

The Marine Ecology of Marina del Rey Harbor, California

A BASELINE SURVEY FOR THE COUNTY OF LOS ANGELES

DEPARTMENT OF SMALL CRAFT HARBORS

1976-1977



by
Harbors Environmental Projects
edited by
Dorothy F. Soule and Mikihiko Oguri

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*Front Cover Photograph of Playa del Rey area in January,
 1958, prior to dredging for the Marina.
 Photo by Fairchild Aerial Surveys, courtesy
 of Dr. D. J. Reish.*

SUMMARY

MARINE ECOLOGY OF
MARINA DEL REY HARBOR, CALIFORNIA

Summary

Marina del Rey is the largest man-made recreational harbor in the world, created some 15 years ago from coastal wetlands and Ballona Creek, and facing southwest on Santa Monica Bay. Prior to the present project, no biological survey had previously been carried out on the marina nor on the area prior to development. It had been observed that at times water quality was poor, and the fauna appeared to be depauperate, while other marinas nearby did not show such patterns. The County of Los Angeles Department of Small Craft Harbors initiated a contract with Harbors Environmental Projects for studies beginning in July 1976, and requested assistance from the USC Sea Grant Program, which started in October 1976. The combined studies cover monitoring, identifying sources of impact on water quality, and developing recommendations for improving the marine environment.

Thirteen stations were established in the marina area, eleven in the marina channels, plus one in the Ballona Creek flood control channel, and one in the bird sanctuary area. At monthly intervals zooplankton and phytoplankton samples were taken, and water temperature, salinity, dissolved oxygen, pH and transparency were measured at one-meter intervals through the water column at each station. Surface water samples were taken to measure the concentration of nutrients and to determine phytoplankton productivity and pigments. Zooplankton were sampled by making vertical tows with a conical net. Benthic collections were made with a grab sampler at less frequent intervals to determine the populations of organisms in the bottom sediments. Fish were sampled by trawl and gill netting. Both the waters and sediments were sampled and analyzed chemically to determine presence or influx of pollutants.

Water temperatures were highest in August 1976 and lowest in March 1977, with the inner slips and shallow areas of the marina showing higher temperatures than the outer stations. Salinity values were similar to those expected from sea water, except after a rain when a less saline layer would appear on the water surface. Dissolved oxygen and pH showed similar trends, being high in surface waters during the warmer months and lower in cooler months. Transparency of the waters is often inversely related to suspended sediments, so that values

of 80%-95% were found in summer months and these dropped to 45%-50% in the winter, particularly after a rain.

Following rainfall it was evident that dissolved oxygen in the marina dropped sharply. In September 1976, following a rainfall, the oxygen concentration dropped to about 4 ppm at many stations, and at station 13 in the bird sanctuary area values of 0.2 to 1.3 ppm were found. Another rain in January 1977 resulted in values of less than 2 ppm at most stations. Special samples collected in March after a rainfall showed high chemical oxygen demand (COD) but low biological oxygen demand (BOD), suggesting that the low oxygen was due primarily to organic or inorganic material in the runoff. However, photographs taken by James Quinn (DSCH) of an incoming tide after a rain showed clearly that debris such as styrofoam cups and grass clippings had been carried down Ballona Creek and back into the marina.

Special sampling cruises were made two and five days after a rainfall of 0.89 inches during March 16, 1977. On 18 March water samples were collected at four stations, and on 21 March both water and sediment were taken for chemical analysis at the USC Environmental Engineering laboratory. Immediate oxygen demand (IOD) dropped between the two dates at station 4, nearest the Venice canal tidegate, and at station 7, while an increase was noted at stations 10 and 12. Heavy metals decreased and both DDT and PCB increased in the waters during the three days between samplings. Water sampling data from the Los Angeles County Flood Control District, taken 15 April 1977 near the Lincoln Blvd. overpass (Station No. 41118) at Ballona Creek offer the only comparison available for the marina samples taken in March. This location is just inland from the perimeter of Marina del Rey and from station 12, near the mouth of Ballona Creek. (See Figure 1.2).

The levels of copper, iron, zinc, cadmium, lead and nickel were lower at station 12 than they were at Lincoln Blvd. Flood Control Station. On the other hand, levels of chromium and mercury were from 2 to 20 times higher at the downstream location, station 12. This might be explained by additional effluent entering the channel, or by sediment deposition and resuspension in the tidal prism, if the laboratory analyses are truly comparable.

Finer sediments appear to occur in the inner parts of the marina. In general, sediments from stations nearest the entry to the marina were lower in both organic material and heavy metals than those from stations in the inner parts of the marina. Station 3 was consistently the lowest in almost all parameters, and station 10 was highest.

Phytoplankton productivity, pigments and assimilation ratio showed seasonal trends of a moderate bloom in April 1977 and secondary, sometimes localized, blooms through the summer and fall. Winter values were the lowest recorded. In general, the most productive stations were station 1 at the entry, and station 8 near the beach; the least productive were station 3 near the Venice canal tidegate, station 7 near the boat launching ramp, and station 10 near the bird sanctuary. The effect of rainfall and runoff is not immediately apparent, although blooms were noted at most of the stations one month after rainfall in September 1976 and January 1977. Rainfall in March may have engendered general bloom conditions in April, but this is also the time for the spring bloom which occurs generally along this coast.

Zooplankton in Marina del Rey show a ubiquitous occurrence and general dominance by *Acartia tonsa*, with a higher diversity in the outer stations, numbers 1-5, than in the inner stations. Seasonally high population levels occur in summer and low levels are found in the winter months. Station 3 is the most depauperate of all, showing lower numbers throughout the year. Number 11 is also one of the poorer stations.

Benthic populations in the marina show a generally good pattern of diversity, suggesting that the sediments in which they live are not heavily polluted. Station 1, which would be most influenced by the flow from Ballona Creek, showed heavy concentrations of *Capitella capitata*, a species highly tolerant of pollution and of environmental variability.

Fish collections conducted in Marina del Rey by both trawl and gill net resulted in the capture of 630 fish of 13 species. Juvenile anchovies collected in Basin D were the most numerous. Other dominant species included the white croaker, California halibut and spotted sand bass.

Historical unpublished data taken by Dr. D. J. Reish prior to and during construction of the marina was assembled and included in this report (See Appendix A).

Cage culture experiments, which were not funded by OSG or DSCH, were carried out in part by Harbors Projects personnel along with Dr. C. R. Feldmeth from Claremont Colleges and Mr. Russ Izor, skipper of the sport fishing boat Peace. Cages were anchored in the water at the USC Catalina Marine Science Center and juvenile kelp bass were gathered by Scuba divers. Fish were fed a supplemental diet of trout chow and showed 100% survival and growth for the test period of about six months, after which the experiment had to be terminated for lack of funds. While admittedly a limited pilot project, this

established a feasibility for developing stocks of desired fish species to be transplanted to sportfishery locations, much as the California Fish and Game now stocks freshwater streams. A small artificial reef was established in 1966 by the County Fish and Game Commission, with 250 tons of rock. It is located about one nautical mile west of the north end of the breakwater and was visited once by a diver team to examine it as a possible site for stocking.

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CHAPTER 1

ENVIRONMENTAL INVESTIGATIONS
OF
MARINA DEL REY, CALIFORNIA

INTRODUCTION

History

Marina del Rey Small Craft Harbor is a man-made recreational marina which encompasses some 403 acres of waterways, including navigation channels and small craft berthing basins. A similar amount of peripheral land in the marina is devoted to support facilities. About one-third of the land is held or operated directly by the Los Angeles County Department of Small Craft Harbors for the public, and two-thirds is under lease to private entities that provide slip and dock facilities, shops, restaurants, apartments and hotel accommodations.

The marina was created from a part of the area which, much earlier, had been included in the estuarine wetlands associated with Ballona Creek (Fig. 1.1).

The creek was concretized over a period of years before marina construction, creating a major flood control channel that drained inland areas from central Los Angeles seaward. Tidal gates connect Ballona Lagoon with the north side of the marina channel entry, and Del Rey Lagoon is connected with the flood control channel on the south side. Each lagoon lies parallel to the ocean behind the sandy strands. The former wetlands were partly occupied by farms and oil fields prior to development of the marina; much of the area dredged had earlier been drained or filled (see front cover photo).

The Department of Small Craft Harbors (1976) compiled a short history of the region, indicating that a plan to develop the area into a major commercial harbor was conceived as early as 1887. In 1919, the U.S. Army Corps of Engineers reported to Congress that development of the Playa del Rey Inlet and Basin as a major commercial harbor was impractical. However, in 1936, Congress authorized reconsideration of the negative 1919 report. The decision was finally made to enlarge the present Los Angeles Harbor instead of constructing a commercial harbor at Playa del Rey.

In 1949, the U.S. Army Corps of Engineers indicated the feasibility of constructing a pleasure craft harbor, and Marina del Rey became a viable plan. The Los Angeles County Board of Supervisors sponsored state legislation in 1953, which eventually granted the county a two million dollar loan from the state tidelands oil revenue to complete purchase of the new harbor site. In 1954, Marina del Rey became an authorized federal project and planning moved into high gear. Funds for construction came from the federal and Los Angeles County governments and from a 13 million dollar revenue bond

issue. By late 1958, the entrance channel jetties were complete and construction of the marina's interior continued. Dredging was completed and the harbor opened in 1962. However, during the winter of 1962-63 the marina suffered severe storm damage due to excessive surge caused by wave action along the main channel.

Model studies at the U.S. Army Corps of Engineers Waterways Experiment Station at Vicksburg, Mississippi indicated the need for an additional, offshore breakwater (Fig. 1.2). Appropriations by the County of Los Angeles and the Federal Government were shared in the construction of this breakwater, which was completed in January of 1965. Total cost for the construction of the entire marina was \$36,250,000.

Today over 5,800 recreational boat slips are in use and hundreds of smaller boats are in dry storage. A new park and library are present, along with a large public launching ramp for trailer-class boats. Some 30 restaurants are located around the marina's shores, along with apartment residences for more than 10,000 people. The marina has now been in operation for about fifteen years.

Areas which were once mudflats have now become part of a protected bay environment. A rich and relatively diverse fauna such as those which exist in Alamitos Bay on the south coast or nearby King Harbor on the west coast might be expected to occur in Marina del Rey. Unfortunately the fish fauna is reduced and provides little resource for recreational fishing. The invertebrate species composition had not been sampled in the marina prior to the present study.

Marina del Rey also has a serious problem with floating trash which appears to enter the marina from adjacent Ballona Creek with the changing tide. Such a condition may also mean that water of poor quality is entering the marina and perhaps causing less than optimal conditions for the development and maintenance of a diverse marine community. Storm drains also flow into the marina at several locations, probably adding to the water quality problem (Fig. 1.2).

Marine Environmental Investigations

In July, 1976 the Los Angeles County Board of Supervisors approved a proposal for a study of Marina del Rey for the Department of Small Craft Harbors, covering the biological, physical and chemical aspects of the waters by the University of Southern California Harbors Environmental Projects program. The USC Sea Grant Program, funded by the Department of Commerce

(NOAA), has provided some matching funds for the present study.

The physical, chemical and biological aspects of Marina del Rey had not been systematically sampled previously. Several county agencies, including the Los Angeles Flood Control District and the Department of Health Services, have responsibilities and technical capabilities to survey and analyze the physical and chemical properties of both ocean and fresh waters. However, their objectives relate primarily to human health standards. A need thus existed for a thorough study of the marine biota and the ambient conditions which directly affect these marine organisms. The California Department of Fish and Game has not made such a comprehensive study of the marina.

Dredging took place for the marina between January, 1960 and August, 1962. During that period Dr. Donald J. Reish studied the fauna of the Ballona Creek jetty area. His published and unpublished data have been made available for comparison with existing conditions (Appendix A).

The only other studies of the marina were limited in scope and duration. In 1971, the University of Southern California School of Engineering analyzed stormwater runoff (Bowerman and Chen, 1971). In 1973 a study of birds was carried out for six months by Schleicher (1974), but it did not cover the spring nesting or migratory seasons and may have thus missed important species usage. A study of the flood control channel flow characteristics was carried out by USC in 1973 (Brandsma *et al.*, 1973).

Scope of the Study

Thirteen stations were selected as representative of the diverse environments in or adjacent to the marina (Fig. 1.2). Stations 12 and 13 cannot be sampled by boat, so benthic samples were made at eleven stations only. The station descriptions are presented in Table 1.1.

The sampling program included, on a monthly basis, measurements at thirteen stations of temperature, salinity, dissolved oxygen and pH. A remote probe instrument was used to take measurements at one-meter intervals through the depth of the water column. Turbidity (percent light transmittance) was also measured through the water column by a remote probe transmissometer. Water samples were analyzed for the nutrients ammonia, nitrite, nitrate and phosphate.

Phytoplankton productivity and pigments were also measured

monthly and zooplankton was sampled for identification by making oblique tows with a 253 μ mesh conical net. Bimonthly sampling of meroplankton (fouling fauna) was done by suspending settling racks at eight locations, at the 3-meter depth.

Benthic (bottom) invertebrates were sampled at eleven stations by Campbell grab three times during the year, rather than quarterly, due to multiple breakdowns of the county boat scheduled for sampling. Fish observations were made during the year and an intensive trawl and gill net survey was made in June, 1977.

Because of questions concerning the levels of pollutants in the water column following stormwater runoff, and of ambient levels in the sediments, several special analyses were made during the year. Sediments were analyzed for 22 parameters. Water was analyzed for 30 parameters, in samples taken before and after a rainfall in March, 1977.

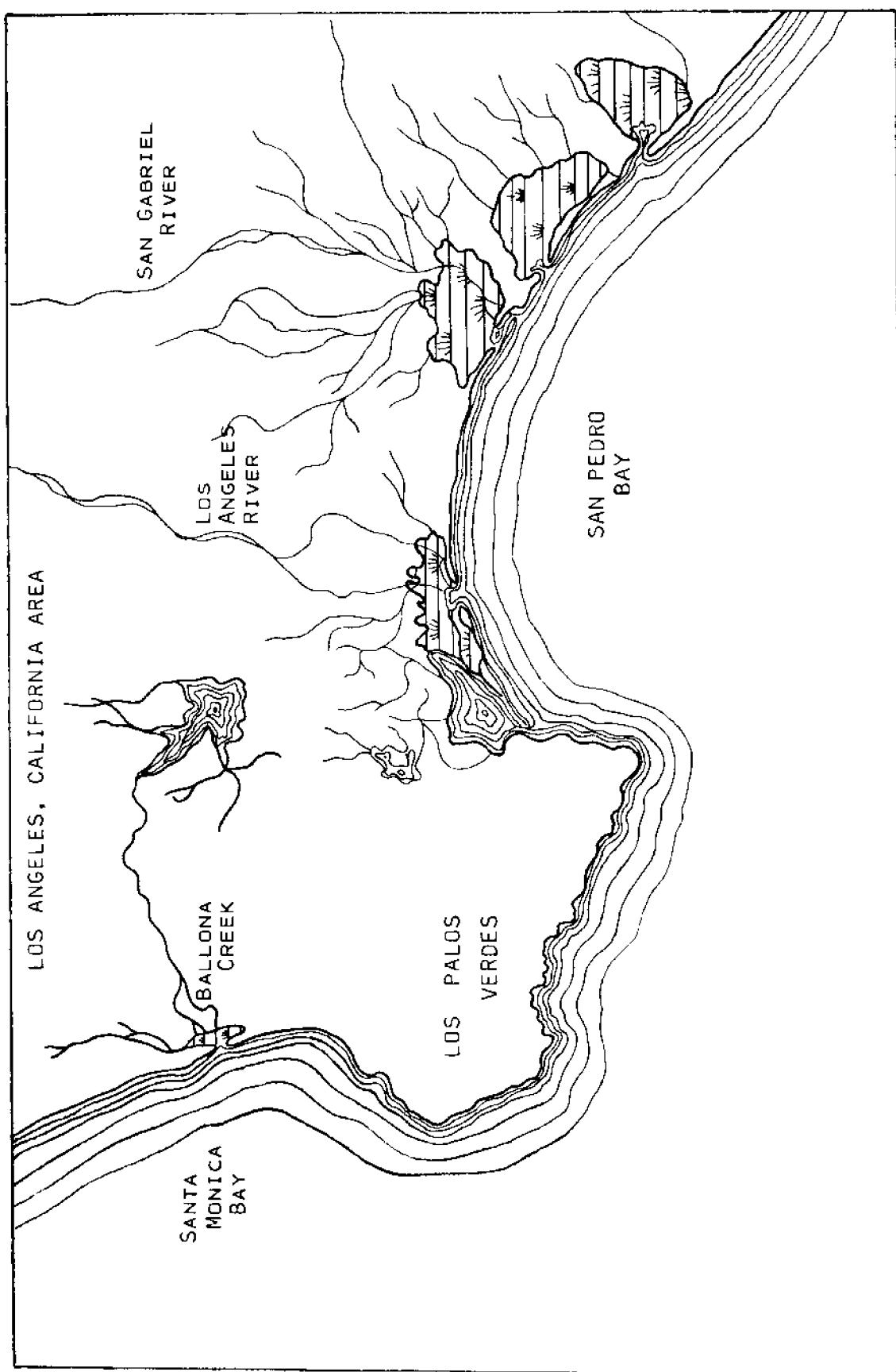


Figure 1.1.

