

3.2 UTILITIES

A key component in planning for the future development and growth of an area within the context of a General Plan is ensuring that the various utilities (public and private) operating in the local area and region are capable of providing services at the levels and in the locations necessary to support the demand generated by future land uses and activities. State of California Office of Planning and Research guidelines prescribe that the General Plan contain “policies and plan proposals for the development, improvement, and timing of major sewer, water, and drainage facilities” as well as “policies, plan proposals, and standards for the location of pipelines and facilities for the transmission of electricity.”

The following section inventories and describes the existing jurisdictions, facilities, and operation of the critical utilities (i.e., sanitary sewer, storm drainage, water, electricity, natural gas, and telecommunications) that are provided within the City of Redondo Beach. The section also inventories and describes several specific utility-related infrastructure components that do not generally exist in all cities, but do exist in the City of Redondo Beach. These infrastructure components include the Groundwater (Seawater) Intrusion Barrier and the various Petroleum Extraction/Pipeline Facilities.

3.2.1 Sanitary Sewer Service

Sanitary sewer service is provided in the City of Redondo Beach through a coordinated multi-jurisdictional system containing different facilities, some of which are operated/maintained by the City of Redondo Beach Public Works Department and some of which are operated/maintained the County of Los Angeles Sanitation Districts. For the county’s planning and operational purposes, the city actually falls within two geographically separate but equivalent districts: 1) County Sanitation District #5, which includes all of North Redondo Beach; and 2) the South Bay Cities Sanitation District, which includes all of South Redondo Beach.

Sewage is collected through the network of city and county sewer mains located below virtually every street in the city and pumped towards the east through pump stations into centralized larger “trunk lines” to be treated at the Joint Water Pollution Control Plant (part of the county's Joint Outfall System, which consists of six treatment plants and four submarine outfalls). This plant is operated and maintained by the Los Angeles County Sanitation Districts, and is located in the City of Carson, approximately five miles east of the city. This plant serves communities throughout the entire South Bay, as well as communities located as far east as Downey and as far north as Inglewood.

Based on residential per capita population totals and net built square footage totals for all commercial and industrial space city-wide, it is estimated that the average daily sewage

generation rate for the City of Redondo Beach totaled approximately 14.5 million gallons per day (mgd) in 1989 (Source: Rosenberg and Associates, 1990).

The Joint Water Pollution Control Plant in Carson, California is currently treating sewage at a 12-month average flow of 382 million gallons per day (mgd); the plant has a design capacity of 385 million gallons per day (mgd), and a peak flow capacity of 770 million gallons per day (mgd). The plant's operational capacity is expected to increase in the future, as a result of the expected 1992 completion of the San Jose Creek Treatment Plant expansion, which currently diverts its daily excess sewage flow to the Joint Water Pollution Control Plant.

All sewage processed at the Joint Water Pollution Control Plant in Carson receives advanced primary treatment, 200 million gallons per day (mgd) (or 52 percent of the total) receives additional secondary treatment. The treated sewage is disposed into the ocean at submarine outfalls located at White's Point off of the Palos Verdes Peninsula.

Existing Facilities

The entire City of Redondo Beach sewer system includes approximately 550,000 linear feet (or approximately 104 miles) of sewer main, and approximately 1,750 manholes. The majority of the system is composed of 8-inch diameter sewer mains with some 10-inch, 12-inch, and 15-inch sewers (including the larger collection "trunk lines"). In addition, the local system contains a series of 6 pump stations owned, operated, and maintained by the Los Angeles County Sanitation Districts (**Figure 18**).

Analysis indicates that approximately 90 percent (totaling 495,000 linear feet) of the total sewer main length in the city is operated and maintained by the City of Redondo Beach Public Works Department. The remaining ten percent (totaling 55,000 linear feet) is operated and maintained by the County of Los Angeles Sanitation Districts (**Figure 18**).

The various sewer mains operated and maintained by the County of Los Angeles Sanitation Districts are concentrated in five specific areas of the city:

- (1) A main running northwest to southeast parallel to and due south of the San Diego (405) Freeway right-of-way between Marine Avenue and Manhattan Beach Boulevard in North Redondo Beach;
- (2) A main running north to south, originating at Marine Avenue and bisecting the southern half of the TRW complex running along Doolittle Drive, east along Manhattan Beach Boulevard, south along Rindge Lane, east along Bataan Road, south along Vail Avenue, east along Curtis Street, and south along Mackay Lane, terminating into the main at its intersection with Mathews Avenue;

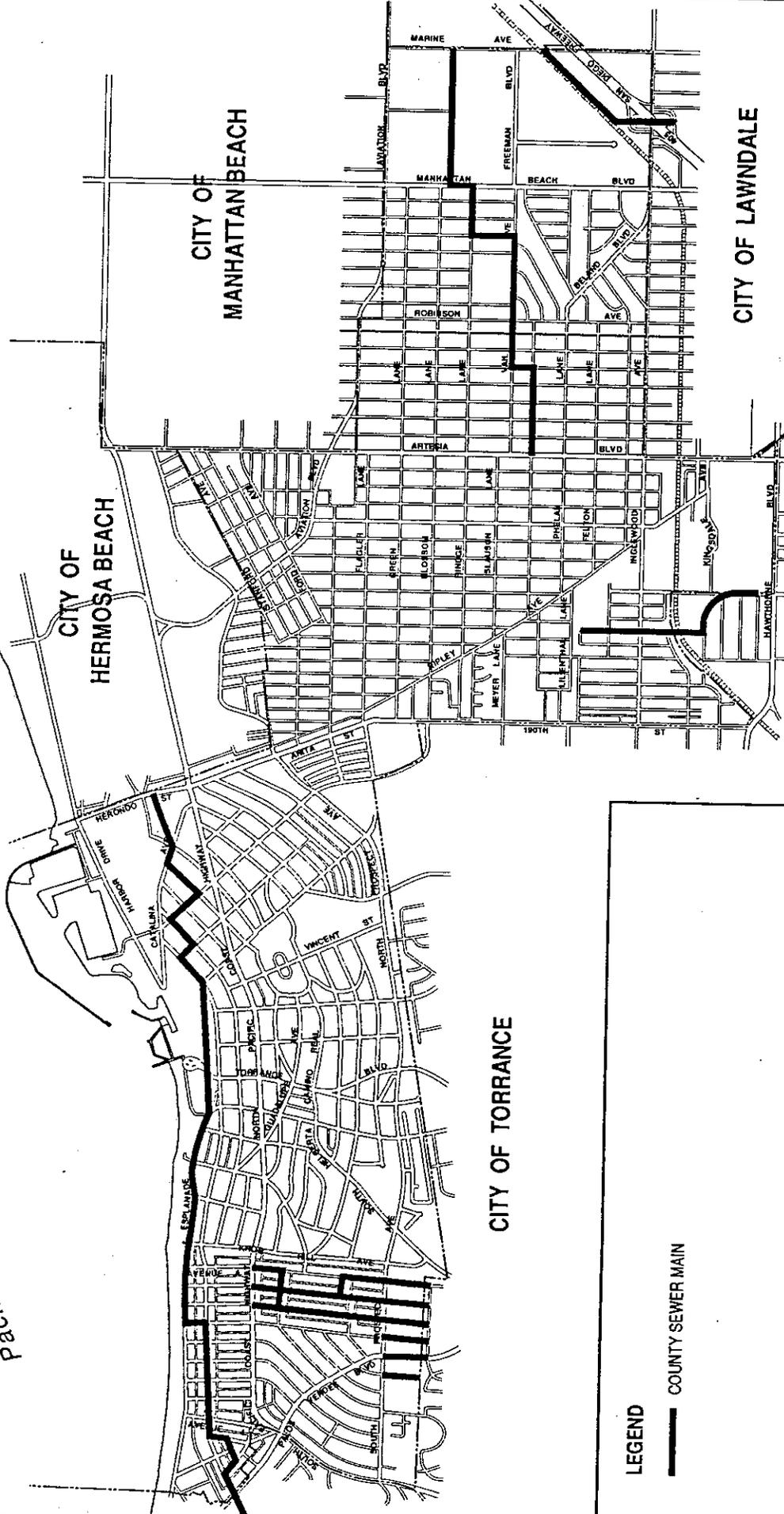
Pacific Ocean

CITY OF HERMOSA BEACH

CITY OF MANHATTAN BEACH

CITY OF TORRANCE

CITY OF LAWDALE



LEGEND
 — COUNTY SEWER MAIN



EXISTING LOCAL LOS ANGELES COUNTY SEWER SYSTEM FACILITIES

- (3) A main running west to east, beginning at Pruitt Drive running due south of 184th Street to the City of Torrance boundary and connecting into Hawthorne Boulevard in the City of Torrance;
- (4) A main running north to south, beginning at the City of Hermosa Beach boundary due east of Francisca Avenue, running south and following Francisca Avenue, turning southwest following Beryl Street, turning south following Broadway, turning southwest following Carnelian Street, turning south following Catalina Avenue, turning southwest following Diamond Street, turning south running under the Harbor/Pier parking structure, turning east following Torrance Boulevard, turning south following the Esplanade, turning east up Avenue "D" to rejoin Catalina Avenue, turning south following Catalina Avenue, and terminating into a city sewer line at South Elena Avenue; and
- (5) A series of mains serving the old "Clifton Heights" area of the city, that was formerly under sole control by the County of Los Angeles, but was annexed by the City of Redondo Beach in the early 1980's. This area includes all the sewer mains serving a "reverse L-shaped" area approximately 15-acres in size, roughly bounded by Knob Hill Avenue to the north, the City of Torrance boundary to the east, Avenue "F" to the south, Prospect Avenue to the west, Avenue "D" to the south, and Pacific Coast Highway to the west.

System Status

The Preliminary Sewer Master Plan, prepared in January, 1990 for the City of Redondo Beach Public Works Department by consultant Donald G. Rosenberg & Associates, Incorporated, determined that the overall condition of the City's system (i.e., quality of the physical condition of the pipes, etc.) is above average; no significant leakage or caving problems have been experienced or reported.

The report has also concluded that the City's sewer system is currently operating at approximately 70 percent of the capacity projected at the ultimate buildout of the city under the existing General Plan. This analysis further translated into a conclusion that approximately 100,000 linear feet of sewer main (or 15 percent of the entire system) would be operating at or above design capacity by the year 2020 (based on buildout under existing zoning). These areas have been identified and highlighted (**Figure 19**). These impacts will be similar to those experienced under a full buildout of the maximum land use and building densities allowed under the Land Use Plan of the updated General Plan.

