a condition at which the highway is "at capacity", 1,400 vehicles/hour. At this volume, the flow would be unstable, speed would be less than under "C", and there would be occasional stop-and-go traffic.

See calculations in Notes to Table 10.2

NOTES TO TABLE 10.2

	LEVEL OF SERVICE	
	C	E
Road Capacity (Vehicles Per Hour Commuter Period)	2,200	2,800
Commuter Population Employment Ratio	2.3	2.3
Commuter/Peak Hour Commuter X	1.25	1.25
Peak Hour Commuter/Vehicle X	1.5	1.5
Number of Peak Hours X	2-3	2-3
Capacity Competition*	0.75 - 1.0	0.75 - 1.0
<u>Equals Total Supportable Commuter-Related Population</u>	14,231-28,462	18,113-36,225
<u>Less: Existing Commuter- Related Population</u> (Total Mid-Coastside)	6,210	6,210
<u>Equals New Supportable Commuter-Related Population</u> X	8,021-22,252	11,903-30,015
One-Half	0.5	0.5
<u>Equals Half Moon Bay Share of New Commuter-Related Population</u>	4,011-11,126	5,951-15,007
<u>PLUS</u>		
New Local Employment X	400-625	400-625
Population/Local Employment Ratio	1.98	1.98
<u>Equals Population Related to Local Employment</u>	792-1,238	792-1,238

PLUS

Population in Households Without an Employed Person (20% of Existing and Future)	2,980-4,870	3,460-5,840
PLUS EXISTING POPULATION	7,282	7,282
EQUALS TOTAL CITY POPULATION ASSOCIATED WITH COMMUTER ROAD CAPACITY	15,065-24,516	7,485-29,367

*Capacity of 0.75 equal to a 25% reduction caused by Pacifica growth.

TABLE 10.3

NEW CCWD WATER CAPACITY TO BE RESERVED FOR PRIORITY
LAND USES UNDER THE HALF MOON BAY LCP AT YEAR 2000

	<u>ANNUAL DEMAND (mgd)</u>
<u>Coastal Act Priorities</u>	
Marine-Related	
<u>Commercial-Recreational</u>	
Equestrian Facilities	.01
Hotel/Motel	.03
Restaurant	<u>---</u>
	.04
<u>Public Recreational</u>	
Local Recreation (local parks, playfields)	.02*
Campsites	.02
Beaches	<u>.02</u>
	.06
<hr/>	
Indoor Floriculture	.20
Field Flowers and Vegetables	<u>.04</u>
	.24
Total Water Capacity for Priority Land Uses	<u>.34</u>

*Based on maximum use of reclaimed water.

TABLE 10.4

SEWAGE TREATMENT CAPACITY TO BE RESERVED FOR
 PRIORITY LAND USES UNDER THE HALF MOON BAY LCP (mgd, adwf)

<u>Coastal Act Priorities</u>	<u>City of Half Moon Bay</u>	<u>Granada Sanitary District</u>	<u>Total</u>
Commercial/ Recreational	.03		.03
Public Recreation	.03	.01	.04
TOTAL	.06	.01	.07