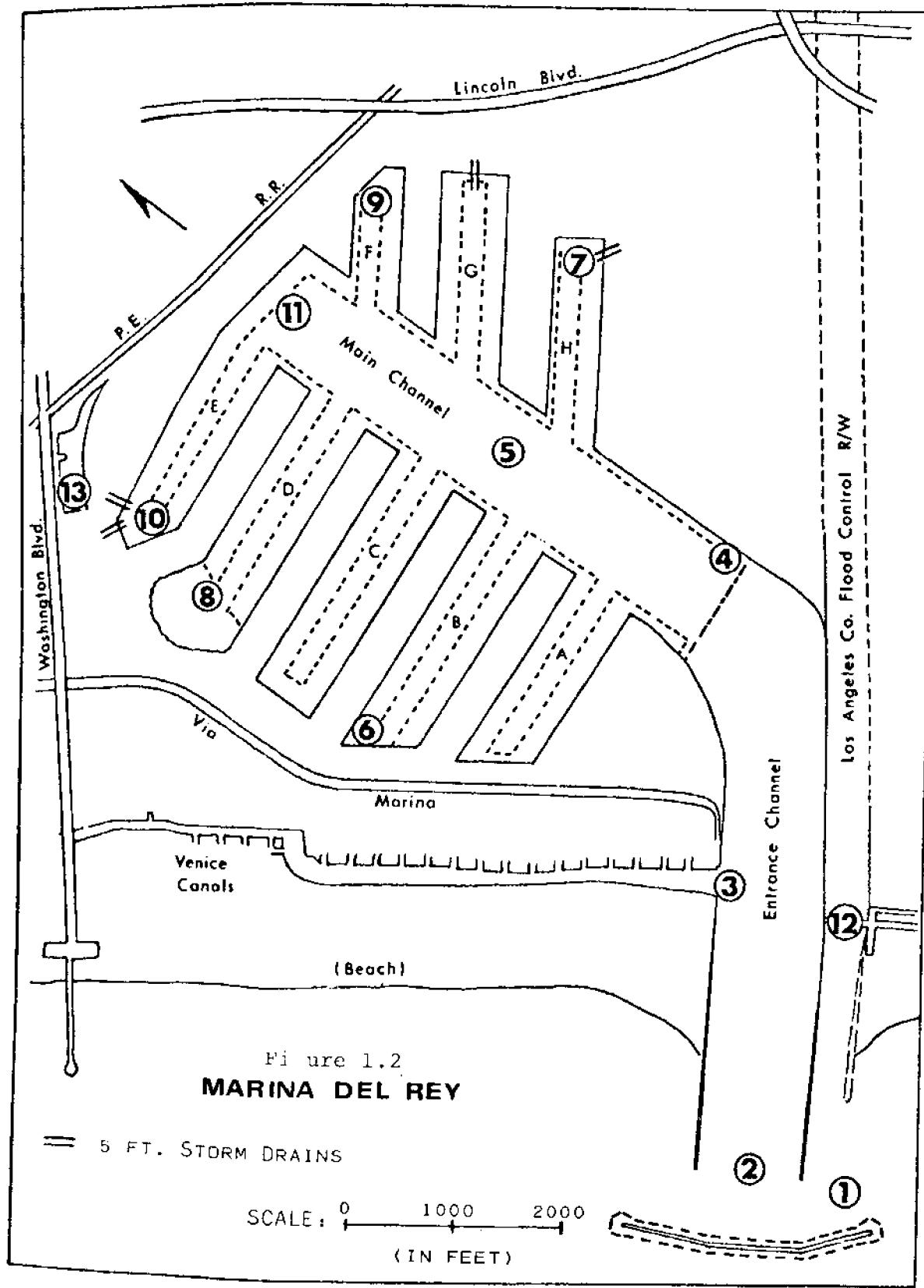


Table 1.1. Descriptions of Stations

- MDR-1 1. Located at buoy at east entrance to Marina.
 2. Off mouth of Ballona Creek, some protection from breakwater but subject to currents along coast.
 3. Subject to discharge from Ballona Creek, especially after rains.
 4. Depth 21 feet.
- MDR-2 1. At entrance of Marina, midway between the two jetties.
 2. Protection by breakwater but subject to currents along coast.
- MDR-3 1. Located on west side of main channel in front of tide gate at entrance to the old Venice canal.
 2. Protected by jetties and breakwater.
 3. Subject to discharge from Venice canal on ebb tides and after rains.
 4. Depth 10 feet.
- MDR-4 1. At Administration dock on east side of main channel.
 2. Subject to heavy boating use.
 3. Protected from surge but exposed to strong westerly winds.
 4. Depth 15 feet.
- MDR-5 1. Located in the center of the main channel.
 2. Subject to heavy boating traffic.
 3. Depth 15 feet.
- MDR-6 1. At very back of Basin B.
 2. Protected from winds by concrete sea wall.
 3. Depth 10 feet.
- MDR-7 1. At work yard dock, back of Basin H.
 2. Exposed to afternoon westerly winds.
 3. Storm drain opening present.
 4. Depth 10 feet.
- MDR-8 1. At center buoy outside swimming beach in Basin D.
 2. Exposed to afternoon winds.
 3. Depth 10 feet.
- MDR-9 1. At very back of Basin F.
 2. Protected by slips and sea wall.
 3. Storm drain present.
 4. Depth 6 feet.

Table 1.1. (continued)

- MDR-10 1. At very back of Basin E.
2. Subject to daily flow from adjacent tide gate from Bird Conservation Area.
3. Subject to storm drain runoff after rains due to Bird Conservation Area.
4. Depth 9 feet.
- MDR-11 1. At end of main channel.
2. Storm drain present.
3. Depth 10 feet.
- MDR-12 1. On Ballona Creek at Pacific Avenue bridge.
2. Subject to daily discharge along Ballona Creek as well as storm runoff after rains.
3. Depth 6 feet.
- MDR-13 1. At tide gate in Bird Conservation Area.
2. Subject to daily flushing via tide gate.
3. Storm drain runoff present after rains.
4. Depth 6 feet.

CHAPTER 2

PHYSICO-CHEMICAL PARAMETERS

PHYSICO-CHEMICAL PARAMETERS

The interactions of physical and chemical parameters in the sea create the environmental conditions that govern the occurrence and distribution of marine organisms. While there are numerous factors that could be measured, and some that cannot, temperature, salinity, oxygen and pH are considered to be crucial in defining the local environment. Light transmittance measures the turbidity of the waters.

Temperature, salinity, dissolved oxygen and pH were measured monthly at all stations. Using a Martek instrument with remote cable probe, measurements were taken at one meter intervals through depth. Data were entered in the Harbors Environmental Projects data bank at USC. Tables of raw data are presented in Appendix B. Graphs of the minima and maxima of the parameters, with depth profiles, are given in Tables 2.1 to 2.13, at the end of this section. Light transmittance was measured with a Hydrolab transmissometer.

Temperature

Ocean temperature regimes differ considerably from year to year in the southern California area (Soule, 1974), due to variability of the intrusion of warm water by the northerly flow of the Davidson current. The winter of 1976-77 was unusual in that the north central Pacific water mass was 1-3°C colder than normal, while southern California waters were 1-3°C warmer than usual. This was thought to have caused the Pacific coast drought by altering the jet stream. Sea temperatures affect the extent of cloud cover and the amount of late night and early morning fog along the coast as well. Variations in wind, clouds, fog, rainfall and air temperature also affect localized water temperatures.

In embayments such as Marina del Rey, water often becomes considerably warmer than the open ocean waters of Santa Monica Bay during the summer months. This occurs because the shallow waters are warmed by the sun to a greater extent and mixing with cooler ocean water is restricted by the structure of the marina.

Plants and animals living within the marina are, therefore, subject to a wider range in temperature than those living in much of Santa Monica Bay. Warmer summer temperatures within the marina may cause certain fish species to migrate out to cooler waters. Blooms of dinoflagellates or diatoms may occur in the warmer, protected waters of the marina.

In the sampling period from August, 1976 to July, 1977 the highest water temperature measured within the marina occurred on 19 August 1976, when it was 23.3°C at a depth of 2 meters at station 9, located at the end of Basin F (Fig. 2.1). The lowest temperature observed was 13.0°C for surface water at station 1 at the east entrance of the marina, on 17 March 1977 (Tables 2.1a-2.13a).

The maximum summer temperatures found in the marina consistently occurred in the shallow ends of the basins located farthest from the ocean. Even during winter and spring months these protected basins are somewhat warmer than the main channels or the waters of Santa Monica Bay.

Salinity

Salinities within Marina del Rey are those of normal sea water for this latitude, except after rains. Major storm drains five feet in diameter enter the marina at the end of slips H, G, and E, while local drains bring runoff to the various slips. Ballona Creek, adjacent to the marina, is a major flood control channel and some fresh water probably enters the marina by being deflected off the breakwater and moving up the entrance channel during flood tides. Tables 2.1b-2.13b graph the minimum and maximum salinities during the 12-month period.

Since fresh water has a specific gravity lower than sea water, low salinities are mainly restricted to the surface or the first few meters. The lowest salinities measured during the study were 20.6 parts per thousand at station 12 and 26.8 ppt at station 1 on 17 March 1977. Also at station 12 the salinity was 26.9 ppt on 19 August 1976. During rainstorms lower salinities will occur, but these conditions are only temporary because tidal flushing soon brings the salinity back to normal. Many organisms found within the marina are adapted to the estuarine environment and variability, and such periods of low salinity probably have little negative impact. Some species of invertebrates, especially those attached to boat docks and slips, may be adversely affected by the low salinities which occur during and briefly after rainfall, but many are able to close up or otherwise become inactive during short periods of stress. Some fishes would probably swim from the harbor, while euryhaline species (tolerant to a wide range of salinities) would remain.

Dissolved Oxygen

Dissolved oxygen (DO) levels in surface waters are used by regulatory agencies to measure water quality, and 5.0 ppm has been designated as the minimum level for acceptable environmental quality. Sea water at air saturation will generally contain 7-9 ppm, depending upon temperature and salinity. As the oxygen level drops below the saturation point most marine animals must either increase the rate at which they ventilate their respiratory surfaces (gills) or reduce their level of activity to meet the lower oxygen available from their environment. Below about 3 ppm most fishes are under considerable stress and a dissolved oxygen concentration of 2.0 ppm is probably lethal to many fishes (Waggoner and Feldmeth, 1971). Some invertebrates can tolerate very low dissolved oxygen levels temporarily.

The dissolved oxygen levels within Marina del Rey exhibit an interesting pattern over a year's time. During the summer months of July and August, dissolved oxygen concentrations remained near saturation throughout the marina. The lowest levels in those months (6.0 to 7.0 ppm) occurred at stations 10 and 11 at the back of the marina. During August, oxygen concentrations rose to about 10 ppm at several stations, indicating the presence of phytoplankton blooms.

In September 1976, after an unusual tropical storm brought more than 3 inches of rain to southern California, the dissolved oxygen levels dropped below 4.0 ppm in many basins. At station 13, in the bird sanctuary, dissolved oxygen ranged between 0.20 and 1.30 ppm. Since the bird sanctuary is the terminus of a major storm drain, the low oxygen levels may be due to an influx of substances with high oxygen demand that were transported into the marina after the heavy rains.

This pattern of low oxygen levels after significant rainfall continued throughout the winter and spring months (Figs. 2.2-2.4). Rainfall during January 1977 totalled approximately four inches, after minimal rains in November and December, 1976. The lowest dissolved oxygen concentrations were measured in January 1977, when oxygen levels fell below 2.0 ppm for all stations except those at the entrance of the marina (stations 1 and 2). Heavy rainfall also occurred on 16-17 March 1977.

On 18 and 21 March 1977, following a heavy rain, water samples were collected from stations 4, 7, 10, 11, 12 and 13, for more thorough laboratory analysis. The chemical oxygen

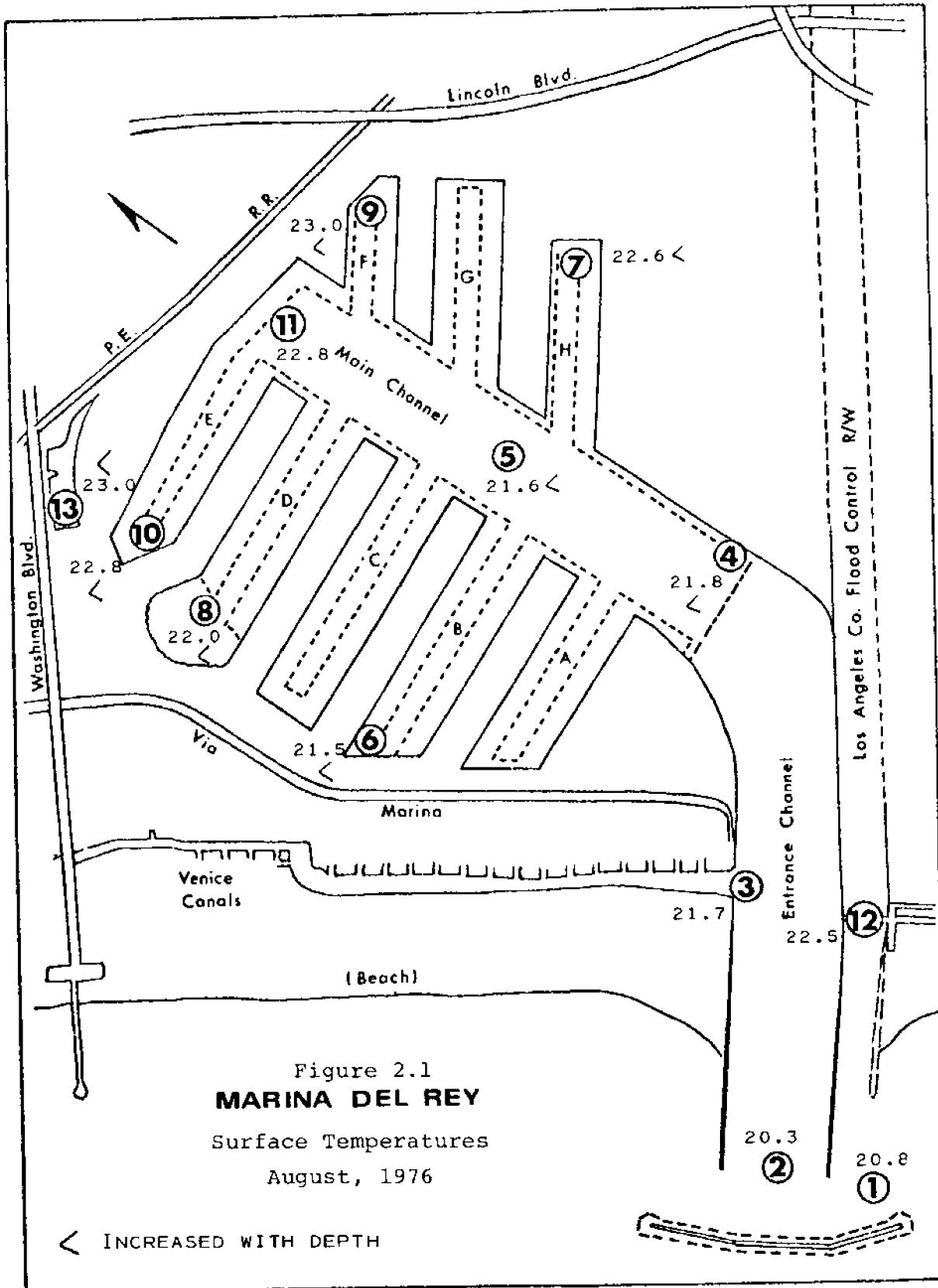
demand for samples collected from these stations ranged from 172 to 204 ppm, which is extremely high. This preliminary data may well explain the low oxygen levels monitored in the marina after rains. Chemical substances, with the capability of combining with dissolved molecular oxygen, are apparently transported into the marina from flood control channels. Once in a marina, they reduce oxygen levels until they can be sufficiently diluted by tidal flushing. Certain more tolerant species, such as flatfishes and rays may survive, but other fishes probably cannot (Waggoner and Feldmeth, 1971).

pH (Acidity-Alkalinity)

The pH of the waters of the marina showed a tendency at times to follow the same patterns as the variations in dissolved oxygen, but in some instances the patterns appeared to be unrelated (Soule and Oguri, 1976). The range of pH was 7.56 to 8.45 and the lower values were generally found in cool months or near the bottom. The highest pH values generally occurred during the warm months and at the surface.