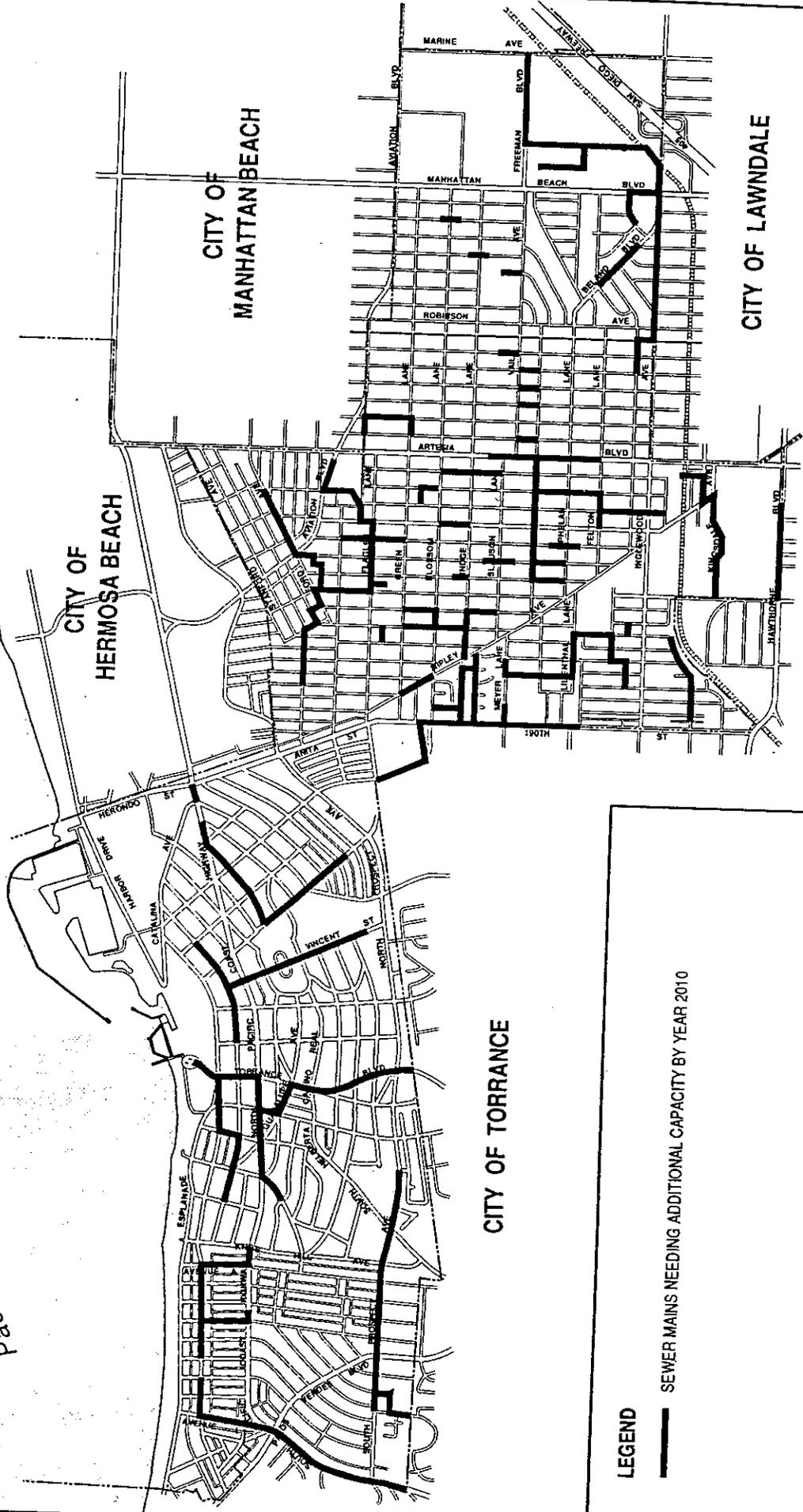
Pacific Ocean

CITY OF HERMOSA BEACH

CITY OF MANHATTAN BEACH

CITY OF TORRANCE

CITY OF LAWDALE



LEGEND

— SEWER MAINS NEEDING ADDITIONAL CAPACITY BY YEAR 2010



LOCAL SEWER FACILITIES PROJECTED TO OPERATE AT OR ABOVE CAPACITY (YEAR 2010)

Planned Improvements

Within the findings of the aforementioned sewer master plan study, a list of the ten most critical sewer main facilities to be supplemented with parallel sewer mains for additional capacity were compiled and recommended (two of which are major county trunk lines) (**Table 46**).

Because of the high cost of such capital improvements, an additional development fee should be considered by the City to underwrite the cost of these necessary replacements. A nexus study should be performed to determine the appropriate amount of money per dwelling unit (for residential construction) or per square foot (for commercial or industrial construction) that could be reasonably assessed to new development within the City for this purpose.

3.2.2 Storm Drainage Service

Existing System

Storm drainage service within the City of Redondo Beach is provided through a cooperative multi-jurisdictional system with different facilities, some of which are operated and maintained by the City of Redondo Beach Public Works Department, and some of which are maintained by the County of Los Angeles Department of Public Works Flood Control District.

In general, the storm drainage pattern of the city includes a network of storm drainage catch basins at street level and pipes under streets that collect and carry storm and excess water from the city in three general patterns (**Figure 20**):

- (1) Storm water that is collected and drained from the north and northeast portions of North Redondo Beach is carried out of the city through the city and county pipe system and drains into the major regional drainage facility of Dominguez Channel to the east;
- (2) Storm water that is collected and drained from the southern portion of North Redondo Beach and all of South Redondo Beach is carried and drained into the Pacific Ocean through one of the thirteen different drainage outfalls that are located along the southwestern shoreline of the city; and
- (3) Water that is collected in one of the five different sumps or sump pumps located throughout the city that is force-pumped back into and through the system and drained through one of the ocean drainage outfall pipes.

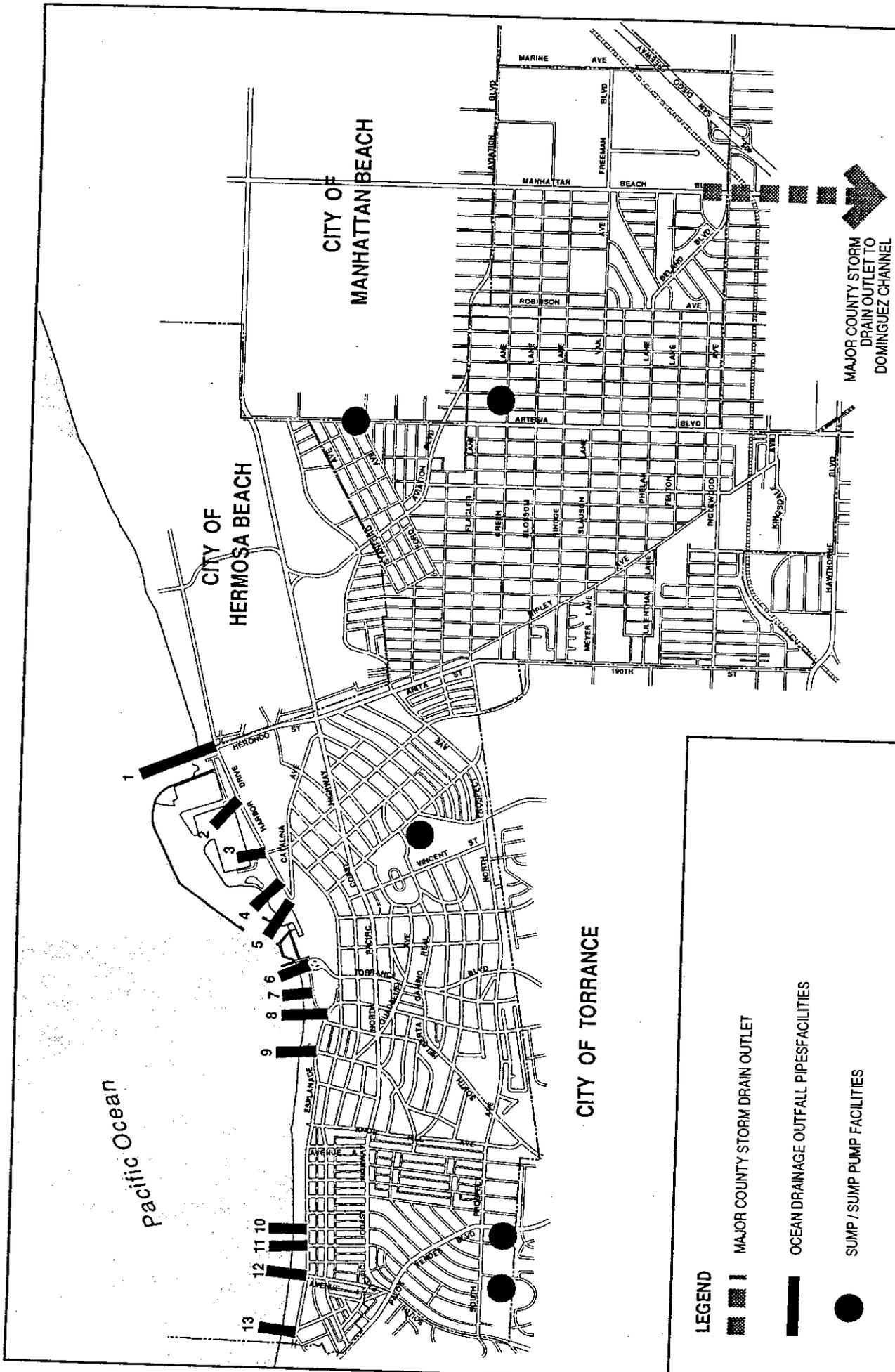
TABLE 46

List of Most Critical
Recommended Local Sanitary
Sewer System Improvements

	<u>Sewer Line Location</u>	<u>Pipe Size</u>
1.	Alvord Lane by High Lane	12"
2.	Rindge Lane by 190th Street	8"
3.	Inglewood Avenue by 183rd/184th Street*	12"
4.	184th Street by Ramona Avenue	n/a
5.	Ives Lane by Lilienthal Lane	10"
6.	Carlson Lane by Goodman Avenue	8"
7.	Doolittle Drive by Manhattan Beach Boulevard*	18"
8.	Vail Avenue by Timothy Avenue*	15"
9.	Broadway by Diamond Street	15"
10.	Doris Way by Massena Avenue	8"
11.	Catalina Avenue by Avenue Del Norte*	18"
12.	Catalina Avenue between Torrance Boulevard/Pearl Street	8"
13.	Broadway and Vincent Street	15"
14.	Francisca Avenue by Beryl Street	15"
15.	Inglewood Avenue and Manhattan Beach Boulevard	8"

Source: Preliminary Sewer Master Plan, City of Redondo Beach. January, 1990,
Prepared by Donald G. Rosenberg & Associates, Inc.

* Indicates County trunk line.



0 Feet 1,500' 3,000' 4,500'

LEGEND

- MAJOR COUNTY STORM DRAIN OUTLET
- OCEAN DRAINAGE OUTFALL PIPES/FACILITIES
- SUMP / SUMP PUMP FACILITIES

EXISTING LOCAL STORM DRAINAGE / NETWORK CHARACTERISTICS

The existing storm drainage system serving the City of Redondo Beach includes a total of approximately 29.1 miles of gravity flow storm drain and 0.3 miles of forced flow storm drain. These drains are located sporadically throughout the city, with approximately one-third of the entire city's streets served and underlain by storm drains. The pipes range in diameter from 18 inches to 96 inches, depending on location and anticipated maximum flow.