Light Transmittance

The amount of light available to the phytoplankton in harbor waters is regulated by ambient sunlight and by weather such as cloud cover and fog. Light penetration is controlled by turbidity in the water, which may be due to sediment suspension, turbid waste products, or density of phytoplankton. Light transmittance (the opposite of turbidity) was measured with a Hydrolab transmissometer with remote cable probe and a self-contained light source. During the summer months, values generally between 80 and 95% transmittance were observed in the main channel and at the marina entrance. In the basins, more turbid conditions caused the transmittance readings to be between 60 and 70%. During the winter and spring months, especially after rains, transmittance readings as low as 45-50% were common, especially at station 12 in Ballona Creek and at station 1 at the east entrance of the marina. These very low readings were generally restricted to surface waters of below normal salinities and are indicative of waters affected by rain runoff.



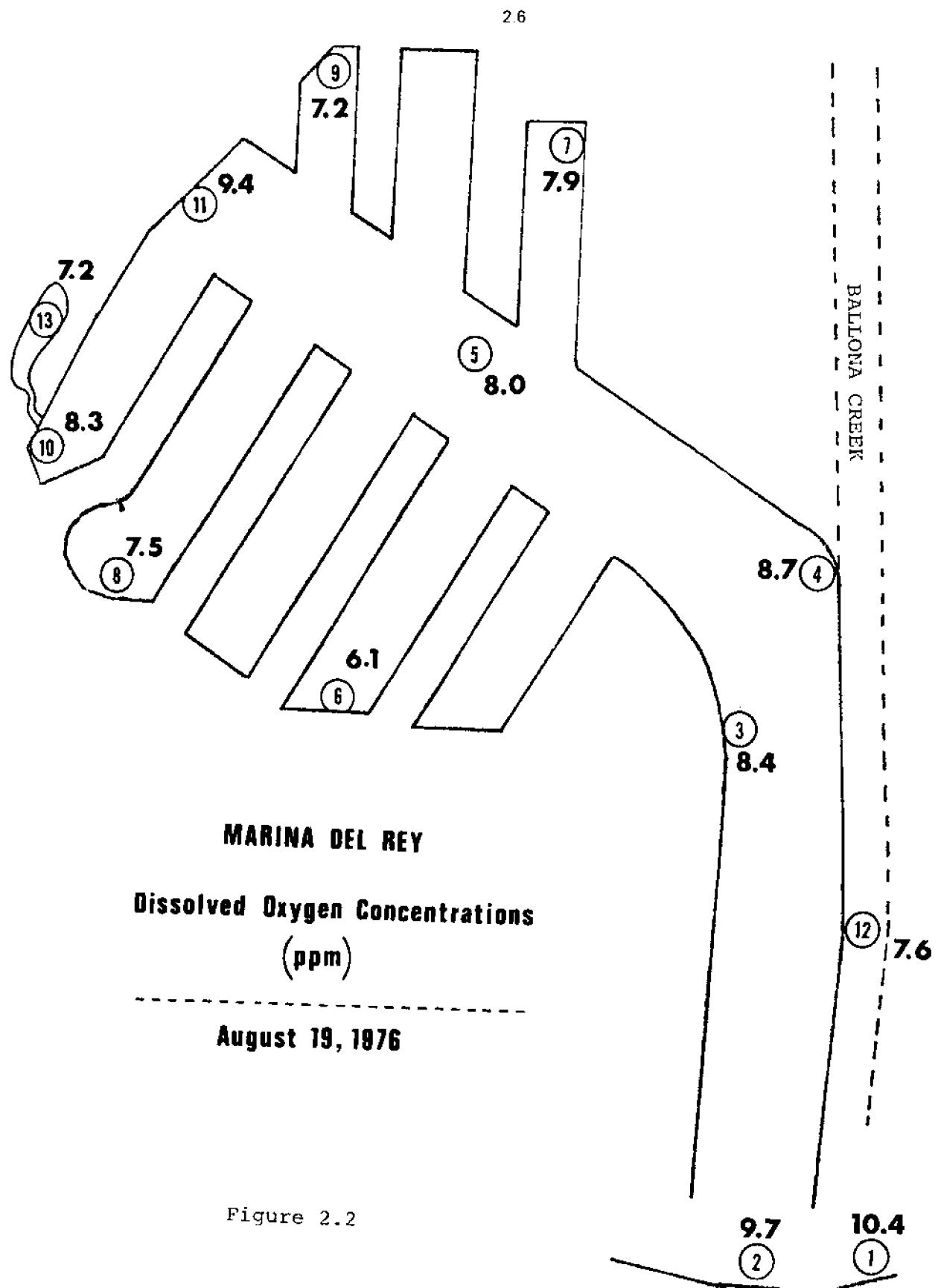


Figure 2.2

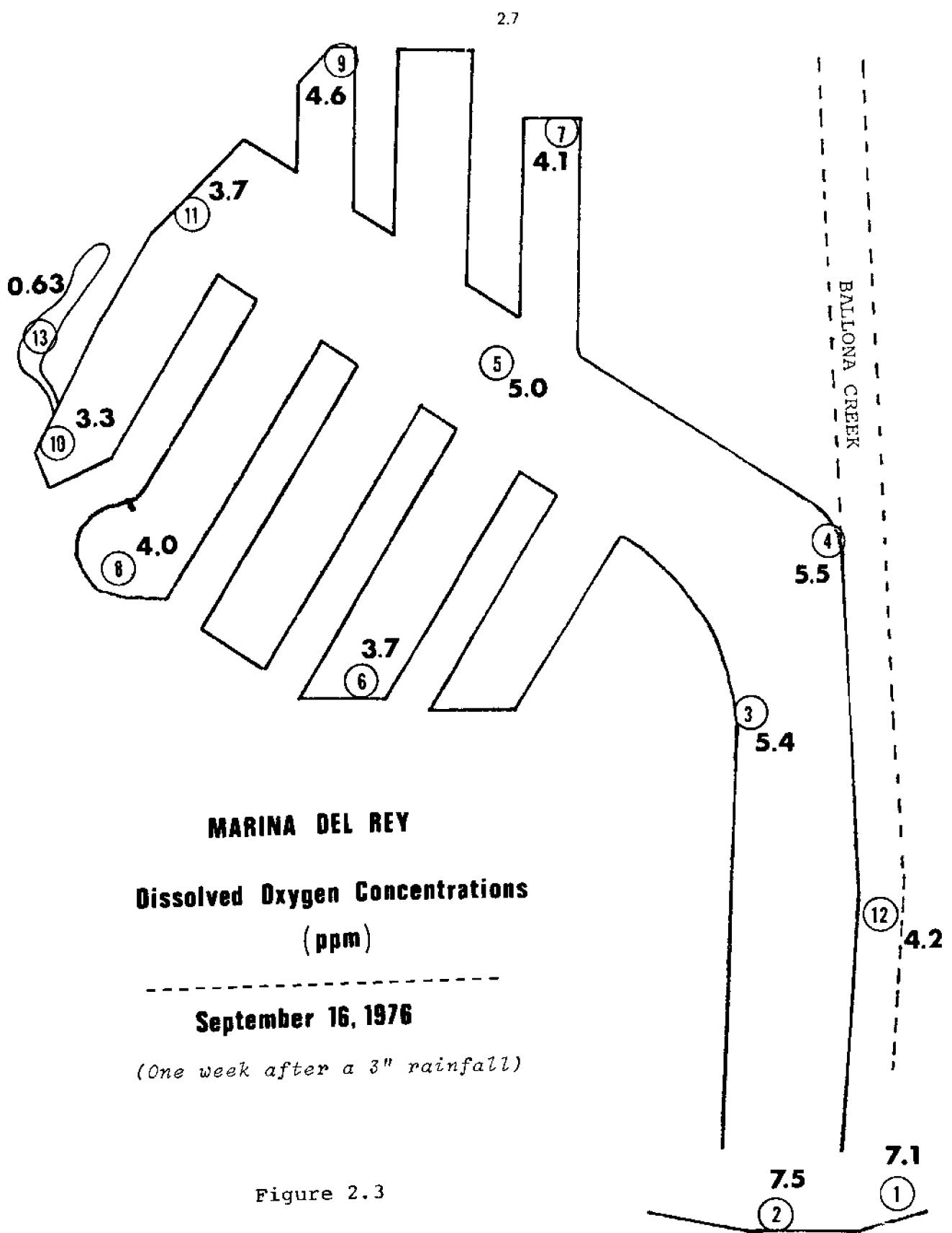


Figure 2.3

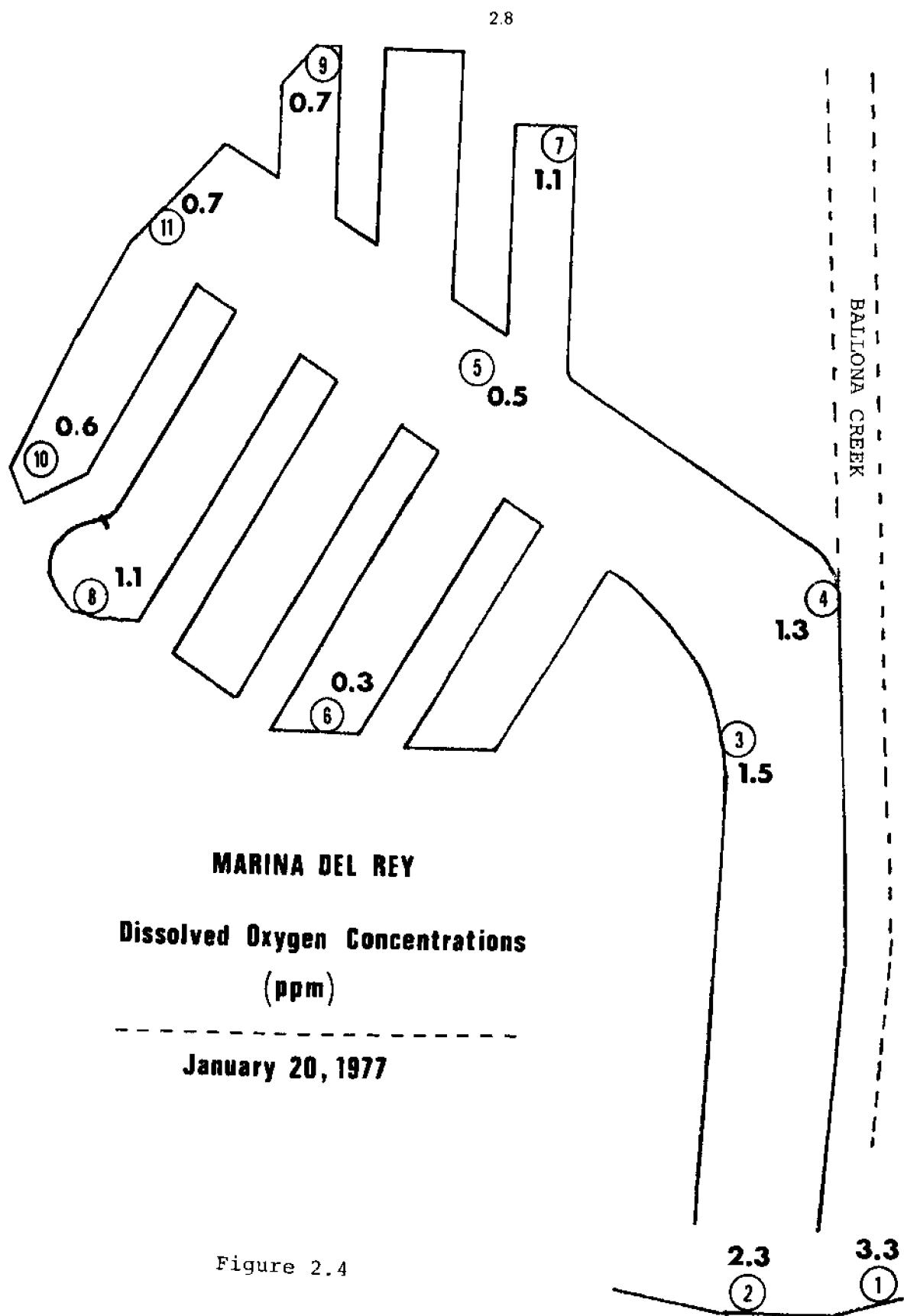


Figure 2.4

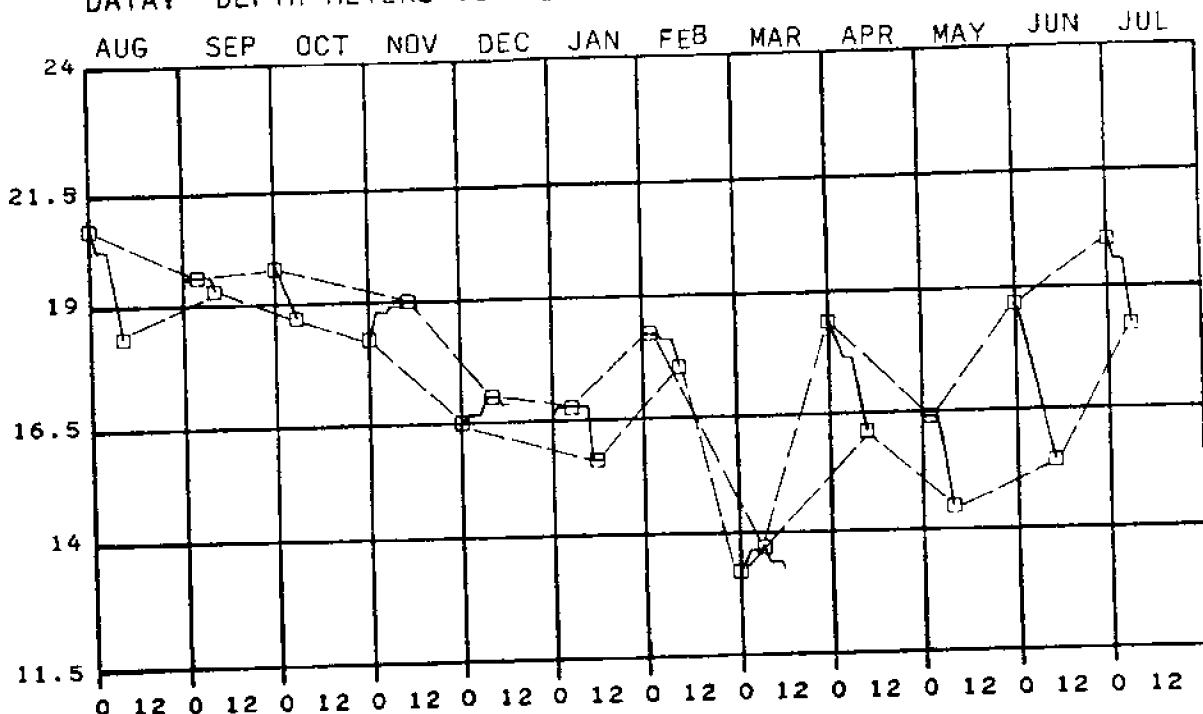
Table 2.1a,b

STATION M1

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. TEMPERATURE (°C)