The majority of the storm drains are located in North Redondo Beach; the elevated topography of portions of South Redondo Beach is such that the eastern half of that area of the city has better natural drainage, and is not as intensely served by storm drainage infrastructure.

Approximately 25 percent of the storm drainage system is owned, operated, and maintained by the City of Redondo Beach Public Works Department; the remaining 75 percent of the system is owned, operated, and maintained by the Los Angeles County Department of Public Works Flood Control District.

In addition to the pipes and drainage system, there are three city-operated sumps and pump stations and two city-operated independent sump pumps that collect excess and storm water into sumps. This excess water is then pumped up into gravity flow drains which carry the water out to the Pacific Ocean through one or more of the aforementioned drainage outfalls. The locations of these sumps and sump pumps include **(Figure 20)**:

- (1) A sump and sump pump located in the eastern center of North Redondo Beach within the Mathews Parkette at the northwest corner of the intersection of Green Lane and Mathews Lane;
- (2) A large sump and sump pump (the Wylie-Steinlart sump) located in the southeastern portion of North Redondo Beach, roughly bounded by Artesia Boulevard (the City of Manhattan Beach boundary) to the north, Ford Avenue to the east, and Goodman Avenue to the west;
- (3) A large sump and sump pump located in the far southeastern portion of South Redondo Beach within the Massena Parkette, roughly bounded by Massena Avenue to the west, Avenue "H" to the north, and the City of Torrance boundary to the east;
- (4) An independent sump pump located in the center of South Redondo Beach, within the low-lying area of the Redondo Union High School athletic fields, roughly bounded by Vincent Street to the south, Prospect Avenue to the east, and Del Amo Street to the north; and

- (5) An independent sump pump located in the far southeastern portion of South Redondo Beach at the base of South Irena Avenue directly abutting the City of Torrance boundary to the east.

In addition to the inland storm drainage system, the harbor and harbor basin area of the City (located in the northwestern area of South Redondo Beach and including the various marinas located in the City) are protected from coastal flooding and damage related to storm-generated flooding by a large rock/stone material rip-rap breakwater wall.

The breakwater extends out like a large arm extending out to the west due south of the terminus of Herondo Street, and curving to the south approximately 3,000 linear feet (over one half of a mile), serving as a protective wall between the open and exposed portions of Santa Monica Bay and the Pacific Ocean and the structures, areas, and boats located in the northern coastal area of the City.

In the 1930's a small breakwater facility was installed to protect the harbor area from flooding and storm-related damage. In the mid 1950's the existing large breakwater facility (at a height of 14 feet above the mean low water level) was constructed; in 1963 portions of the facility were elevated to a height of 20 feet above the mean low water level. There is also a project currently underway between the City of Redondo Beach and the United States Army Corps of Engineers to elevate the height level of the remainder of the existing breakwater to 20 feet above the mean low water level, to extend the southern portion of the breakwater approximately 150 linear feet, and to raise the southern portion of the breakwater to a height of 16 feet above the mean low water level. These improvements will further enhance the ability of the breakwater to protect the harbor area from flooding and storm-related damage.

Prior to any of this protection, significant damage had occurred to a number of major structures and areas of the harbor. Even recently (within the last five years), particularly violent weather systems have caused storm-related damage to the Portofino Inn and the Municipal Pier structures.

The roadways and structures along Harbor Drive and the Esplanade, located due east of the public beach area extending almost the entire length of South Redondo Beach, are also protected from coastal-related damage and flooding. These areas are elevated approximately eight feet above the level of the beach area, and are further protected by a concrete block retaining wall running along the length of the Esplanade.

System Status/Planned Improvements

Overall, the city's storm drainage system is in good physical and operational condition. One major issue that has arisen, due to the lack of storm drainage facility coverage throughout the entire city, is the continued incidence of long standing "nuisance" or

excess water generated by common day-to-day domestic activities [i.e., washing of vehicles, irrigation of lawns or planting areas, etc.]. Because of the lack of drainage facilities in some areas of the city, this water remains and pools in curbside gutters for long periods of time until it evaporates naturally, and thus, can become a moderate public safety and health hazard.

The City of Redondo Beach Department of Public Works is presently making incremental improvements to the system with monies budgeted from the city's General Fund to improve this situation.

In addition, the Los Angeles County Department of Public Works Flood Control Division has three storm drainage improvement projects currently in differing planning or study stages that will impact the City of Redondo Beach. These capital improvements would be funded by future Los Angeles County bond financing projects. These include (**Figure 21**):

- (1) The Vincent Street Drain Project: this project will add a new gravity-forced drainage line that will serve to drain the sump and pump station within the Redondo Union High School athletic fields, will drain and run west, serving Vincent Street to Broadway; will drain and run north, serving Broadway from Vincent Street to Beryl Street; will drain and run west, serving Beryl Street to Harbor Drive; and will drain and run south just west of Harbor Drive, joining and draining through an existing outfall pipe into the Pacific Ocean off of Mole D in the harbor/pier area.

This new drain will serve to supplement the existing drain running from the athletic field sump down Diamond Street and along Broadway, Beryl Street, and Harbor Drive to the same ocean outfall.

- (2) The Knob Hill Coast Drain Project: this project will add a new gravity-forced drain running and draining north to south along Pacific Coast Highway from Avenue "A" to Avenue "G," running and draining west along Avenue "G" to the Esplanade, running and draining north along the Esplanade, and connecting and draining through the existing outfall pipe into the Pacific Ocean parallel to Avenue "F."

This drain will serve to supplement the system in the southern end of the city adjacent to Pacific Coast Highway which are currently underserved by storm drainage and subject to sporadic flooding and extensive standing "nuisance" water.

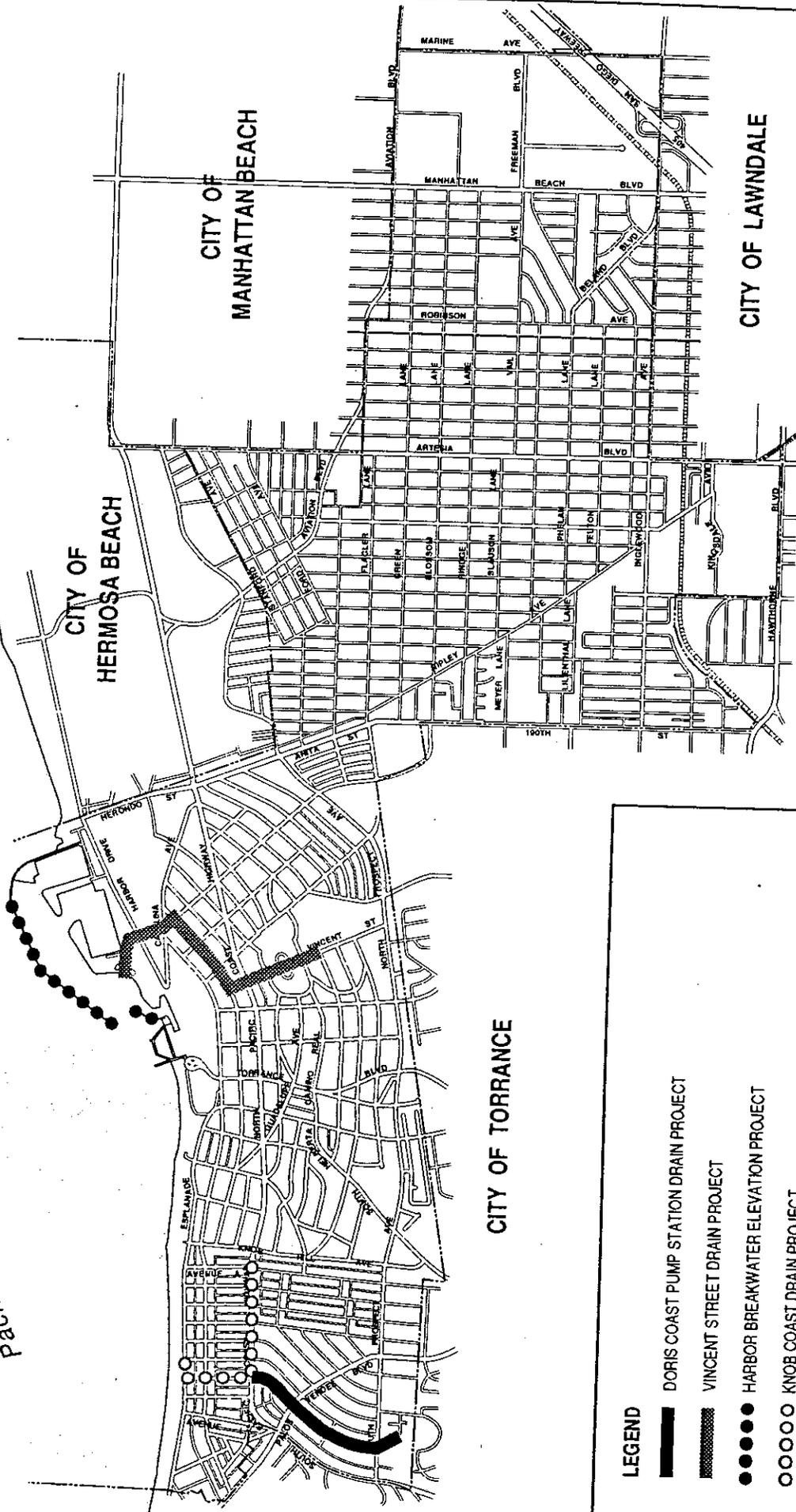
Pacific Ocean

CITY OF HERMOSA BEACH

CITY OF MANHATTAN BEACH

CITY OF TORRANCE

CITY OF LAWDALE



LEGEND

- DORIS COAST PUMP STATION DRAIN PROJECT
- - - VINCENT STREET DRAIN PROJECT
- HARBOR BREAKWATER ELEVATION PROJECT
- KNOB COAST DRAIN PROJECT

0 Feet 1,500' 3,000' 4,500'

ENVICOM CORPORATION

PROPOSED LOCAL STORM DRAINAGE / FLOOD CONTROL IMPROVEMENTS

(3) The Doris Coast Pump Station Project: this project will add improvements on the City of Torrance side of the Avenue “H” sump pump, but will also include improvements on the Redondo Beach side of the system. These improvements will include the construction of a gravity-forced storm drain (with catch basins) running from and serving the Avenue “H” sump pump, running and draining west along Avenue “G” and connecting into the future Knob Hill Coast Drain at the intersection of Avenue “G” and Pacific Coast Highway. This drain will enhance drainage from and disposal of water from the Avenue “H” sump pump, and will also serve to supplement the system in the residential areas of the southern end of the city adjacent to Pacific Coast Highway.

These areas are currently underserved by storm drainage, and are subject to sporadic flooding and extensive standing “nuisance” water.