STATION M1

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. SALINITY (PPT)

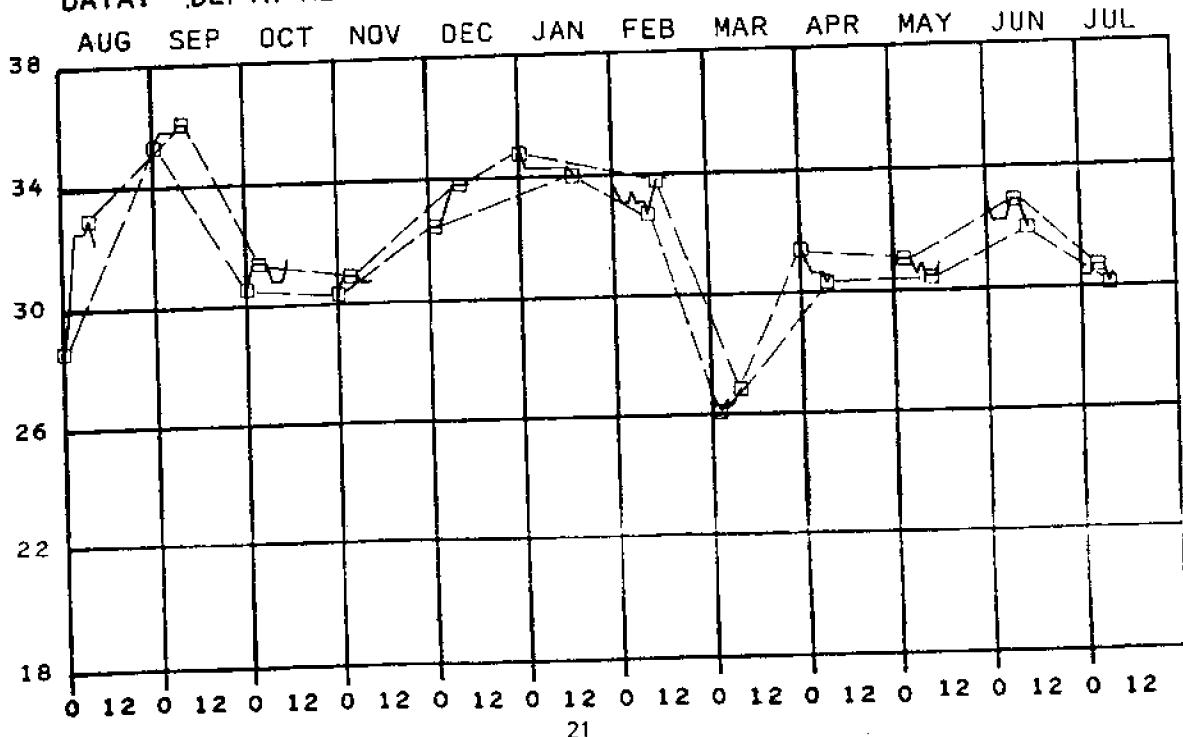
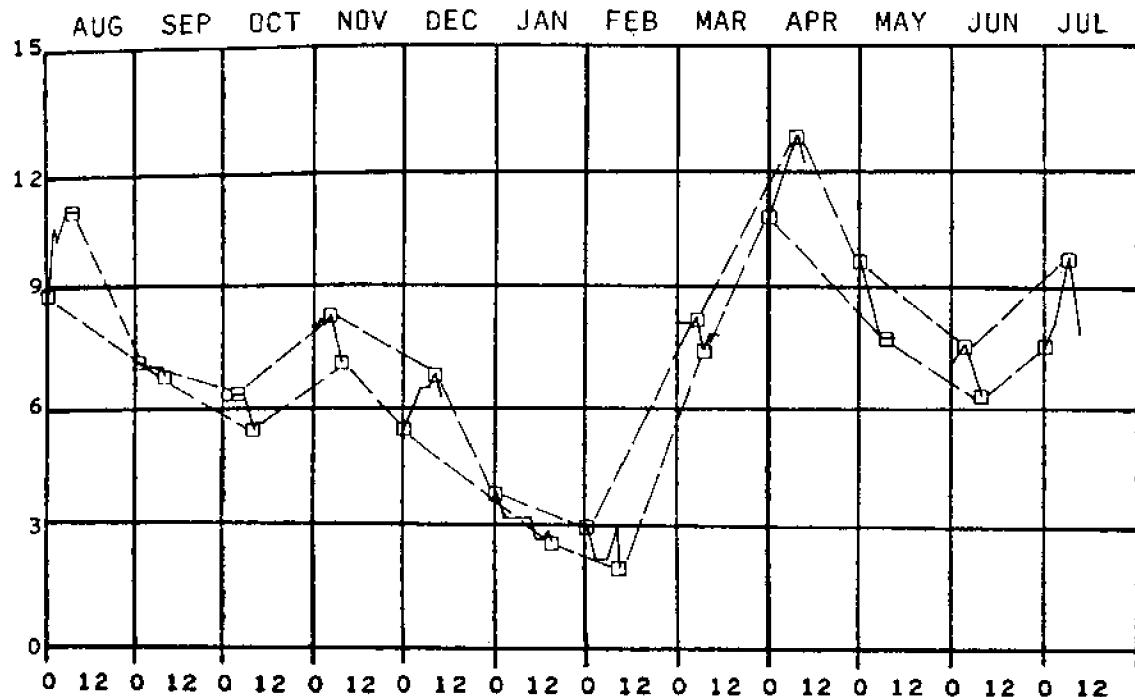


Table 2.1c,d

STATION M1
 DATE: 8/19/76 THROUGH 7/21/77
 EACH SUBGRAPH BY MONTH
 DATA: DEPTH METERS VS. DISSOLVED OXYGEN (PPM)



STATION M1
 DATE: 8/19/76 THROUGH 7/21/77
 EACH SUBGRAPH BY MONTH
 DATA: DEPTH METERS VS. PH (H ION CONCENTRATION)

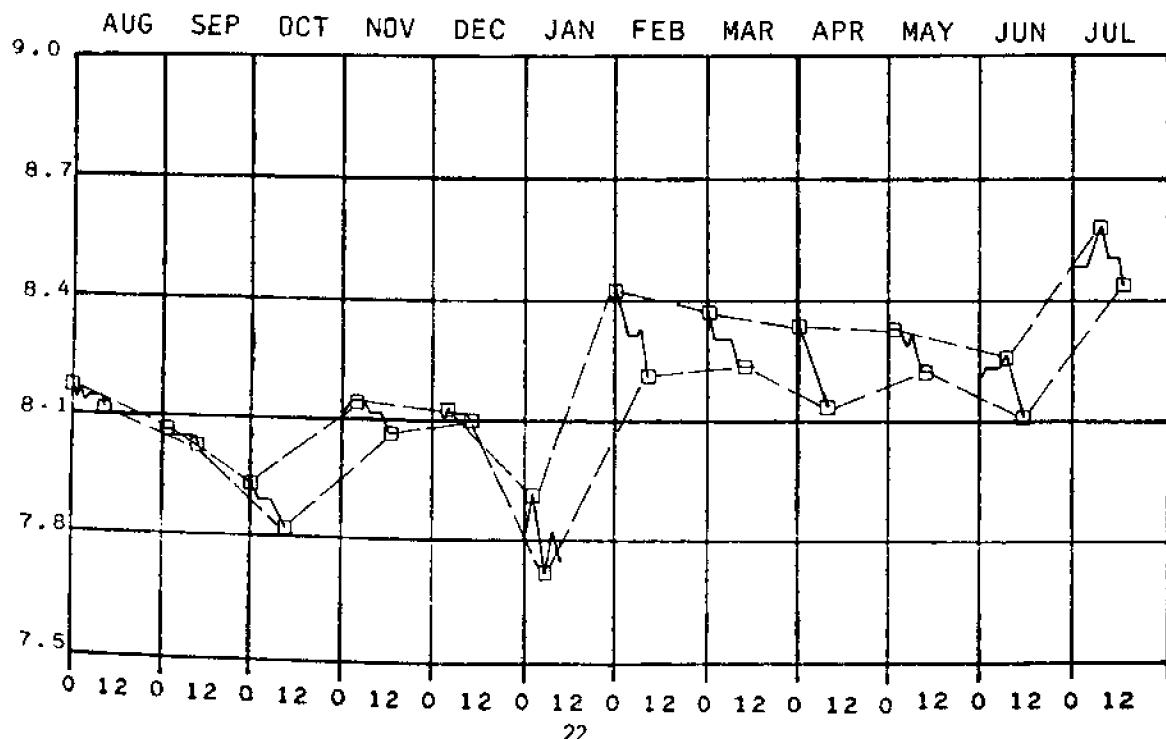


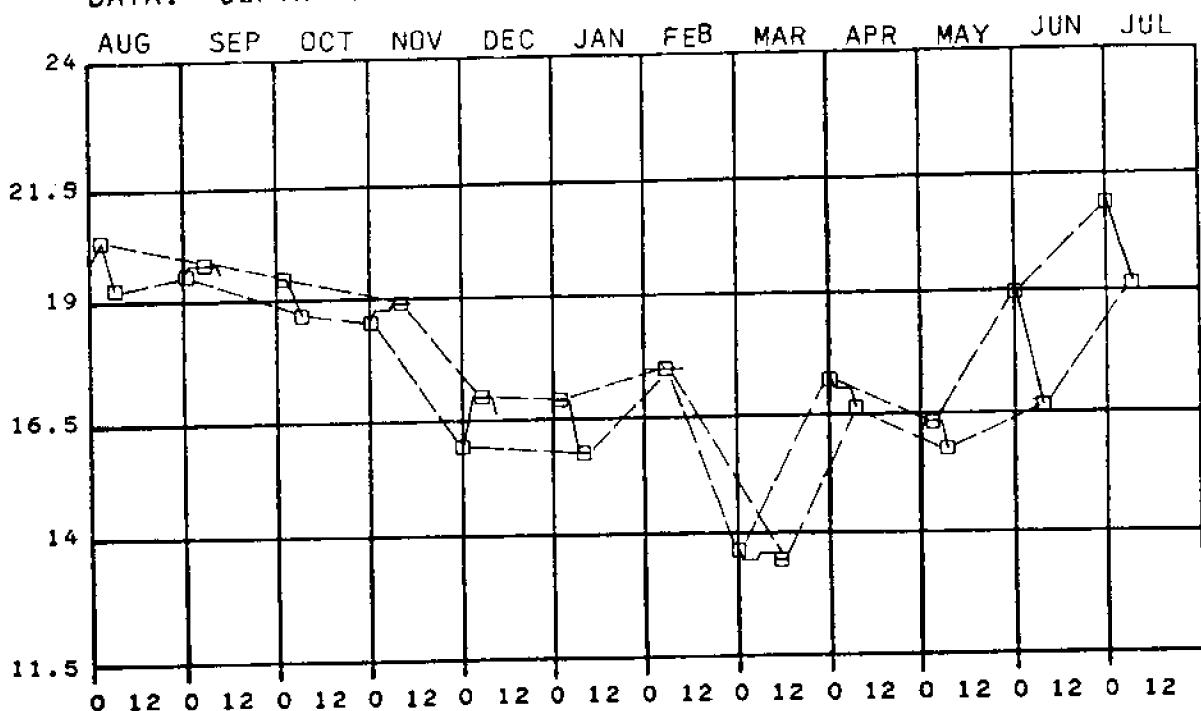
Table 2.2a,b

STATION M2

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. TEMPERATURE (°C)



STATION M2

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. SALINITY (PPT)

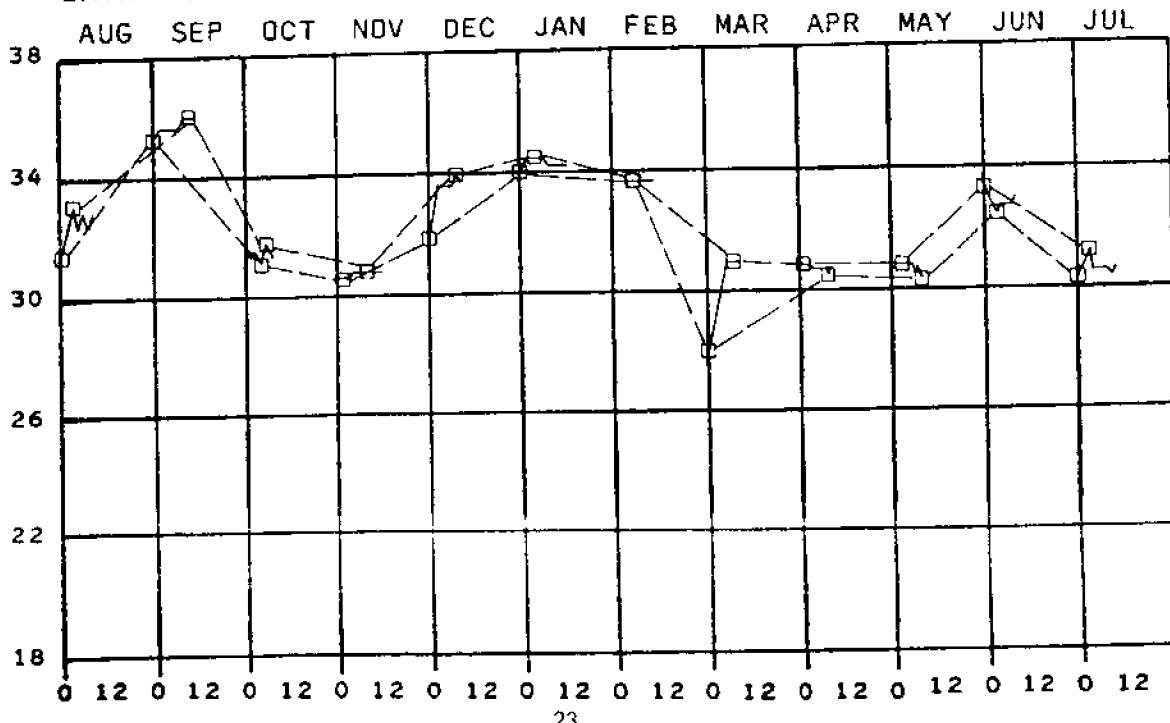


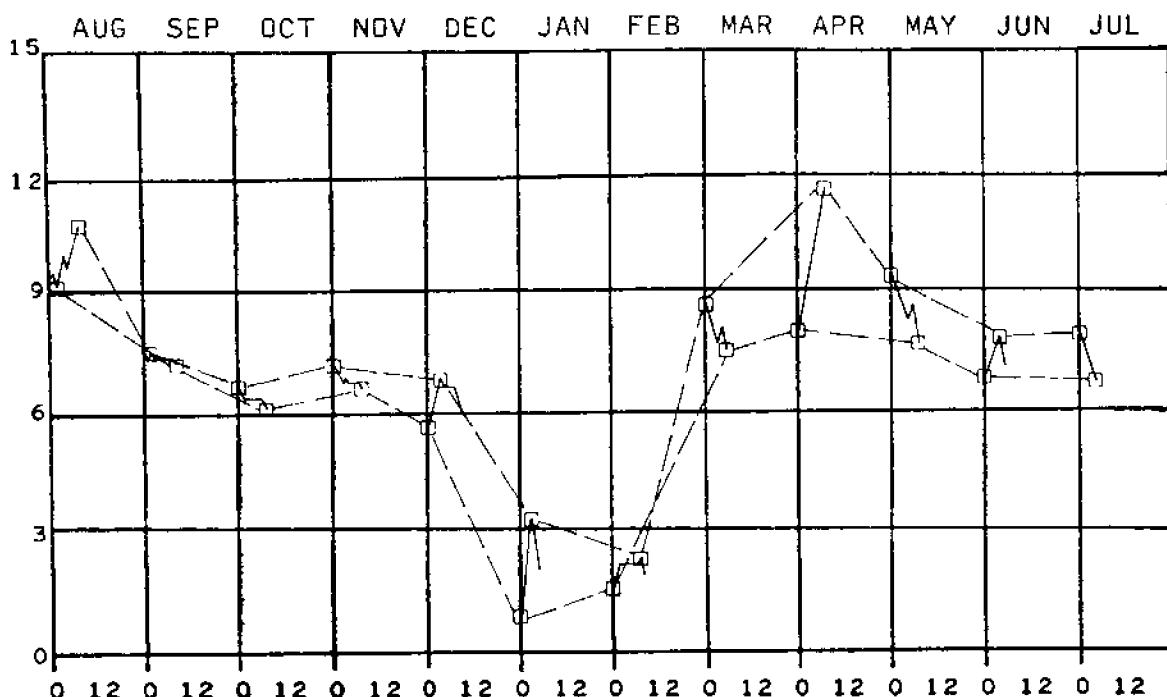
Table 2.2c,d

STATION M2

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. DISSOLVED OXYGEN (PPM)



STATION M2

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. PH (H+ ION CONCENTRATION)

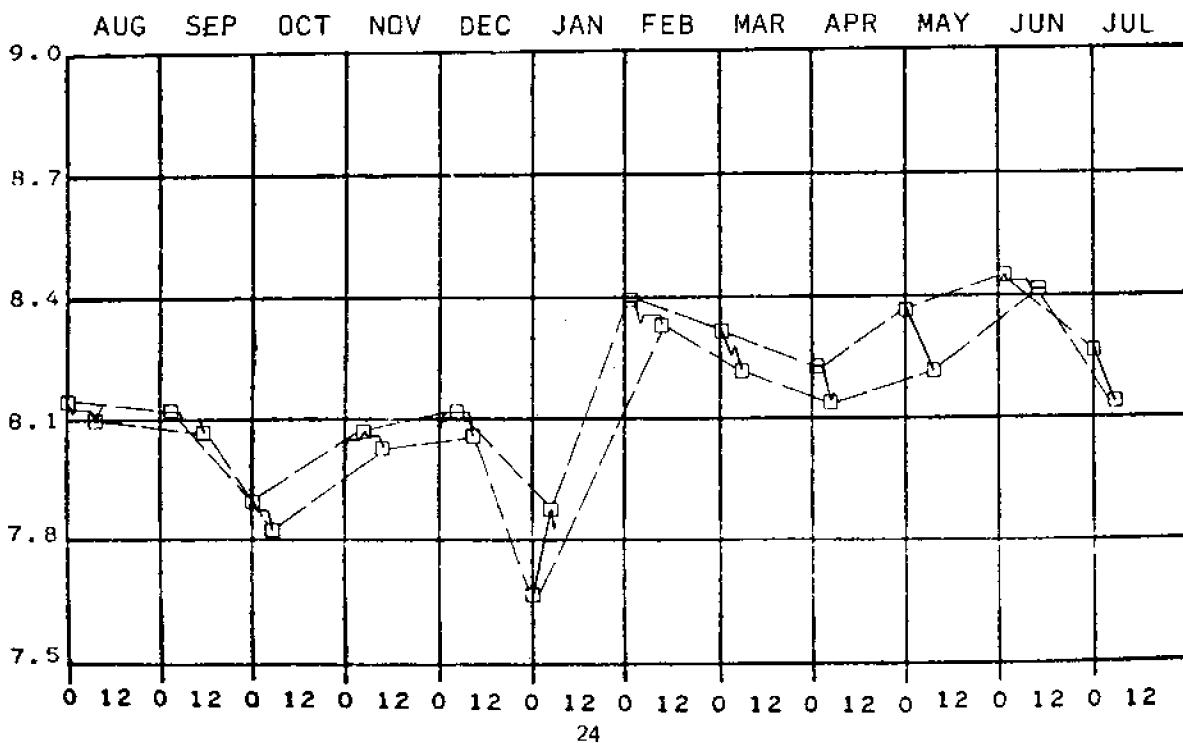


Table 2.3a,b

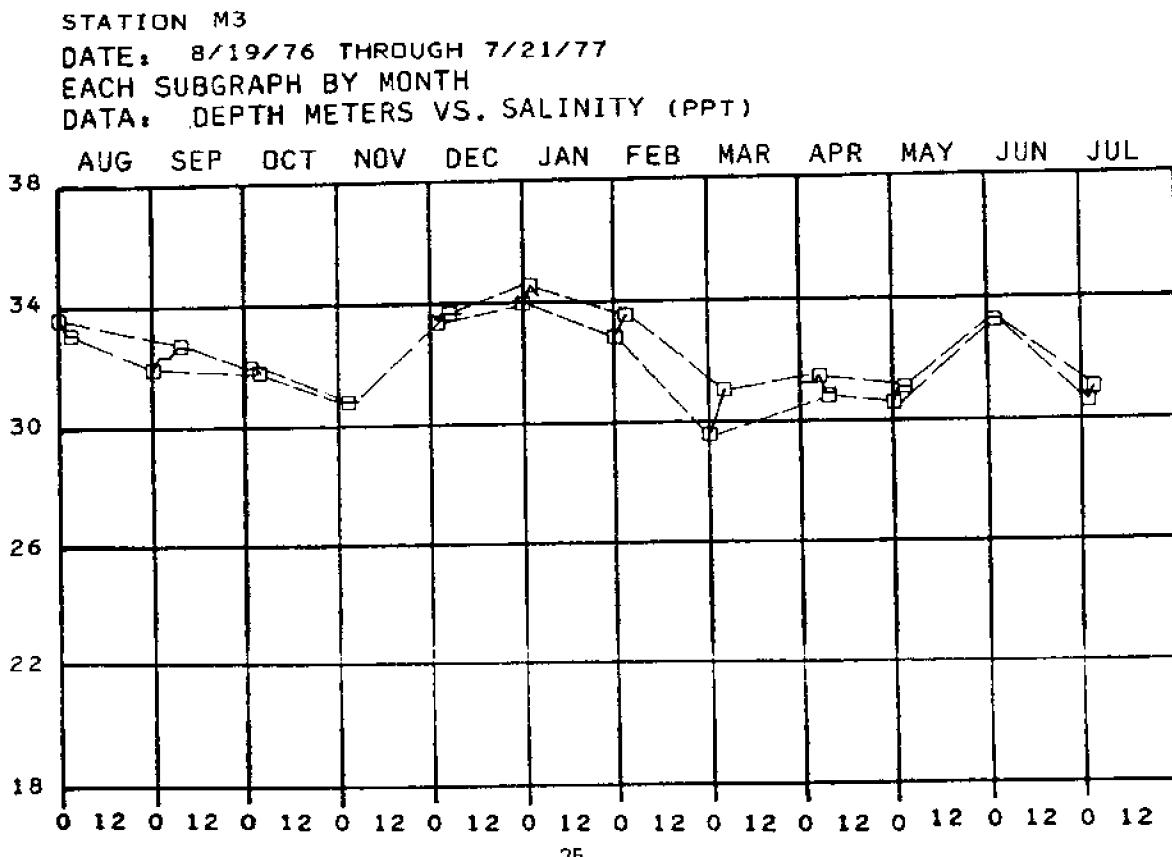
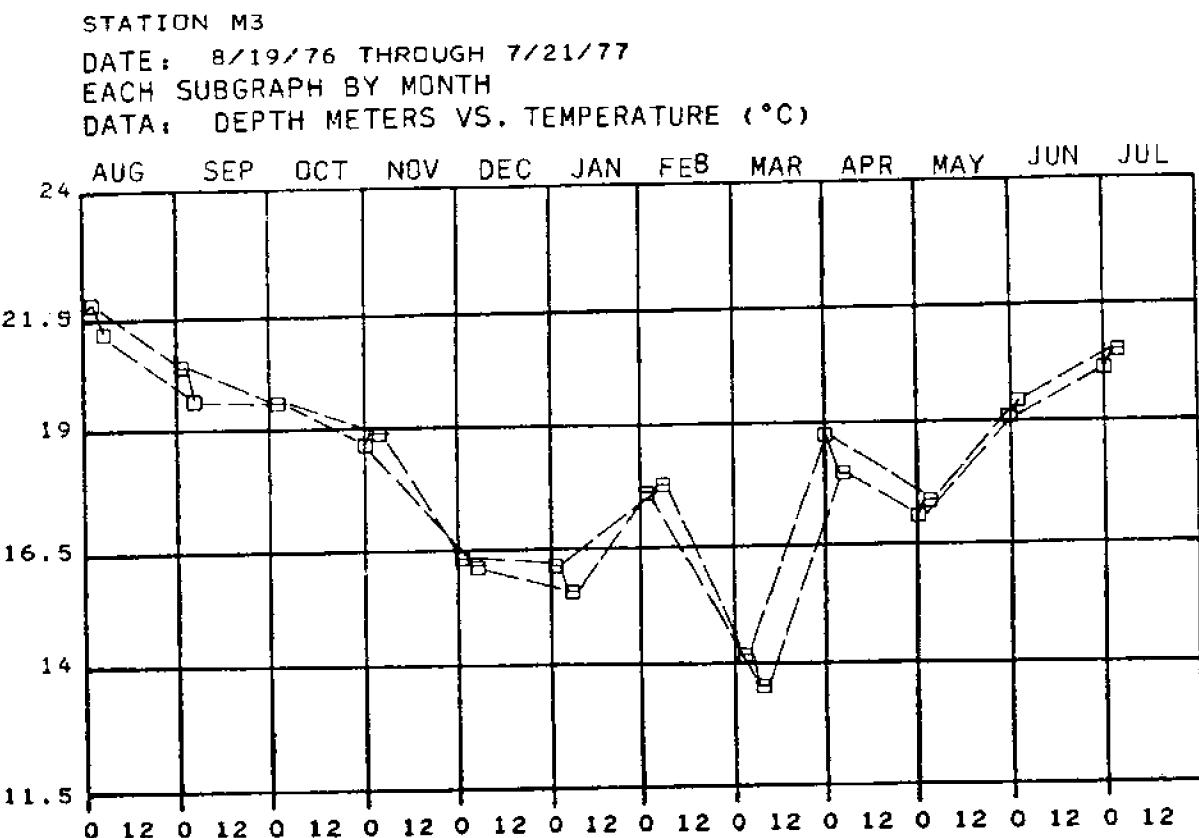
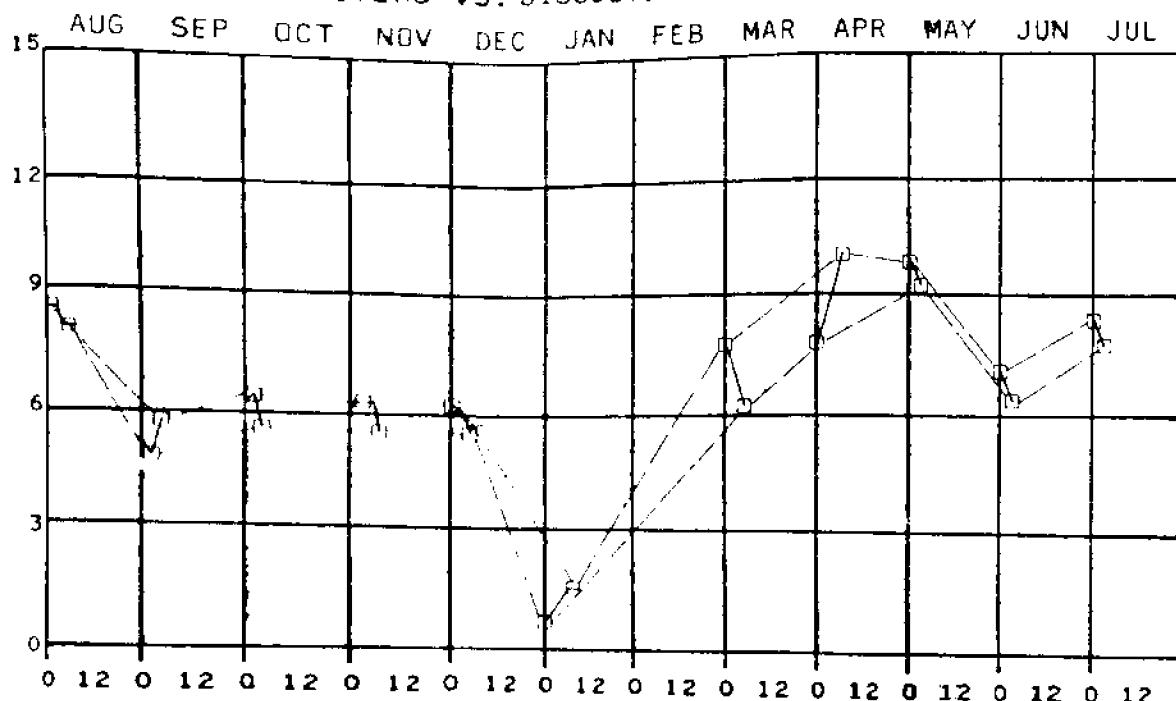


Table 2.3c,d

STATION M3

DATE: 8/19/76 THROUGH 7/21/77
 EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. DISSOLVED OXYGEN (PPM)



STATION M3

DATE: 8/19/76 THROUGH 7/21/77
 EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. PH (H+ ION CONCENTRATION)