As previously mentioned, there is also a project currently underway between the City of Redondo Beach and the United States Army Corps of Engineers to elevate the height level of the remainder of the existing breakwater to 20 feet above the mean low water level, to extend the southern portion of the breakwater approximately 150 linear feet, and to raise the southern portion of the breakwater to a height of 16 feet above the mean low water level. These improvements will further enhance the ability of the breakwater to protect the harbor area from flooding and storm-related damage.

3.2.3 Water Service

The City of Redondo Beach receives its water service from the California Water Service Company (CWSC), an investor-owned public utility whose operations are regulated by the State of California Public Utilities Commission (PUC). The California Water Service Company has been providing water service to the community since 1927.

For operational and maintenance purposes, the City of Redondo Beach is classified within the Hermosa-Redondo District, an area containing all of the City of Hermosa Beach, all of the City of Redondo Beach, and an 800-acre portion of the City of Torrance located directly south and southwest of the City of Redondo Beach.

Existing Conditions and Facilities

The Hermosa-Redondo District contains a total of 209 miles (1.1 million linear feet) of water main supplying and distributing all of the water to the district. The City of Redondo Beach contains 136.8 miles of water main (65 percent of all the district's mains); the City of Torrance contains 28.6 miles of water mains (14 percent of the district's mains), and the City of Hermosa Beach contains 43.6 miles of water main (21 percent of all the district's mains). Unfortunately, all usage data compiled for the water

service district are compiled for the area as a whole, and cannot be broken down into figures for the individual cities.

All water supplied to and used in the City of Redondo Beach comes from one of two sources:

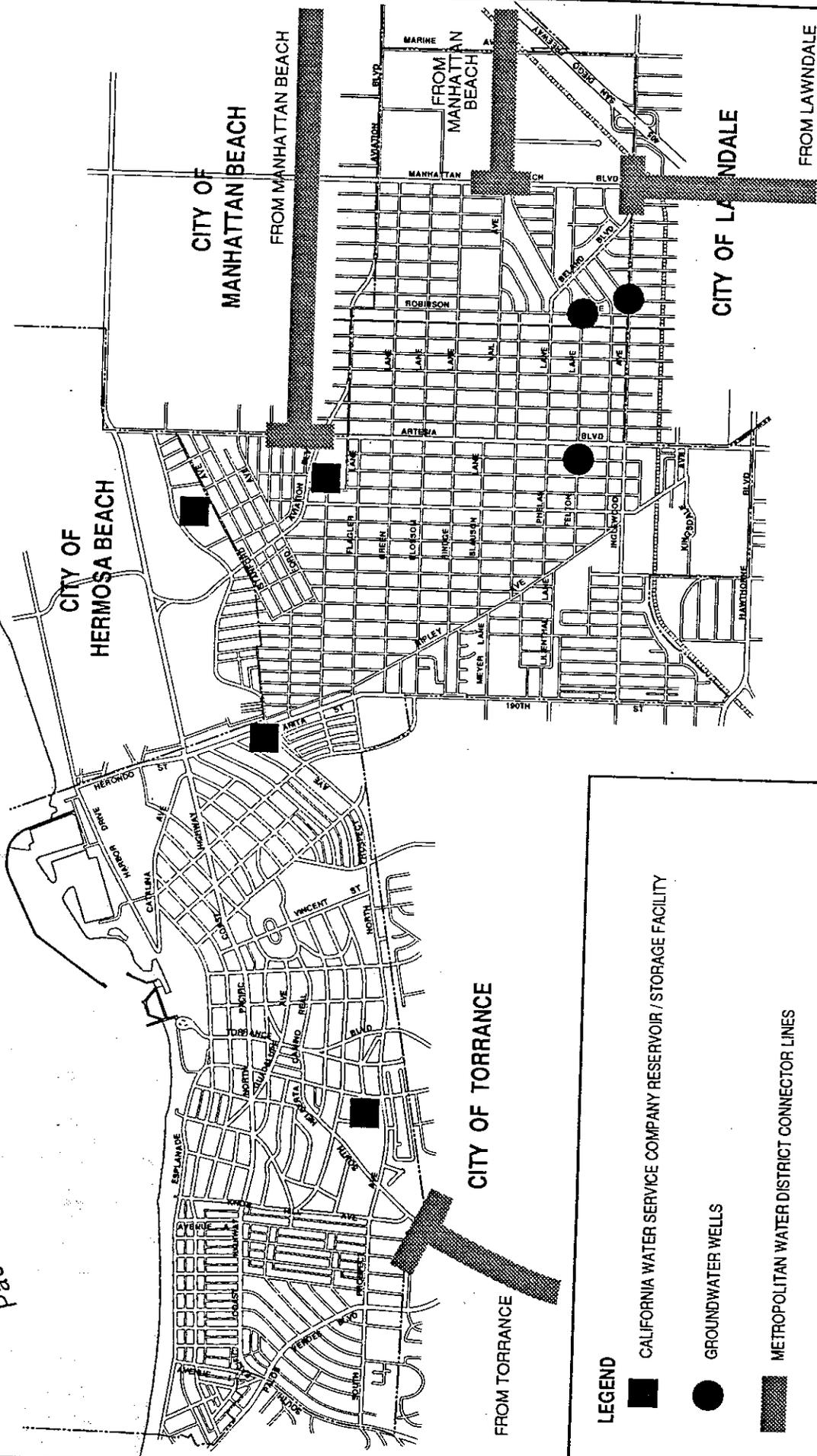
- (1) Water purchased by the California Water Service Company from the larger, regional Metropolitan Water District. This water is pumped into the city through four Metropolitan Water District connector lines, two that are located in the far north end of North Redondo Beach (one near the intersection of Inglewood Boulevard and Manhattan Beach Boulevard and one near the intersection of Freeman Boulevard and Manhattan Beach Boulevard and two that are located outside of the City of Redondo Beach but are connected through mains into the city (one near the intersection of Redondo Street and Manhattan Beach Boulevard in the City of Manhattan Beach and one near the intersection of 242nd Street and Walnut Street in the City of Torrance) (**Figure 22**); and
- (2) Water pumped up from local groundwater sources by the California Water Service Company through a series of three wells located in the far north end of North Redondo Beach (one near the intersection of Felton Lane and Vanderbilt Lane, one near the intersection of Felton Lane and Graham Avenue, and one near the intersection of Blaisdell Avenue and Inglewood Avenue (**Figure 22**).

Approximately 85 percent of the water supplied to and used in the City of Redondo Beach is purchased from the Metropolitan Water District, while approximately 15 percent is pumped up from groundwater sources through wells in the city.

Existing water facilities within the City of Redondo Beach also include:

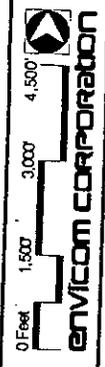
- The 136.8 miles of California Water Service Company water mains serving the city. The water mains are located running below virtually every street in the city, branching off into connections to distribute water to residences and businesses. The diameters and materials of the mains running under the streets range from the 2-inch, to 4-inch, to 6-inch, or 8-inch cast iron and asbestos lined concrete pipes; larger 10-inch or 16-inch cast iron and asbestos lined concrete mains which connect into the storage reservoirs or Metropolitan Water District supply lines located within the city. Pressure rates in the mains range from approximately 40 pounds per square inch (psi) to 120 pounds per square inch (psi).
- A series of three California Water Service Company reservoirs (containing a total of seven storage tanks). The total storage capacity of these tanks at any one time is 14.5 million gallons of water. The specific geographic locations of these reservoir facilities include (**Figure 22**):

Pacific Ocean



LEGEND

- CALIFORNIA WATER SERVICE COMPANY RESERVOIR / STORAGE FACILITY
- GROUNDWATER WELLS
- METROPOLITAN WATER DISTRICT CONNECTOR LINES



EXISTING LOCAL WATER SERVICE AND STORAGE FACILITIES

- Reservoir #1: located due south of the intersection of Pearl Street and Lucia Avenue in the center of South Redondo Beach. This reservoir contains four storage tanks with capacities of 1.0 million gallons, 1.5 million gallons, 1.5 million gallons, and 2.0 million gallons respectively, for a total storage capacity of 6.0 million gallons;
- Reservoir #3: located due west of the intersection of Prospect Avenue and Agate Street in the far northeast end of South Redondo Beach. This reservoir contains one storage tank with a capacity of 1.5 million gallons; and
- Reservoir #10: located due east of the intersection of Carnegie Lane and Aviation Boulevard in the eastern center of North Redondo Beach. This reservoir contains two storage tanks with capacities of 3.5 million gallons and 3.5 million gallons respectively, for a total storage capacity of 7.0 million gallons.
- There are also two California Water Service Company reservoirs, Reservoir #6 and Reservoir #9, that are technically located within the City of Hermosa Beach (due east of the intersection of Harper Avenue and Ormond Lane) but serve the City of Redondo Beach. This reservoir contains five storage tanks with a total storage capacity of 6.0 million gallons.
- A series of 11 pump stations scattered throughout the City of Redondo Beach (five in North Redondo Beach and six in South Redondo Beach) that pump the water through the distribution system and keep the water pressure at correct rates (**Figure 22**).

Service Status/Planned System Improvements

The California Water Service Company reports that it is presently meeting all of the districts existing water service needs. Although the vast majority of the systems pipes are in better than average conditions (even some of the older cast iron pipes that are more than 60 years old), the company is currently carrying out a program to replace its 2-inch and 4-inch mains with standard 6-inch main.

In addition, the California Water Service Company is replacing 2,610 feet of 6-inch main on Curtis Street and Herrin Street and 1,040 feet of 6-inch main on Hill Street. The cost of these improvements is absorbed by being billed back to the customers incrementally through their monthly utility bill.

3.2.4 Electricity Service

Electric service to the City of Redondo Beach is provided exclusively by the Southern California Edison Company (SCE). For operational and maintenance purposes, the City of Redondo Beach is encompassed within Edison's Southern Region, which includes the South Bay/South County area bounded by Inglewood on the north, Long Beach on the south, and the 605 freeway on the east.

Existing Facilities

The primary existing Southern California Edison Company facility located within the City of Redondo Beach is the main regional power generation plant located on a 41-acre parcel in South Redondo Beach, roughly bounded by Harbor Drive to the west, Herondo Street to the north, the abandoned railroad right-of-way due west of Francisca Avenue and North Catalina Avenue to the east, and Beryl Street to the south (**Figure 23**). The plant is currently operating at approximately 30 percent capacity, with only four of the eight generators "on-line."

Southern California Edison also operates four neighborhood high-voltage substations in the city. Victoria Substation (Blossom Lane and 190th Street) and Ditmar Substation (Vanderbilt Lane and Flagler Lane), serve north Redondo Beach. Redondo Substation (Pacific Coast Highway and Beryl Street) and Topaz Substation (Knob Hill Avenue and Prospect Avenue) serve south Redondo Beach (**Figure 23**).