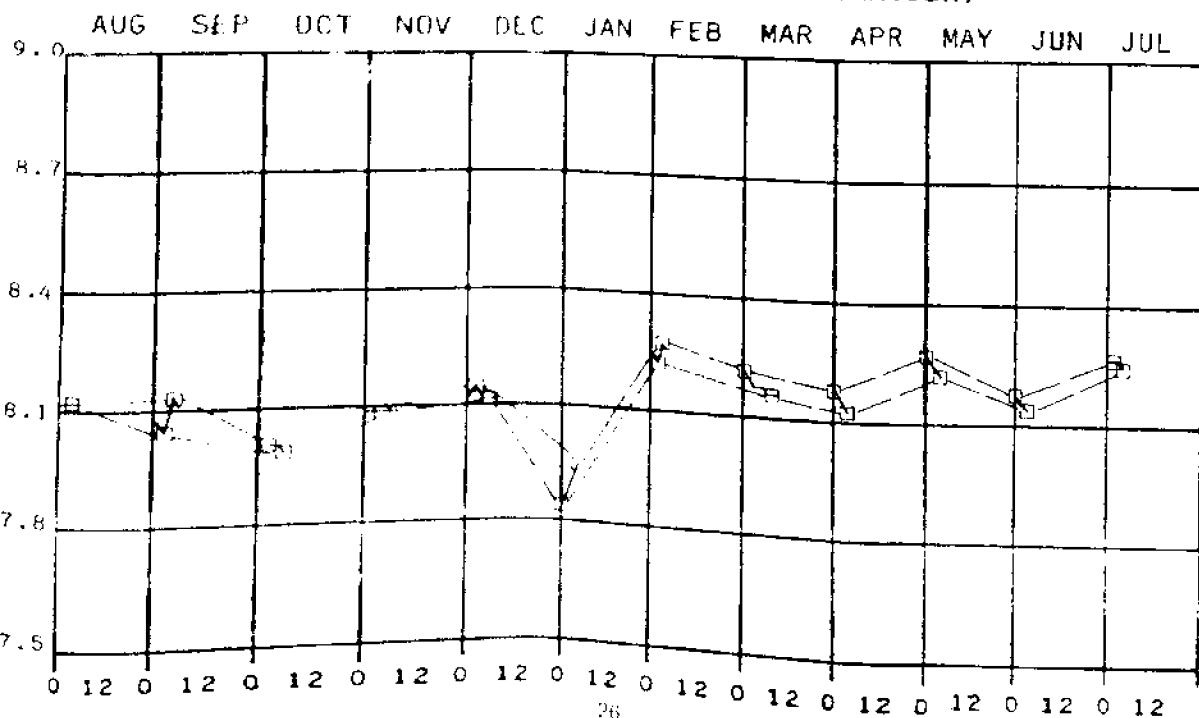


Table 2.4a,b

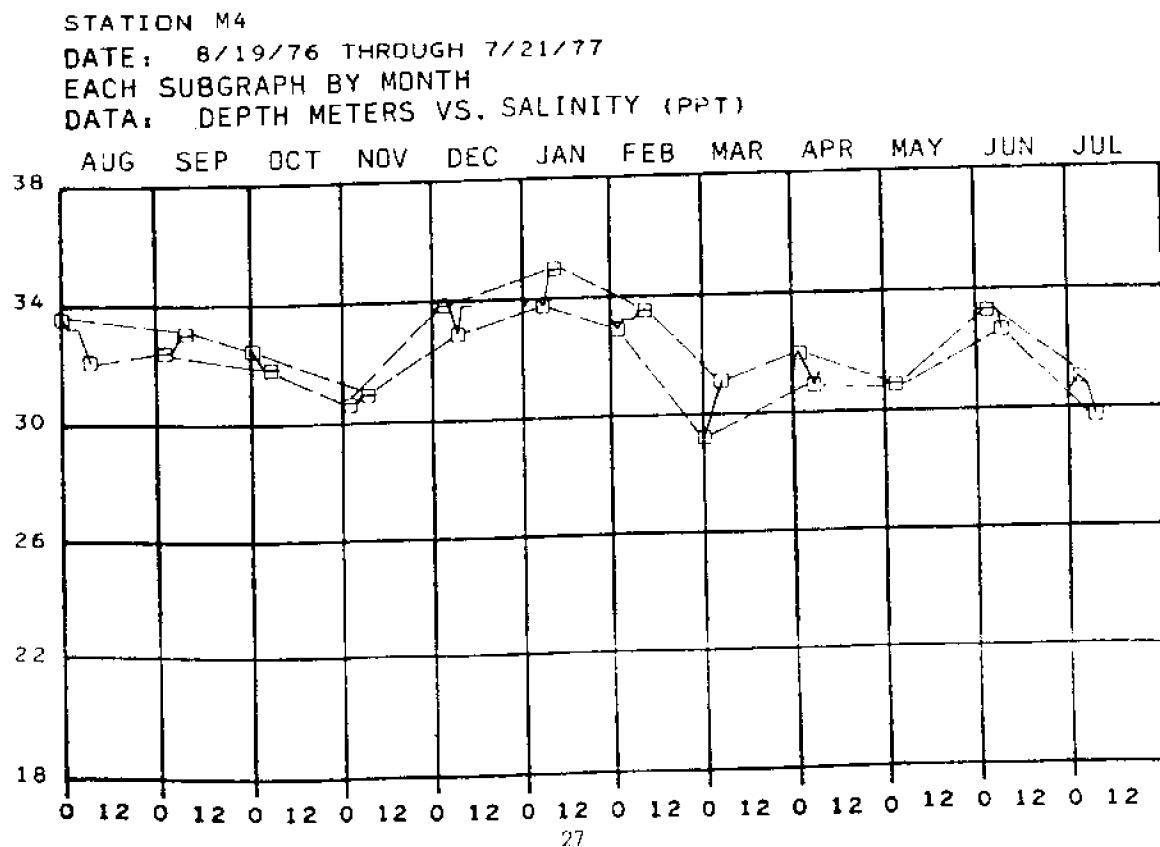
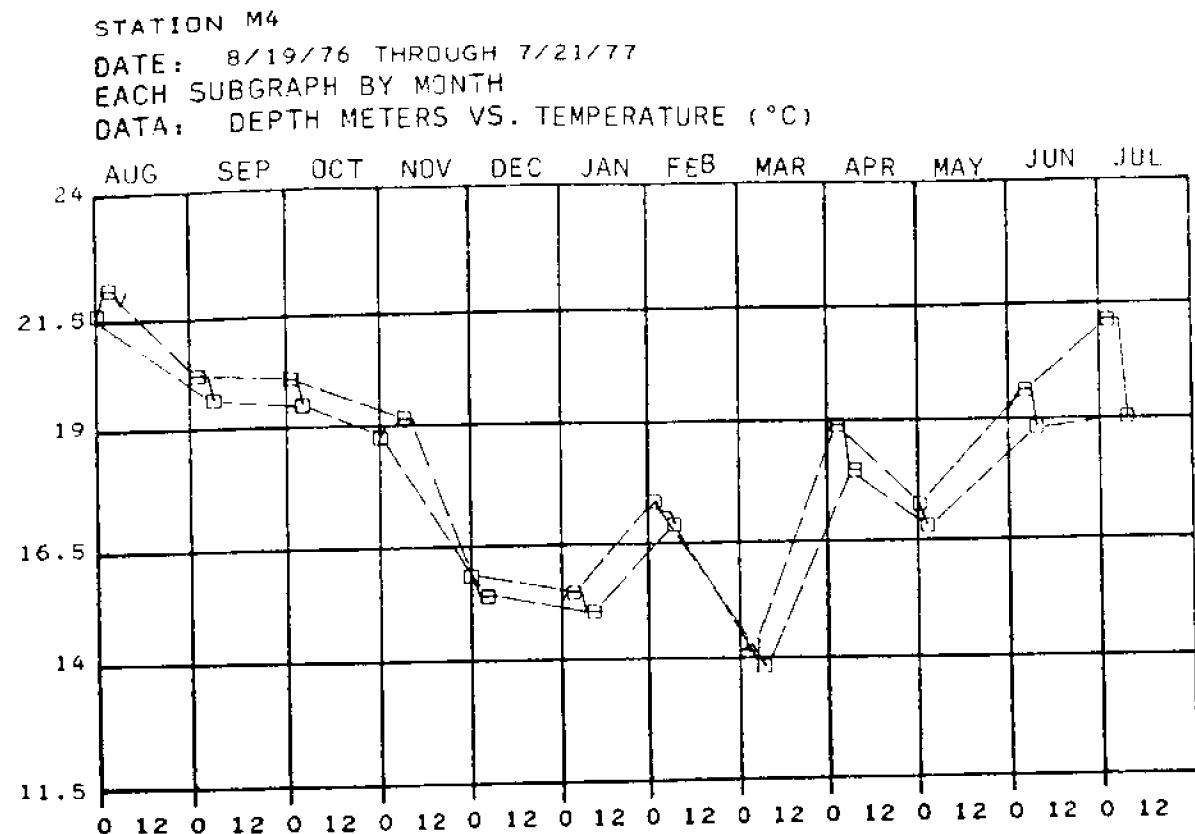
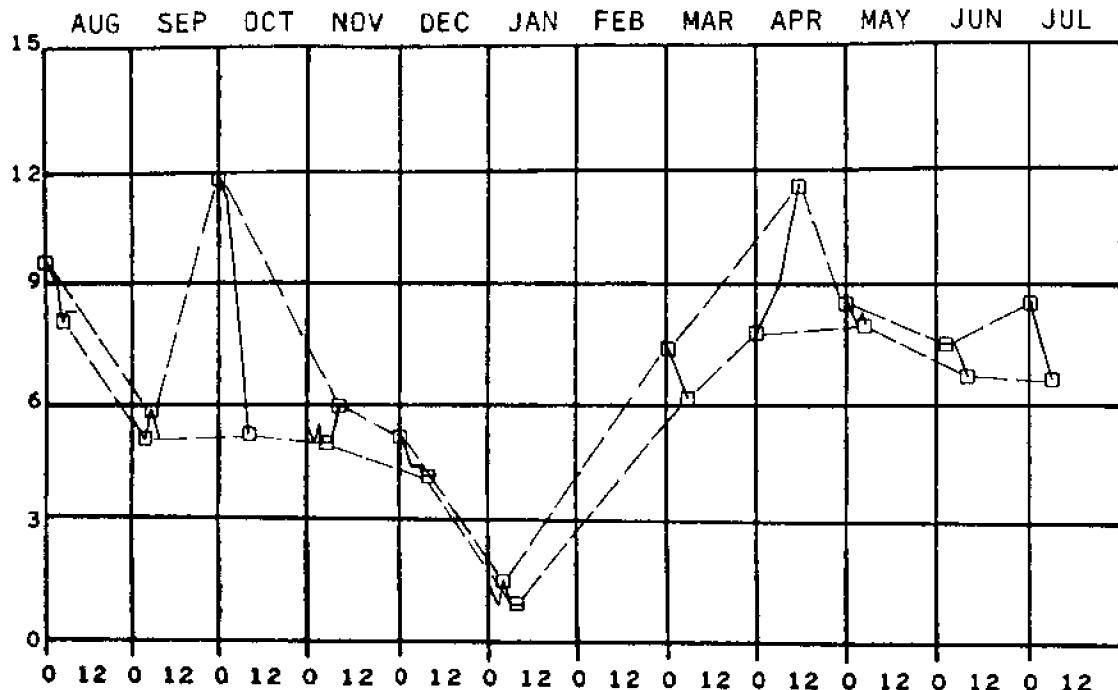


Table 2.4c,d

STATION M4
 DATE: 8/19/76 THROUGH 7/21/77
 EACH SUBGRAPH BY MONTH
 DATA: DEPTH METERS VS. DISSOLVED OXYGEN (PPM)



STATION M4
 DATE: 8/19/76 THROUGH 7/21/77
 EACH SUBGRAPH BY MONTH
 DATA: DEPTH METERS VS. PH (H ION CONCENTRATION)

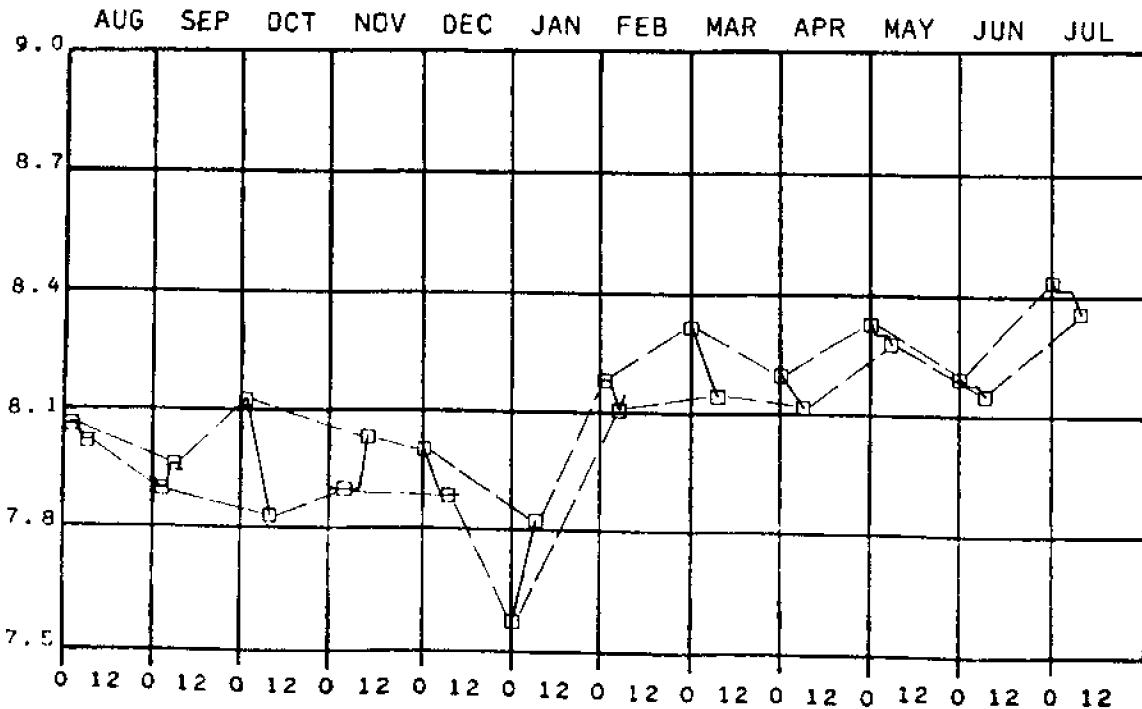


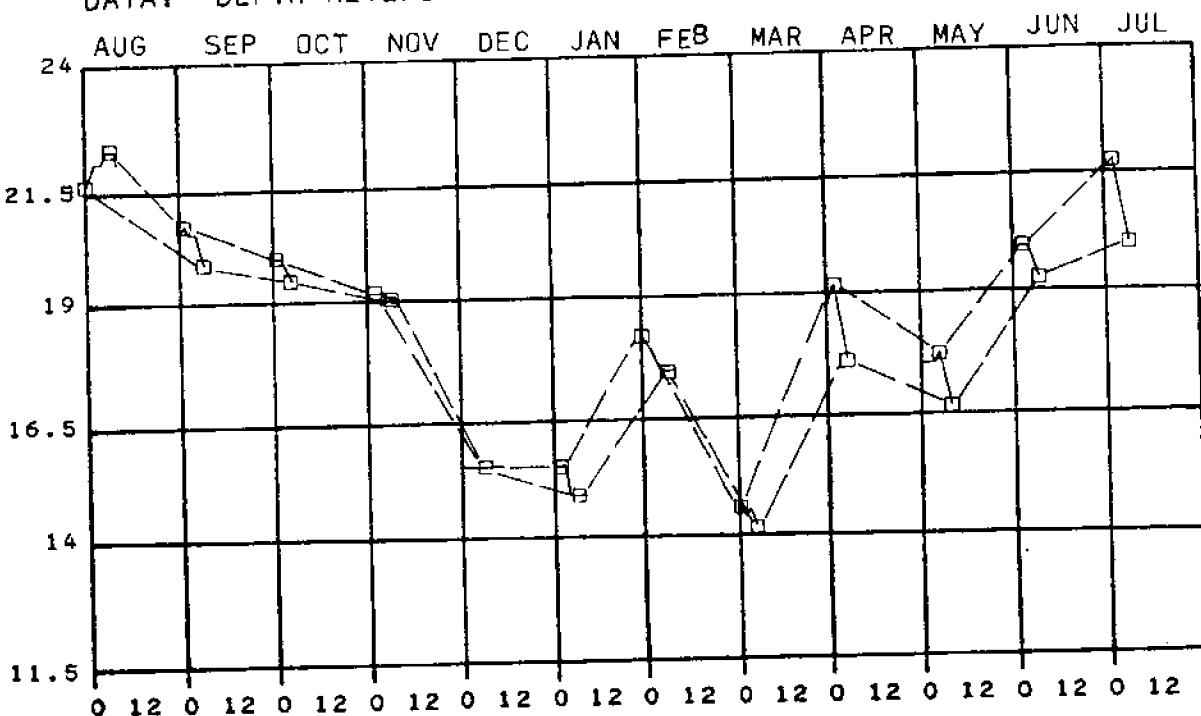
Table 2.5a,b

STATION M5

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. TEMPERATURE (°C)