The vast majority of electrical infrastructure within the city is distributed through wires running along above-ground wooden poles. This distribution system originates from neighborhood substations which receive power from larger transmission substations located outside of the city. The transmission substations are supplied power in-part by transmission lines on above-ground metal "towers" located within turfed rights-of-way. The Edison transmission corridors in north Redondo Beach contain metal towers carrying electricity generated at the El Segundo Generating Station and also electricity transmitted from Edison's La Fresa Substation in Torrance. The towers on the right-of-way generally paralleling Herondo/190th Streets transmit electricity generated at the Redondo Generating Stations (**Figure 23**).

Planned Improvements

Recently, the city has engaged in the process of securing funding and working with the Southern California Edison Company to remove the unsightly above-ground service poles and wires and locate them below-ground. The first priority of the project was to remove the above ground utilities along the Artesia Boulevard commercial corridor, which was completed in 1991. As additional funds for this purpose become available, the City of

Redondo Beach Public Works Department and Southern California Edison Company will prioritize and undertake similar projects in other areas of the city.

The City of Redondo Beach Public Works Department is now requiring that new commercial and multi-family residential projects built in the city provide underground electrical utility service to their sites. This incremental process will, over time, significantly increase the amount of the city served by underground utilities and relieved of the visual blight of above ground poles and wires.

3.2.5 Natural Gas Service

Natural gas service to the City of Redondo Beach is provided exclusively by the Southern California Gas Company. For operational, maintenance, and planning purposes, the City of Redondo Beach is classified within the South Coastal Division. This Division includes all communities west of the Harbor (110) Freeway from San Pedro north to the Ventura County line. The city is further classified into the 182nd Street Division, whose jurisdiction includes all of the City of Redondo Beach and the City of Torrance.

Existing Facilities

The vast majority of natural gas infrastructure and facilities within the City of Redondo Beach are the series and networks of underground pipelines that distribute the gas to the various residential, commercial, and industrial land uses throughout the area. These pipelines run up and down below virtually every street in the city, with diameters ranging from 12-inch trunk lines running down major streets to 4-inch supply lines running down smaller streets and serving residential neighborhoods.

System Status/Planned Improvements

At this time, the Southern California Gas Company reports that the infrastructure and supply system serving natural gas to the City of Redondo Beach is in good working order and has the capability to serve the city's future needs relative to natural gas supply and capacity. For these reasons, no major improvements or upgrades, above those normally scheduled under the gas company's ongoing plan for the replacement of older infrastructure are presently scheduled for the system.

3.2.6 Telecommunications Services

As with most urbanized areas, the City of Redondo Beach is fully served by modern telecommunications services. Telecommunications services available within the City of Redondo Beach fall into two general categories: 1) telephone service; and 2) cable television service.

Telephone Service

As a result of legislation and actions including the federal deregulation of telephone services and the mandated “break-up” of the Bell Telephone Company, telephone service and equipment in the City of Redondo Beach are available through a number of different providers.

Overall, the licensing and regulation of the different providers and overseer of these services is the State of California Public Utilities Commission (PUC). The dominant public (coin-operated) and private telephone provider in the City of Redondo Beach area is the General Telephone and Electric Company (GTE).

Basic hookups to residences and local telephone service in the city are provided through General Telephone and Electric Company (GTE). Individual users of the telephones then have a myriad of selections available to them regarding their actual choice of service options and long distance telephone service providers.

Businesses who desire public (coin-operated) telephone service in or around their establishments arrange for the infrastructure (telephone and booth or station) and service hook-up and pay a one-time installation fee (approximately \$150.00) and monthly charge (approximately \$35.00) to the provider.

Cellular (or mobile) telephone service is also available throughout the City, provided to individual users by a number of service companies licensed and monitored by the State of California Public Utilities Commission (PUC). The City has little or no control over the provision of cellular telephone service, other than oversight and approval authority over the siting and operation of any cellular transmission antennas proposed to be located within the City limits. The siting and design of these facilities are subject to the City's conditional use permit review and approval process.

Cable Television Service

Cable television service within the City of Redondo Beach is provided exclusively by the Century Cable Company, a national privately-owned cable television franchise corporation. Century Cable Company has been providing cable television service to the City of Redondo Beach since 1973, with local offices located at 2925 West 182nd Street in Redondo Beach.

Century Cable Company currently serves approximately 14,930 subscribers (including residential household, businesses, and restaurant/bar establishments) city-wide, offering a 34 channel menu, with one locally-originating community channel (i.e., broadcasting local government and public interest programming and notices).

The company estimates that it has approximately 110 linear miles of cable wiring distributed across the city; approximately 85 percent of the service is wired above-ground along telephone poles, while approximately 15 percent of the services are wired below ground.

Century Cable Company's fixed franchise agreement term with the city has recently expired; the company is now working and operating under a six month interim contract until such time as the new longer-term franchise is awarded.

3.2.7 Groundwater (Seawater) Intrusion Barrier

Because of its low-lying coastal setting directly adjacent to Santa Monica Bay and the Pacific Ocean, the southern half of the city experiences two geologic-related conditions that do not occur in the northern half of the city and do not occur in most cities. These conditions include:

- (1) Being underlain by groundwater aquifers that are a valuable source of local and regional domestic water; and
- (2) Having the potential of nearby saltwater sources (Santa Monica Bay and the Pacific Ocean) intruding into (i.e., seeping underground) and contaminating the local groundwater sources.

In order to prevent this occurrence and protect the condition of these local groundwater sources, the Los Angeles County Sanitation Districts Flood Control Division installed and maintains a saltwater intrusion barrier (crossing through the southern half of the City).

The intrusion barrier, formally known as the West Coast Basin Barrier Project, is a series of several hundred freshwater injection wells, running north to south for approximately eight miles down the coast from a point just south of Los Angeles International Airport in El Segundo to the north to the northern tip of Palos Verdes to the south. The wells follow North Prospect Avenue in the City of Hermosa Beach and Prospect Street in the City of Redondo Beach. The majority of the barrier wells were installed in the mid 1960's and were built entirely through bonds issued by the Los Angeles County Sanitation Districts.

The freshwater is pumped into the ground through the wells, forms a barrier (or wall) of high-pressure freshwater that seals out any seawater which may attempt to seep and intrude past the line of wells into the valuable local groundwater aquifers located to the east. Approximately 45 of the freshwater injection wells are currently located within the City of Redondo Beach. The depth of the wells drilled in the city differ, generally ranging from approximately 270 feet below sea level in the northern half of South

Redondo Beach to approximately 830 feet below sea level in the southern half of South Redondo Beach. Additional freshwater injection wells are added over time, as necessary, to keep the pressure and levels of freshwater at sufficient levels to keep out the seawater.

3.2.8 Petroleum Extraction/Pipeline Operations

Although petroleum extraction has, in general, declined markedly over time in the South Bay and the City of Redondo Beach, a number of small oil wells still operate in the city and distribute petroleum within and outside the city through a series of underground pipelines.

At present, the three primary and highly visible petroleum extraction wells that remain active within the City of Redondo Beach include:

- (1) The Standard Pacific Oil facility, located in the northwestern portion of South Redondo Beach, roughly bounded by North Gertruda Avenue to the north, North Francisca Avenue to the west and south, and North Catalina Avenue to the east.
- (2) The Petro-Lewis Oil facility, located in the southeastern portion of South Redondo Beach (within Alta Vista Park), roughly bounded by Julia Avenue to the east, Camino Real to the north, South Juanita Avenue to the west, and Serpentine Street to the south. This facility has an underground pipeline that runs east up Camino Real and then runs north under Prospect Street, eventually tying into the major Southern California Edison petroleum pipeline running adjacent to Anita Street; and
- (3) The Titan Oil facility, located in the northwestern portion of South Redondo Beach (within the Harbor/Pier complex), at the northwestern intersection of Harbor Drive and Portofino Way. This facility is approximately one-half of one acre in size, and is in the process of having all of its wells removed/capped and its operations closed.

In addition to these extraction facilities, a significant number of underground petroleum distribution pipelines, owned and/or operated by the various existing petroleum production and distribution companies serving other areas of the region run throughout the City.

As previously mentioned, the Southern California Edison Company also runs underground petroleum pipelines that supply fuel to the existing electricity generation plant in South Redondo Beach. These pipelines are primarily located within and under the existing turfed Southern California Edison rights-of-way that include the elevated high-tension electricity transmission wires and support standards.

Future Improvements

Although these facilities, overall, have operated and continue to operate safely and “trouble-free” their long-term monitoring and maintenance (relative to pressure levels, leaks, etc.) continues to be a relevant concern. The significant numbers and length of pipelines running throughout different areas of the city (a number of them within residential neighborhoods), their age, and their operation by a host of different and independent private companies and entities all contribute to raise questions about the means through which these pipelines are operated and maintained.

Two means of improving the situation have been suggested by the City of Redondo Beach Public Works Department (the first task has already been initiated by the department):

- (1) Developing and maintaining an accurate and updated catalogue and inventory of the locations, details (dimensions, materials, etc.), owner/operator, and contents of each well and pipeline running within the city.
- (2) Adopting an ordinance which would require a formal inspection and monitoring of all petroleum extraction and transportation facilities in the City.

Implementation of these two suggestions would be expected to significantly decrease the existing safety hazards associated with the present “laissez-faire” monitoring and oversight of these wells and pipelines.

3.2.9 Goals, Objectives, and Policies

The following lists the goals, objectives, and policies for each of the fundamental utility services provided and available within the City of Redondo Beach. The overall intent of these goals, objectives, and policies is to 1) maintain and/or improve the level and quality of utility services provided to existing and future residents, business people, and visitors to the community, and 2) ensure that the construction and operation of new or upgraded utility services keep pace with the amount of additional development that is projected to occur in the city over the life span of the updated General Plan (to year 2010).

***Issue* SANITARY SEWER SERVICE**

Goal *It shall be the goal of the City of Redondo Beach (in cooperation with the Los Angeles County Sanitations Districts) to:*

- 6A Establish and maintain adequate planning, construction, maintenance, and funding for sanitary sewer collection and treatment facilities to support and serve the various land uses and intensities of development in the city and

protect public health and safety; upgrading existing deficient systems, and expanding the system, where necessary. The services shall be provided and system operated in an ecologically-sensitive manner.

Objective *It shall be the objective of the City of Redondo Beach (in cooperation with the Los Angeles County Sanitations Districts) to:*

6.1 Provide a comprehensive and modern system of sanitary sewer collection and treatment facilities which will adequately collect, convey, and treat sewerage generated by existing and future development in the city. The services shall be provided and system operated in an ecologically-sensitive manner.

Policies *It shall be the policy of the City of Redondo Beach (in cooperation with the Los Angeles County Sanitations Districts) to:*

6.1.1 Improve and enhance cooperation and communication with the Los Angeles County Sanitations Districts officials to promote effective planning and ensure the most efficient operation and maintenance of the city's sanitary sewer collection and treatment system and facilities.

6.1.2 Provide for the adequate operation and maintenance of existing sanitary sewer collection and treatment facilities serving the city.

6.1.3 Provide for the improvement of sanitary sewer collection and treatment facilities (i.e., through replacement of old mains, construction of parallel lines, etc.) where existing systems are deficient.