STATION M5

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. SALINITY (PPT)

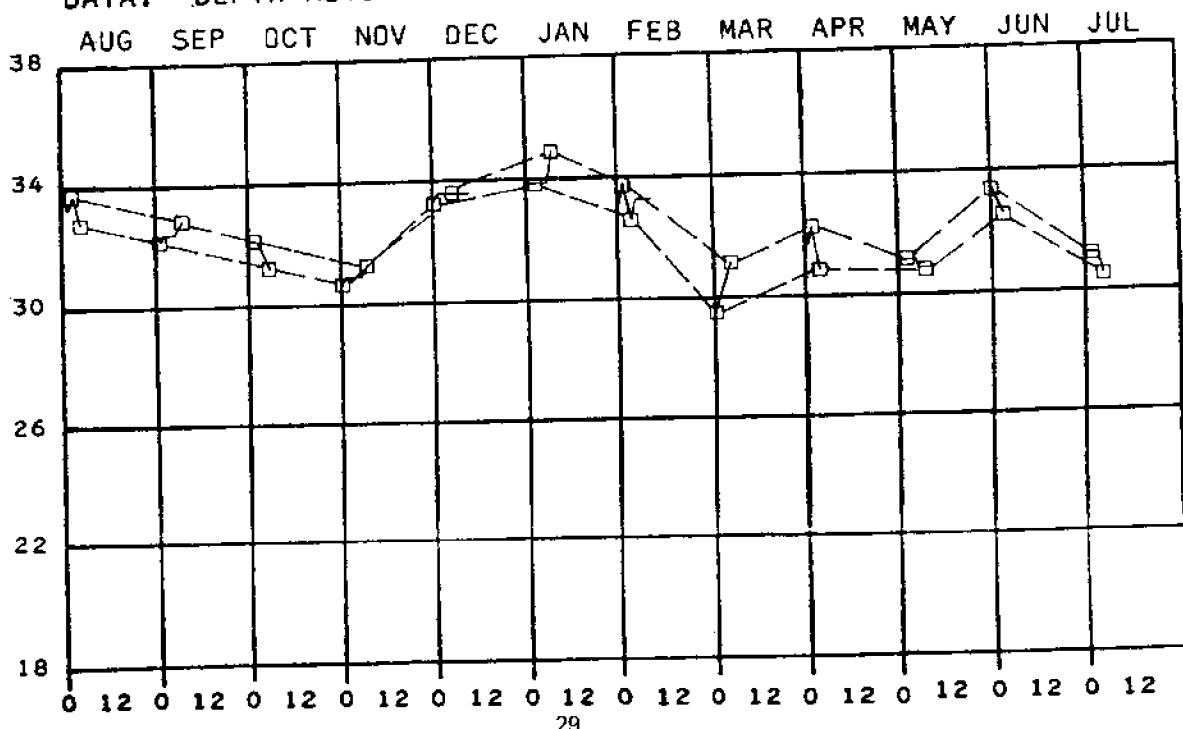


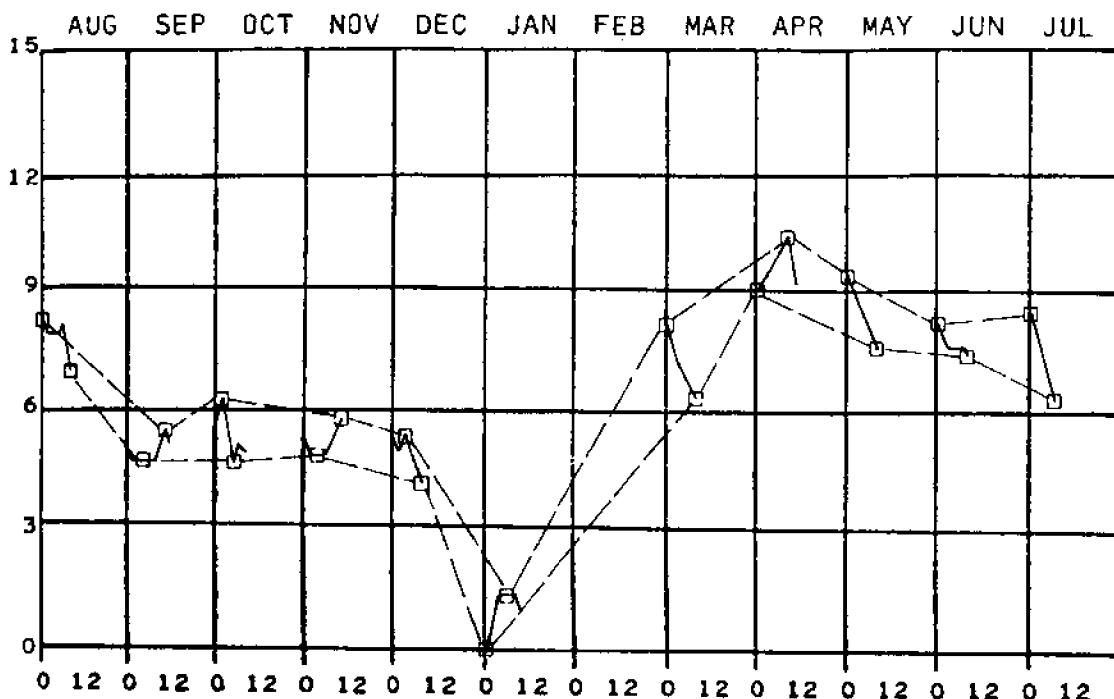
Table 2.5c,d

STATION M5

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. DISSOLVED OXYGEN (PPM)



STATION M5

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

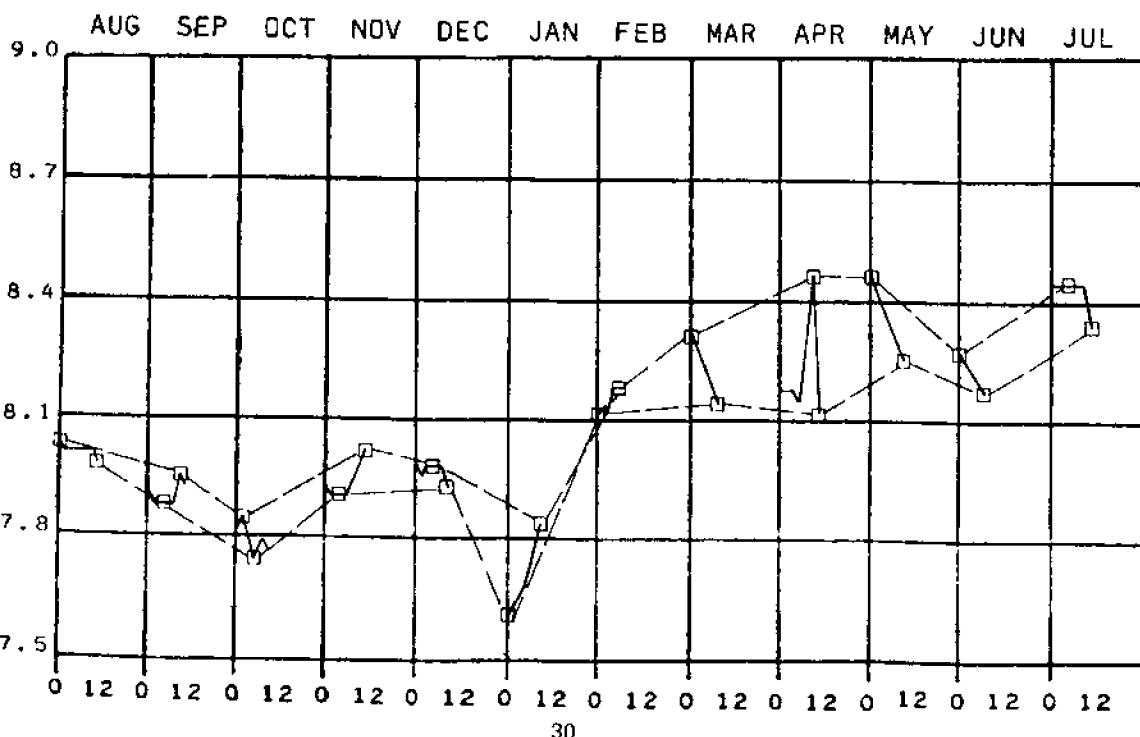
DATA: DEPTH METERS VS. PH (H⁺ ION CONCENTRATION)

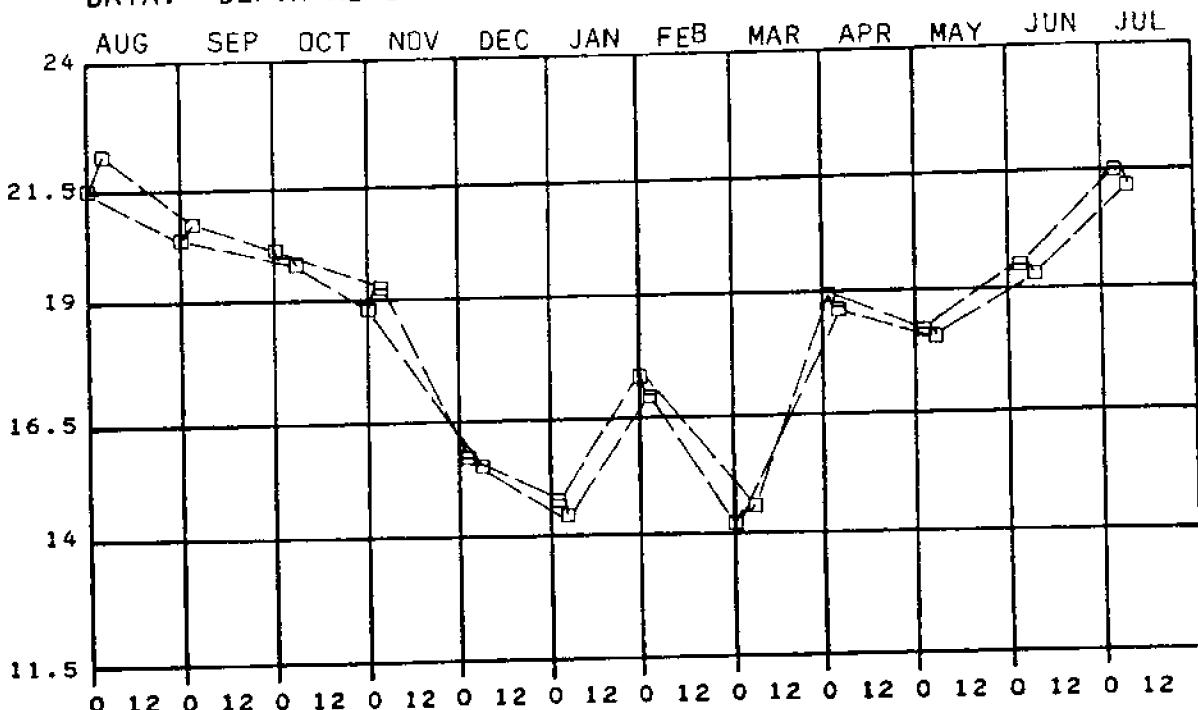
Table 2.6a,b

STATION M6

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. TEMPERATURE (°C)



STATION M6

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. SALINITY (PPT)

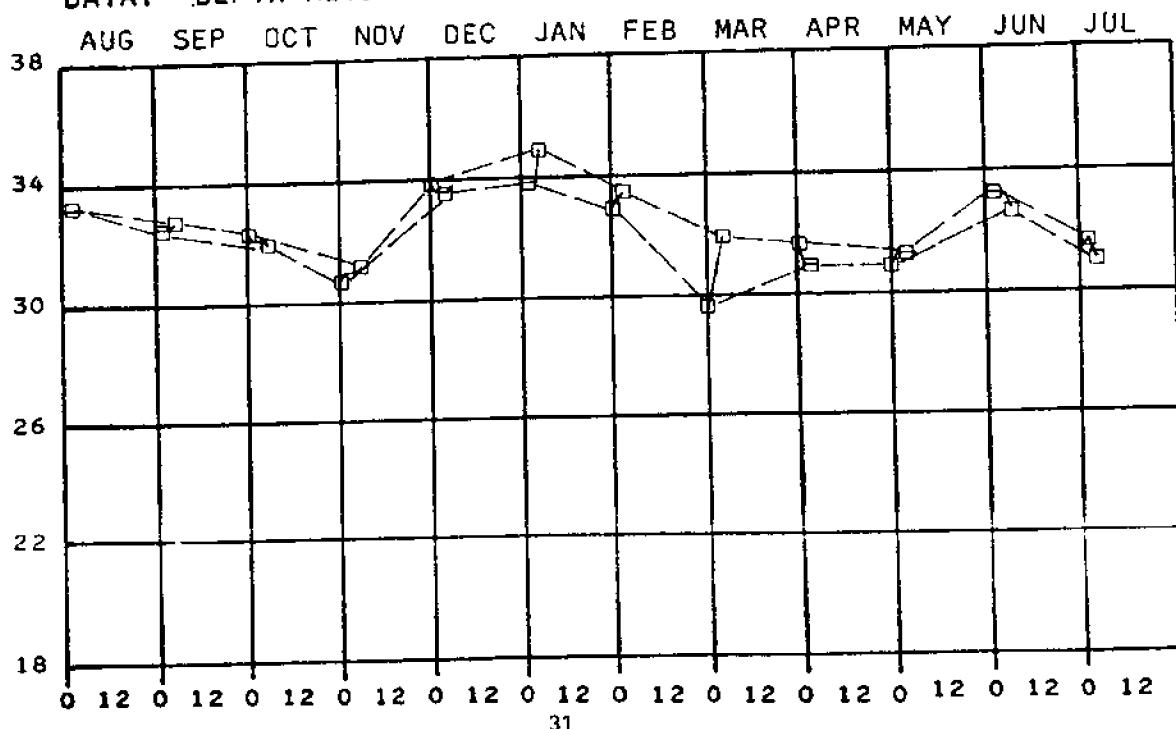


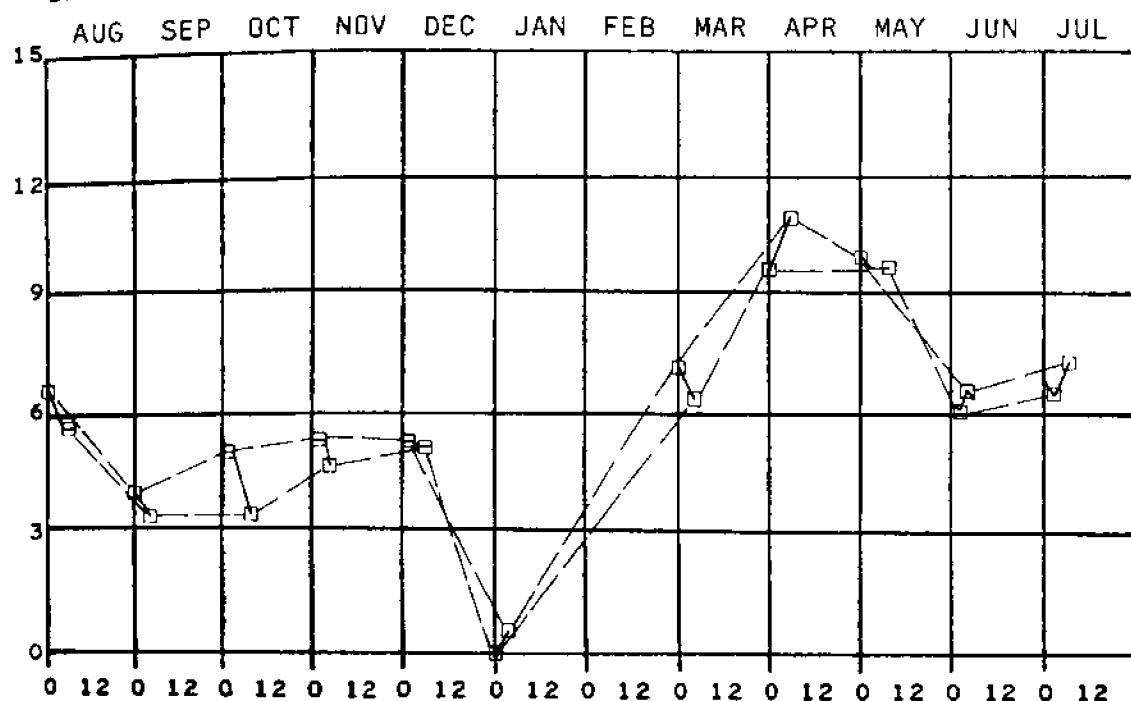
Table 2.6c,d

STATION M6

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. DISSOLVED OXYGEN (PPM)