6.1.4 Provide for the construction of upgraded and expanded sanitary sewer and treatment improvements to adequately support new and existing development throughout the city.

6.1.5 Require that the approval of new development in the city be contingent upon the ability of the project to be served with adequate sanitary sewer infrastructure and service.

6.1.6 Update and complete a comprehensive master plan for sanitary sewer system operation, maintenance, and improvements based on the Preliminary Sewer Master Plan, prepared for the city by Donald G. Rosenberg and Associates, Incorporated and implement all appropriate recommendations where feasible.

- 6.1.7 Pursue, through the Public Works Department, the creation and adoption of an ordinance that would establish a mandatory sewer impact fee (per unit or per square foot) for new development projects (above and beyond the existing sewer connection fees presently charged by the city and the county) to finance the capital improvements within the sanitary sewer system that have been or will be identified as necessary in the future to support such additional development.
- 6.1.8 Review and modify local sewer connection fees and monthly service charges, as necessary, to ensure that adequate amounts of fees and charges are collected to fund the operation and maintenance of existing sanitary sewer collection and treatment facilities.
- 6.1.9 Apply collected sewer impacts fees, sewer connection fees, and monthly service charges associated with sanitary sewer collection and treatment services towards the operation, maintenance, repair, and replacement of existing sanitary sewer facilities and construction of new facilities.
- 6.1.10 Examine the feasibility and potential for the use of reclaimed water for irrigation and cleaning purposes, in both public and private facilities.
- 6.1.11 Wherever applicable and feasible, the City of Redondo Beach shall require that major water users in the community install systems for the collection of and use of reclaimed water as an irrigation and cleaning source.

Issue **STORM DRAINAGE SERVICE**

Goal *It shall be the goal of the City of Redondo Beach (in cooperation with the Los Angeles County Department of Public Works Flood Control Division) to:*

6B Establish and maintain adequate planning, construction, maintenance, and funding for storm drainage facilities to support and serve the various land uses and intensities of development in the city and protect public health and safety; upgrading existing deficient systems and expanding the system, where necessary. The services shall be provided and system operated in an ecologically-sensitive manner.

Objective *It shall be the objective of the City of Redondo Beach (in cooperation with the Los Angeles County Department of Public Works Flood Control Division) to:*

6.2 Ensure the provision of a comprehensive and modern system of storm drainage facilities that will adequately collect, convey, and remove/dispose of the quantities of storm water and excess water that are generated in the city. The services shall be provided and system operated in an ecologically-sensitive manner.

Policies *It shall be the policy of the City of Redondo Beach (in association with the Los Angeles County Department of Public Works Flood Control Division to:*

6.2.1 Ensure the provision and operation of adequate storm drainage facilities, where necessary, throughout the city.

6.2.2 Provide for the maintenance and repair of existing storm drainage facilities, wherever located, throughout the city.

6.2.3 Require that the approval of new development in the city be contingent upon the ability of the project to be served with adequate storm drainage infrastructure and service.

6.2.4 Improve and enhance cooperation and communication with the Los Angeles County Department of Public Works Flood Control Division officials to promote effective planning and ensure the most efficient operation and maintenance of the city's storm drainage collection and removal/disposal system and facilities.

6.2.5 Plan and provide for the ongoing construction of upgraded and expanded storm drainage facilities in areas currently underserved by such facilities in the city, focussing on areas currently encumbered by high incidences of long standing "nuisance" or excess water generated by day to day domestic activities (i.e., washing of vehicles, irrigation of lawns or planting areas, etc.), to protect existing and new development.

6.2.6 Pursue, through the City Public Works Department additional or alternative mechanisms (other than the City General Fund) for the funding of future storm drainage system improvements.

6.2.7 Require that improvements to or expansion of existing storm drainage facilities necessitated by specific new development projects be borne by the project proponent, either through the payment of impact fees or the actual construction of such improvements.

- 6.2.8 Allow for the formation of benefit assessment districts and community facilities districts, where appropriate and feasible, in which those who directly benefit from specific local storm drainage improvements pay a pro rata share of the costs of the improvements.
- 6.2.9 Examine the feasibility of an improved filtering or purification system to treat collected storm water prior to its discharge into Santa Monica Bay and the Pacific Ocean at the various drainage outfall points.
- 6.2.10 Ensure an adequate and thorough notification of the resident population of the community that will be affected by planned storm drainage improvements or repairs prior to the actual action being taken.
- 6.2.11 Encourage the City of Redondo Beach and Los Angeles County Department of Public Works Flood Control Division to install additional shields, barriers, or other design improvements to improve the aesthetics and visual appearance of the various ocean storm drainage outfalls along the shoreline that are open to public view.
- 6.2.12 Where appropriate and feasible, upgrade the existing drainage system by replacing open swales and drainage channels with covered or underground facilities.
- 6.2.13 Evaluate the potential feasibility of collecting and using reclaimed excess storm water for irrigation and other non-potable uses, and implement such uses where possible.
- 6.2.14 Provide additional information and education to the public relative to the proper or improper disposal of debris or materials into the storm drainage system (i.e., household materials, toxics, etc.).

Issue **WATER SERVICE**

Goal *It shall be the goal of the City of Redondo Beach (in cooperation with the California Water Service Company, or any future purveyor of water to the city) to:*

- 6C Ensure adequate planning, maintenance, and operation of a modern, safe, and effective system of supply, distribution, transmission, and storage of water to meet the needs of the community; encouraging the upgrading of existing deficient systems and expansion, where necessary, in the city. The services shall be provided and system operated in an ecologically-sensitive manner.

Objective *It shall be the objective of the City of Redondo Beach (in cooperation with the California Water Service Company, or any future purveyor of water to the city) to:*

6.3 Provide a modern and efficient system of transmission, distribution, and storage of water supplies to the city capable of meeting the normal daily and peak hour demands of the community, including adequate fire flow requirements, to meet existing and future water demand in a timely and cost effective manner

Policies *It shall be the policy of the City of Redondo Beach (in cooperation with the California Water Service Company, or any future purveyor of water to the city) to:*

6.3.1 Ensure the provision of adequate water supply, transmission, distribution, and storage, throughout the city to serve the community's residential, industrial, commercial, and recreational needs.

6.3.2 Ensure the provision and construction of upgraded and expanded water supply, transmission, distribution, and storage facilities throughout the city to support existing and future development.

6.3.3 Ensure the maintenance and replacement of existing water supply, transmission, distribution, and storage facilities, as necessary to adequately serve the city's water needs.

6.3.4 Require that the approval of new development in the city be contingent upon the ability of the project to be served with adequate water infrastructure and service.

6.3.5 Improve and enhance cooperation and communication with the California Water Service Company, the West Basin Municipal Water District, and Metropolitan Water District officials (or any future purveyors of water to the city) to promote effective planning and ensure the most efficient operation and maintenance of the city's water supply, transmission, distribution, and storage system and facilities.

6.3.6 Work, through the City Public Works Department, with the California Water Service Company, the West Basin Municipal Water District, and Metropolitan Water District (or any future purveyors of water to the city) in developing and implementing a menu of programs for public information/education and action in encouraging (or enforcing the potential

mandating) of water conservation practices relevant to the periodic drought conditions faced by the area and the region.

- 6.3.7 Ensure that the costs of specific improvements to the existing water supply, transmission, distribution, and storage facilities necessitated by a new development project be borne by the project proponent; either through the payment of impact fees, or by the actual construction of the necessary physical improvements.
- 6.3.8 Examine the feasibility and potential for the realization of alternative means of water resources and production for use in the community, (including seawater desalinization).
- 6.3.9 Ensure the continued monitoring and maintenance of water quality in the community's supply of potable water, to protect the public health and welfare.
- 6.3.10 Ensure the prudent use of local water resources by the City of Redondo Beach municipal government by continuing to install and maintain drought-tolerant landscaping and adequate and operationally efficient irrigation systems in its parks, parkways, and median strips.
- 6.3.11 Encourage the use of reclaimed water for landscape, grading, industrial, and other State and County health approved purposes as service is provided in the City by the West Basin Municipal Water District.
- 6.3.12 Require that development projects of sufficient scale to make it economically feasible incorporate dual pipe systems for the use of reclaimed water for irrigation and other State and County health approved purposes where these uses are accessible to trunkline distribution service.
- 6.3.13 Work with the City's water providers to encourage local residents, businesses, and industries to store and re-use gray water.
- 6.3.14 Require that large scale development projects evaluate the feasibility of and where feasible incorporate gray water re-capture, storage, and distribution systems.

Issue **ELECTRICITY SERVICE**

Goal *It shall be the goal of the City of Redondo Beach (in cooperation with the Southern California Edison Company or any future purveyor of electricity to the city) to:*

6D Provide an adequate, safe, and orderly supply of electrical energy to support the various existing and future land uses and development intensities in the city. The services shall be provided and system operated in an ecologically-sensitive manner.

Objective *It shall be the objective of the City of Redondo Beach (in cooperation with the Southern California Edison Company or any future purveyor of electricity to the city) to:*

6.4 Work actively with the Southern California Edison Company (or any future purveyor of electricity to city) to ensure that adequate electrical facilities and capacities are available to meet the average daily and peak electrical energy needs of existing and future development in the city.

Policies *It shall be the policy of the City of Redondo Beach (in cooperation with the Southern California Edison Company or any future purveyor of electricity to the city) to:*

6.4.1 Improve and enhance cooperation and communication with the Southern California Edison Company (or any future purveyor of electricity to the city) to promote effective planning and ensure the most efficient and environmentally sensitive operation and maintenance of the city's electricity supply system and facilities.

6.4.2 Require that the approval of new development in the city be contingent upon the ability of the project to be served with adequate electrical infrastructure and service.

6.4.3 Promote and require the undergrounding of electrical utilities, including on-site electrical utility infrastructure and connections within a new development project, unless such undergrounding is judged as being infeasible.

6.4.4 Continue, through the City Public Works Department, to pursue potential funding mechanisms (outside of the city's General Fund) to undertake and carry out a more general program to incrementally underground, where

possible, all of the existing overhead electrical utility infrastructure, cable television lines, and overhead telephone lines in the city.

- 6.4.5 Ensure the provision of adequate illumination of all public streets, alleys (under special conditions) and public areas; upgrading areas which are deficient and maintaining light fixtures in good working order.
- 6.4.6 Require that improvements to or expansion to the existing city street lighting system and or new street light systems necessitated by new private development be borne by the project proponent; either through the payment of fees, or through the actual construction of the facilities.
- 6.4.7 Work, through the City Public Works Department, with the Southern California Edison Company (or any future purveyor of electricity to the city) in developing and implementing a menu of programs for public information/education and action in encouraging electricity conservation practices.
- 6.4.8 Work with the Southern California Edison Company to ensure that their facilities and operations are provided in a manner that is compatible with adjacent and surrounding uses in the community. Continue to pursue and implement, where feasible, a program of mitigation measures to lessen the severity and occurrence of the impacts of these facilities relative to noise, air quality, etc.
- 6.4.9 Work, through the City Public Works Department to monitor the evolving issue of Electromagnetic Radiation Frequencies [EMF] (from electrical operations and facilities) and their potential impacts on the community. As information and mitigation measures for these impacts becomes available, they should be analyzed and implemented, as possible and feasible, through the community.

Issue **NATURAL GAS SERVICE**

Goal *It shall be the goal of the City of Redondo Beach (in cooperation with the Southern California Gas Company or any future purveyor of natural gas to the city) to:*

- 6E Provide an adequate, safe, and orderly supply of natural gas to support the various existing and future land uses and development intensities in the city. The services shall be provided and system operated in an ecologically-sensitive manner.

Objective *It shall be the objective of the City of Redondo Beach (in cooperation with the Southern California Gas Company or any future purveyor of natural gas to the city) to:*

6.5 Work actively with the Southern California Gas Company (or any future purveyor of natural gas to the city) to ensure that adequate natural gas facilities and capacities are available to meet the average daily and peak natural gas energy needs of existing and future development in the city.

Policies *It shall be the policy of the City of Redondo Beach (in cooperation with the Southern California Gas Company or any future purveyor of natural gas to the city) to:*

6.5.1 Improve and enhance cooperation and communication with the Southern California Gas Company (or any future purveyor of natural gas to the city) to promote effective planning and ensure the most efficient and safe operation and maintenance of the city's natural gas supply system and facilities.

6.5.2 Require that the approval of new development in the city to be served by natural gas be contingent upon the ability of the project to be served with adequate natural gas infrastructure and service.

6.5.3 Require that all new development to be served by natural gas install on-site pipeline connections to distribution facilities underground, unless such undergrounding is judged to be infeasible.

6.5.4 Work with the Southern California Gas Company to develop a program for the future protection and conservation of natural gas resources, as supplies warrant into the future.

Issue **TELECOMMUNICATIONS SERVICE**

Goal *It shall be the goal of the City of Redondo Beach (in cooperation with the General Telephone and Electric Company and Century Cable Company or any additional or future purveyors of telecommunications services to the city) to:*

6F Ensure the availability, operation, and maintenance of an adequate, modern telecommunications system (i.e., telephone, facsimile, cellular telephone, cable television, and satellite television/communication) to support the needs of existing and future land uses and development intensities in the city.

Objective *It shall be the objective of the City of Redondo Beach (in cooperation with the General Telephone and Electric Company and Century Cable Company or any additional or future purveyor of telecommunications services to the city) to:*

6.6 Work to ensure that adequate, modern telecommunications systems and facilities (i.e., telephone, facsimile, cellular telephone, cable television, and satellite television/communication) are available to meet the needs of existing and new development in the city.

Policies *It shall be the policy of the City of Redondo Beach (in cooperation with the General Telephone and Electric Company and Century Cable Company or any additional or future purveyor of telecommunications services to the city) to:*

6.6.1 Provide for the continued development, expansion, and modernization of telecommunications systems (i.e., telephone, facsimile, cellular telephone, cable television, and satellite television/communication) [including fibre optics systems] as feasible, to ensure and enhance communication between residents, businesses, government agencies and other similar entities.

6.6.2 Improve and enhance cooperation and communication with the General Telephone and Electric Company and Century Cable Company (or any additional or future purveyor of telecommunications services to the city) to promote effective planning and ensure the most efficient operation and maintenance of the city's telecommunications system and facilities.

6.6.3 Pursue the expansion of coverage and availability of local cable television programming for government and community service meetings and events, public service notices and activities, and other non-profit or community-serving programs that may be of interest or value to the community.

6.6.4 Require that all new development to be served by telecommunications install on-site connections to distribution facilities underground, unless such undergrounding is judged to be infeasible.

6.6.5 Ensure, through the design review and approval process of the City Planning Commission and City of Redondo Beach Building and Safety Department, that satellite dishes and other highly visible telecommunications devices are (preferably) placed and designed as such to

be shielded from view, or (at the least) designed as such to be compatible with surrounding uses and design characteristics of the community.

- 6.6.6 Work with General Telephone (and any other purveyors of telephone service) to ensure that outdoor telephone facilities are located and designed so as to prevent adverse impacts on surrounding properties.

Issue **GROUNDWATER (SEAWATER) INTRUSION BARRIER**

Goal *It shall be the goal of the City of Redondo Beach (in cooperation with the Los Angeles County Department of Public Works Flood Control Division) to:*

- 6G Ensure the continued protection of groundwater sources and aquifers in the local area and region from contamination through saltwater intrusion from Santa Monica Bay and the Pacific Ocean. The protection system shall be operated and maintained in an ecologically-sensitive manner.

Objective *It shall be the objective of the City of Redondo Beach (in cooperation with the Los Angeles County Department of Public Works Flood Control Division) to:*

- 6.7 Work to continue to protect local and regional groundwater sources and aquifers from contamination through saltwater intrusion from Santa Monica Bay and the Pacific Ocean.

Policies *It shall be the policy of the City of Redondo Beach (in cooperation with the Los Angeles County Department of Public Works Flood Control Division) to:*

- 6.7.1 Ensure the continued operation, maintenance, upkeep, and expansion (as necessary) of the existing West Coast Basin Barrier Project groundwater (seawater) intrusion barrier and water injection well system operating in the eastern portion of South Redondo Beach.

- 6.7.2 Improve and enhance cooperation and communication with the Los Angeles County Department of Public Works Flood Control Division officials to ensure that the city's groundwater (seawater) intrusion barrier and freshwater injection well system and facilities are effectively planned, operated, and maintained and that their construction and operation is undertaken in a manner that minimizes traffic disruptions and does not adversely impact adjacent land uses.

6.7.3 Ensure that any new development proposed in the area of the existing groundwater (saltwater) intrusion barrier and freshwater injection well facilities is reviewed to prevent potential impacts or damage to the system.

Issue **PETROLEUM PIPELINE FACILITIES**

Goal *It shall be the goal of the City of Redondo Beach (in cooperation with the various existing and future petroleum or utility companies in the city) to:*

6H Ensure the continued safe operation of petroleum extraction and transportation facilities throughout the city. The facilities and systems shall be operated in an ecologically-sensitive manner.

Objective *It shall be the objective of the City of Redondo Beach (in cooperation with the various existing and future petroleum or utility companies in the city) to:*

6.8 Work to ensure that all petroleum extraction and transportation facilities in the city are operated and maintained in the most safe and effective manner available using existing technology and industry practices.

Policies *It shall be the policy of the City of Redondo Beach (in cooperation with the various existing and future petroleum or utility companies in the city) to:*

6.8.1 Improve and enhance cooperation and communication with the various petroleum or utility companies operating in the city to promote effective planning and ensure the most efficient operation, maintenance, and monitoring of the city’s petroleum extraction and transportation system and facilities.

6.8.2 Maintain, through the City of Redondo Beach Public Works Department, a comprehensive textual and graphic inventory of the operators, location, and function of all existing petroleum extraction and transportation operators in the city.

6.8.3 Require the inspection and monitoring of all petroleum extraction and transportation facilities in the city be carried out in a formal and organized manner, on at least an annual basis to ensure the continued safe operation of such facilities. The inspection and monitoring programs shall be reviewed and approved by the City of Redondo Beach Department of Public Works, and the programs shall be funded by the owners and/or operators of the various facilities.

- 6.8.4 Work, through the local design review and approval process implemented with the Conditional Use Permit process and building inspection/citation process, to ensure that all above-ground petroleum extraction and transportation facilities are designed, constructed, and maintained in an aesthetically-pleasing manner.

3.2.10 Implementation Programs

The following presents the respective programs which shall be carried out by the City of Redondo Beach (or the indicated designee) to implement the preceding goals, objectives, and policies of the Utilities Section of the General Plan. Each implementation program is followed by a number which indicates the pertinent policy or policies which it is intended to implement. Notwithstanding the language in specific implementation measures, action by the City is subject to the availability of funding and staff.

Sanitary Sewer, Storm Drainage, and Water Service

- Continue to provide and adequately maintain the City-owned and operated components of the local sanitary sewer and storm drainage infrastructure systems, while improving and placing additional emphasis on the fiscal and functional efficiency and environmental sensitivity of these systems (*Policy 6.1.2, 6.2.1, 6.2.2, 6.2.13*).
- City of Redondo Beach Department of Public Works staff shall continue to meet and communicate on a regular basis with Los Angeles County Sanitation Districts officials, Los Angeles County Department of Public Works Flood Control Division officials, and the California Water Service Company and Metropolitan Water District, regarding operation, maintenance, and improvement of the local sanitary sewer, storm drainage, and water infrastructure systems (*Policy 6.1.1, 6.2.1, 6.2.2, 6.2.4, 6.2.13, 6.3.1, 6.3.5, 6.3.9*).
- Prior to project approval and construction, and in accordance with local environmental and development review), ensure that adequate sanitary sewer, storm drainage, and water service can be provided to all new local development (*Policy 6.1.5, 6.2.3, 6.3.4*).
- Require, where project impacts necessitate and law allows, that the cost and construction of specific upgrading or improvement of local sanitary sewer, storm drainage, and water infrastructure systems be borne directly by project proponents, through payment of impact fees, participation in benefit assessment districts, and direct construction and eventual public dedication of such improvements (*Policy 6.1.7, 6.1.8, 6.2.3, 6.2.7, 6.3.2, 6.3.7*).

- Continue and expand, as necessary, existing City of Redondo Beach Department of Public Works capital improvement programs for the upgrade of the local sanitary sewer, storm drainage, and water infrastructure systems where they are deficient, using public and/or private funds (*Policy 6.1.3, 6.1.4, 6.2.1, 6.2.3, 6.2.4, 6.2.5, 6.2.13, 6.3.2, 6.3.3*).
- Actively solicit funds for the improvement and maintenance of the City's sanitary sewer, storm drainage, and water infrastructure from state and federal agencies when such revenue is available and the costs cannot be assigned to development projects (*Policy 6.1.2, 6.1.3, 6.1.4, 6.2.5, 6.2.6*).
- City of Redondo Beach Department of Public Works staff shall formally monitor the activities of and continue to meet with officials of the Southern California Association of Governments (SCAG), the Regional Water Quality Control Board, adjacent municipalities, and other appropriate public agencies as they relate to sanitary sewer treatment capacity and planning, particularly regarding the possibility of the expansion of existing sewage treatment facilities or the construction of a new facility to accommodate expanded development and activity in the region (*Policy 6.1.1, 6.1.2, 6.1.3, 6.1.4*).
- Implement, where appropriate and feasible, the recommendations of an updated comprehensive master plan for sanitary sewer services and operation based on the Preliminary Sewer Master Plan, prepared for the City of Redondo Beach by Donald G. Rosenberg and Associates, Incorporated (*Policy 6.1.6*).
- Develop additional local ordinances setting impact fees and charges for the issuance of sewer and water connection permits, as necessary, as a method of controlling the rate of increase in sewer flows and water usage, and their impacts on the overall future capacity of the local sanitary sewer and storm drainage system (*Policy 6.1.5, 6.1.7, 6.1.9, 6.2.5, 6.2.7, 6.3.2, 6.3.7*).
- The City of Redondo Beach Department of Public Works shall periodically, monitor, reassess, and modify rates and charges for sanitary sewer connections and service. The established rates should reflect the costs of providing, maintaining, and improving local services, and should be allocated equitably to users according to demand and actual usage (*Policy 6.1.8, 6.1.9*).
- The City of Redondo Beach Department of Public Works staff and Community Development (Planning) Department staff, through monitoring and participating in the design review and construction process, shall cooperate with, encourage, and mandate (where possible) that public utilities design and site public improvements and facilities in an attractive manner, so that they are well integrated with and sensitive to existing and planned development (*Policy 6.1.1, 6.2.4, 6.2.13, 6.3.5*).

- Adopt a local ordinance which would require public and private development and major local water users to incorporate wastewater and reclaimed storm water recycling systems within new buildings, for irrigation and other non-potable uses (*Policy 6.1.10, 6.1.11, 6.2.13*).
- Adopt an ordinance which requires that development projects evaluate the physical and financial feasibility of incorporating (a) dual pipe systems for the use of reclaimed water for irrigation and other State and County approved purposes and (b) gray water re-capture, storage, and distribution systems. Where such is determined to be feasible, the project shall be conditioned through the permitting process to require the inclusion of such systems. In the drafting of the ordinance, the City shall determine the appropriate use and size of development where such studies shall be mandated (*Policies 6.3.12, 6.3.14*).
- Work with the West Basin Municipal Water District to encourage that they provide information and appropriate incentives to residents, commercial businesses, and industrial uses for the use of reclaimed and re-use of gray water. Such may include the publication of educational brochures, media advertising, cable television broadcasts, pricing benefits, and/or other techniques (*Policies 6.3.11, 6.3.13*).
- City of Redondo Beach Department of Public Works Department staff, or a designated consultant, shall conduct an analysis of the operational and economic implications of constructing an improved filtering or purification system to treat collected storm water prior to its discharge into drainage outfall points. If determined to be fiscally and operationally feasible, the construction and operation of such a system shall be carried out (*Policy 6.2.9*).
- Provide, through newspaper advertisement and direct mailing notice to surrounding residents and businesses, adequate information to the public regarding planned storm drainage improvements or repairs prior to initiation of such projects (*Policy 6.2.10*).
- City of Redondo Beach Department of Public Works staff shall meet and work with the County Sanitation District to design and install appropriate improvements to improve the aesthetic and visual appearance of the various local ocean storm drainage outfalls (*Policy 6.2.11*).
- City of Redondo Beach Department of Public Works staff shall create, distribute and make available to the public, “brochure or pamphlet style” information to instruct local residents on the proper means and locations of disposing of household debris or toxins, to prevent further damage to the local storm drainage

system and environment through improper disposal into the local storm drainage system (*Policy 6.2.14*).

- Participate and review regional studies, technical materials, and planning efforts and conduct local studies analyzing the feasibility, locations, and mechanisms leading to the potential realization and discovery of alternative means of water resources and water production for use in the community (including seawater desalination) (*Policy 6.3.8*).
- Adopt specific local ordinances and regulations which will build upon ongoing regional efforts to promote and achieve additional water and wastewater conservation in the community, particularly in all new development (*Policy 6.3.6*).
- City of Redondo Beach Department of Public Works staff shall cooperate and work with officials of the California Water Service Company, to initiate and facilitate programs for water audits of existing development. These audits should define the current level of use and should also allow potential impacts to supplies and operations to be identified and mitigated (*Policy 6.3.6*).
- City of Redondo Beach Department of Public Works staff shall work with officials of the California Water Service Company, the West Basin Municipal Water District, and Metropolitan Water District to create additional written materials for public distribution and visual materials explaining the potential and existence of local and regional drought conditions and the need/methods for personal and local water conservation. This effort should include the videotaping of a session to be played on a periodic basis on the local government access cable television system, as overall program scheduling allows (*Policy 6.3.6*).
- City of Redondo Beach Department of Public Works staff shall, on a regular basis, continue to monitor local water quality conditions. When problems are identified and arise, Department staff shall work with California Water Service Company representatives to notify residents and property owners and effectively restore appropriate quality, in accordance with established State Department of Health and Safety requirements (*Policy 6.3.9*).
- As fiscal and operational/maintenance conditions allow, drought-tolerant landscaping and adequate and operationally-efficient irrigation systems shall be installed and maintained in and along all local parks, properties, parkways, and median strips (*Policy 6.3.10*).

Electricity, Natural Gas, and Telecommunications Services

- City of Redondo Beach Department of Public Works staff shall continue to meet and communicate on a regular basis with the Southern California Edison Company, the Southern California Gas Company, the General Telephone and Electric Company, the Pacific Bell Telephone Company, and the Century Cable Company (or other future local purveyors) regarding the operation, maintenance, and improvement of the local electric, natural gas, and telecommunications infrastructure systems (*Policy 6.4.1, 6.5.1, 6.6.2*).
- Prior to project approval and construction, and in accordance with the local environmental and development review process), ensure that adequate electricity, natural gas, and telecommunications service can be provided to all new local development (*Policy 6.4.2, 6.5.2, 6.6.1*).
- Require, where project impacts necessitate and law allows, that the cost and construction of specific upgrading or improvement of local sanitary electrical, natural gas, and telecommunication infrastructure systems be borne directly by project proponents, through payment of impact fees, participation in benefit assessment districts, and direct construction and eventual public dedication of such improvements (*Policy 6.4.6, 6.5.2, 6.6.1*).
- In accordance with the local environmental and development review process, require undergrounding of all on-site utilities and connections to local distribution systems in all new development. Permit a variance from this requirement if it can be demonstrated that such undergrounding will be physically infeasible or would otherwise result in a significant hazard to the community (*Policy 6.4.3, 6.5.3, 6.6.4*).
- City of Redondo Beach Department of Public Works staff shall continue to aggressively pursue funding mechanisms (outside the General Fund), to undertake additional, incremental, undergrounding of all local electrical utility infrastructure, cable television lines, and overhead telephone lines, similar to the electrical undergrounding efforts completed along Artesia Boulevard (*Policy 6.4.4*).
- City of Redondo Beach Department of Public Works staff shall identify priority sites and fund the illumination of all local public streets, alleys (where required), and public areas; upgrading areas which are deficient. The use of benefit assessment districts for such funding shall be pursued (*Policy 6.4.5*).
- Continue to meet formally with Southern California Edison Company officials to discuss and review operational/environmental conditions and impacts of their facilities upon the local community. Efforts in this area shall focus on identifying and implementing (where feasible) capital and operational measures to mitigate the severity and occurrence of the impacts of these facilities relative to noise, air

quality, etc. This effort should include public forums, held (on at least an annual basis) in the community, to engender public input and suggestions of additional feasible mitigation measures (*Policy 6.4.8*).

- City of Redondo Beach Department of Public Works officials shall continue to actively monitor federal, state, and regional analysis and activities related to the issue and impacts of Electromagnetic Radiation Frequencies (EMF) [from electrical transmission operations]. The City shall conform to and shall, if feasible, mandate all local public utility operators to conform to applicable federal and state requirements related to this subject (*Policy 6.4.9*).
- City of Redondo Beach Department of Public Works staff shall work with officials of the Southern California Edison Company and the Southern California Gas Company to create additional written materials for public distribution and visual materials explaining the potential and existence of local energy/resource deprivation conditions and the need/methods for personal and local energy conservation. This effort should include the videotaping of a session to be played on a regular basis on the local government access cable television system, as overall program scheduling allows (*Policy 6.4.7, 6.5.4*).
- City of Redondo Beach Department of Public Works staff shall cooperate and work with officials of the Southern California Edison Company, and the Southern California Gas Company to initiate and facilitate programs for energy audits of existing development. These audits should define the current level of use and should also allow potential impacts to air noise, etc. to be identified and mitigated (*Policy 6.4.7, 6.5.4*).
- The City of Redondo Beach and Century Cable Company (or future service purveyors) shall continue to allocate funds and resources, as feasible, for the expanded production and transmission of cable television programs and information to residents and business persons; particularly government and community service meeting and events, public services and activities, and other non-profit or community service programs. Expand programming topic variety and services as additional funds become available and opportunities present themselves. Specific mechanisms should be developed to resolve recurring service problems and upgrade/replace these services if the problems cannot be acceptably resolved (*Policy 6.6.1, 6.6.2, 6.6.3*).
- The City of Redondo Beach Community Development Department (through the development, environmental, and building permit review and approval process) shall ensure that satellite dishes and other large or highly visible telecommunications devices are sited to be shielded from public view, and

designed to be compatible with surrounding land uses and the urban and architectural design character of the area (*Policy 6.6.5*).

Groundwater (Seawater) Intrusion

- Continue to assist the County of Los Angeles Department of Public Works Flood Control Division in the ongoing operation, maintenance, monitoring, and expansion (as necessary) of the West Coast Basin Barrier Project to protect against seawater intrusion (*Policy 6.7.1*).
- City of Redondo Beach Department of Public Works staff shall continue to meet and communicate on a regular basis with Los Angeles County Department of Public Works Flood Control Division officials to review and discuss the operational status of the West Coast Basin Barrier Project to ensure the most efficient operation and maintenance of the system (*Policy 6.7.2*).
- The City of Redondo Beach Community Development Department and City of Redondo Beach Public Works Department shall, through the local design and environmental review and approval process, ensure that new development proposed in the area of the existing groundwater (seawater) intrusion barrier and water injection well system will not create any adverse impacts or damage to the operation of the system (*Policy 6.7.3*).

Petroleum Pipeline Facilities

- City of Redondo Beach Department of Public Works officials shall, on an ongoing basis, contact all companies and entities operating and/or maintaining petroleum extraction or transportation facilities within the community to receive updates on ownership and operational activities, and provide information relative to the City's policies, practices, and requirements in relation to these facilities (*Policy 6.8.1*).
- City of Redondo Beach Department of Public Works officials shall complete and continue to maintain and update their ongoing textual and graphic inventory of the operators, location, and function of all petroleum extraction and transportation operators in the City, to assist in assuring safety and information availability in planning and other development and construction-related activities (*Policy 6.8.2*).
- Adopt an ordinance to require formal inspection and monitoring of all petroleum extraction and transportation facilities in the City to ensure an organized and accountable means of achieving this task, and improve and ensure the continued safe and effective operation of these facilities. The inspection and monitoring program shall be managed and overseen by the City of Redondo Beach Department of Public Works (*Policy 6.8.3*).
- The City of Redondo Beach Community Development Department and City of Redondo Beach Public Works Department shall, through conditions mandated in the local design and environmental review and approval process, building inspection and citation process, and conditional use permit issuance and renewal process, ensure that all above-ground petroleum extraction and transportation facilities in the community are designed, constructed, and maintained in an aesthetically-pleasing manner (*Policy 6.8.4*).