STATION M6

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. PH (H+ ION CONCENTRATION)

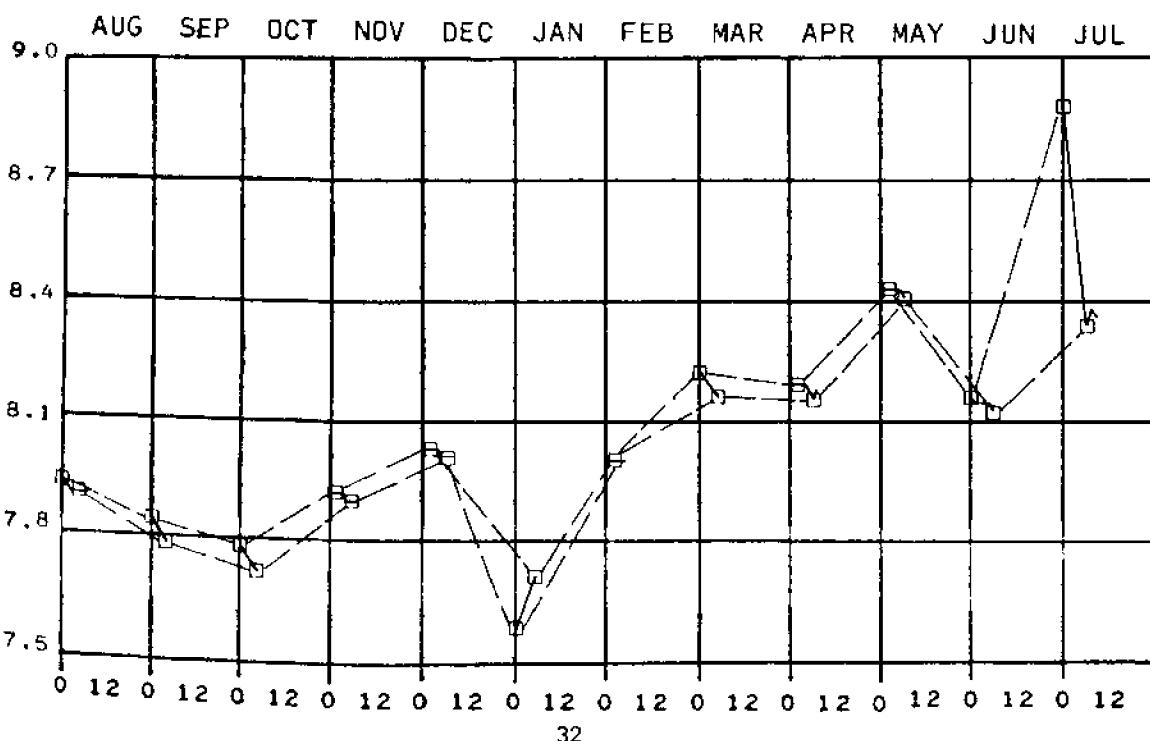


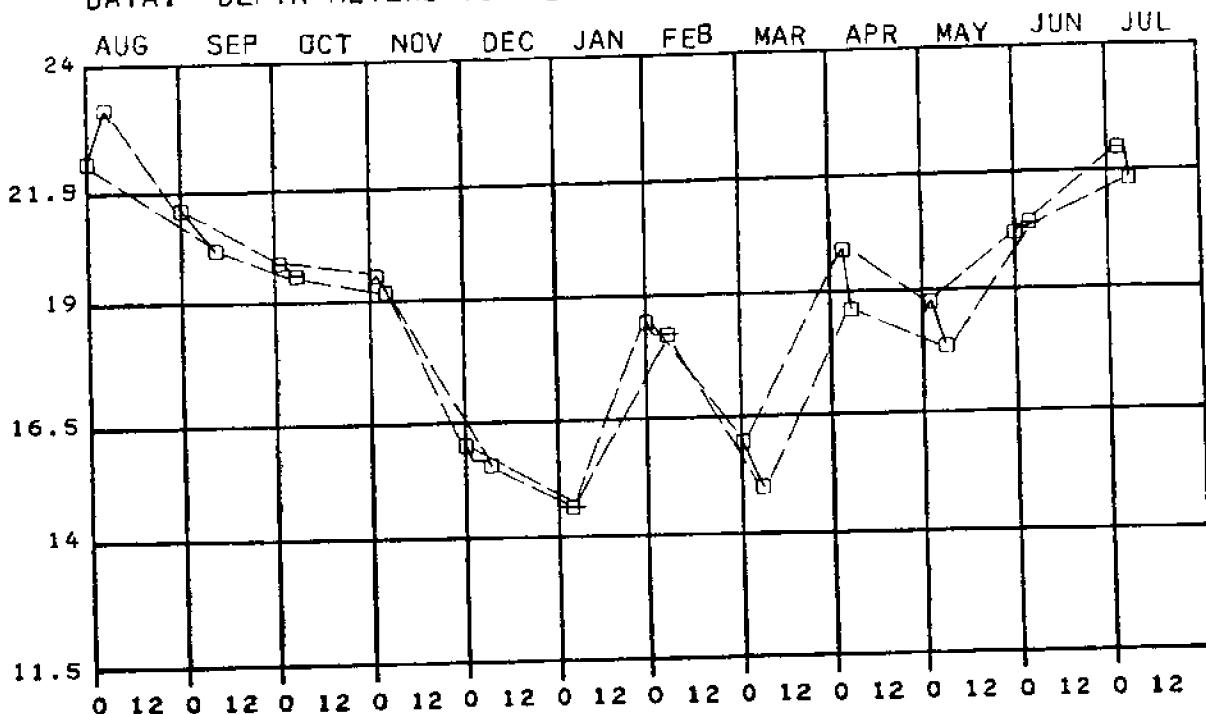
Table 2.7a,b

STATION M7

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. TEMPERATURE (°C)



STATION M7

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. SALINITY (PPT)

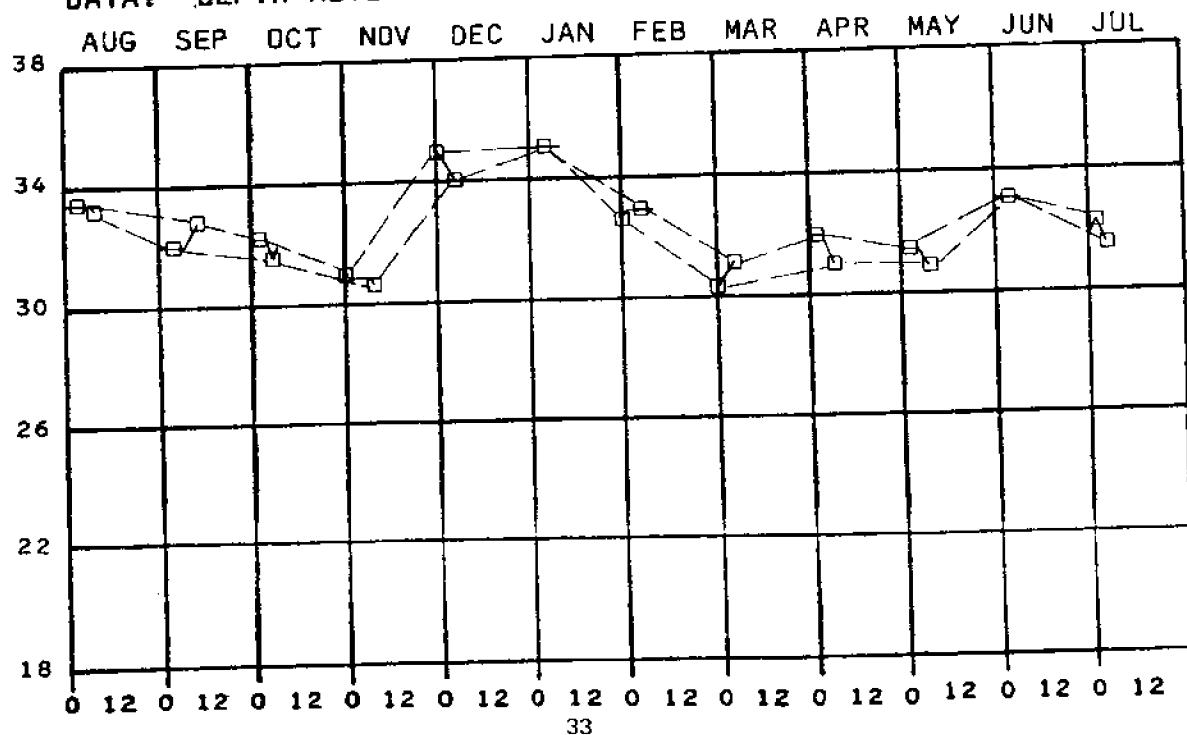


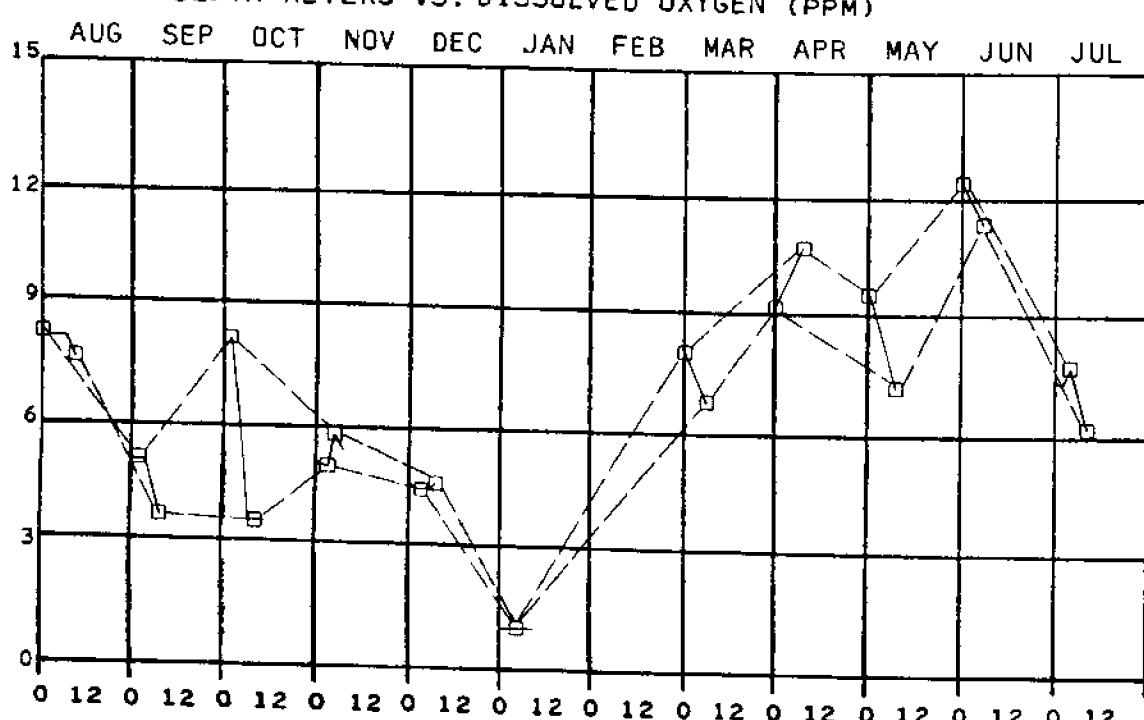
Table 2.7c,d

STATION M7

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. DISSOLVED OXYGEN (PPM)



STATION M7

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

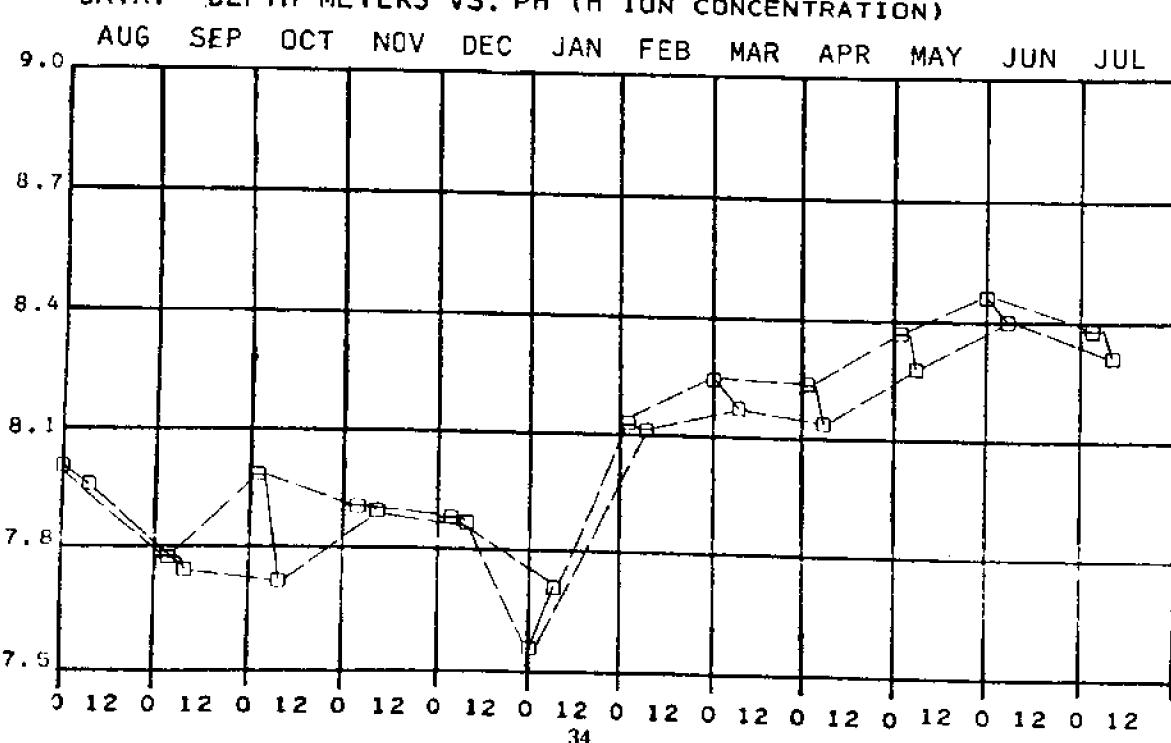
DATA: DEPTH METERS VS. PH (H⁺ ION CONCENTRATION)

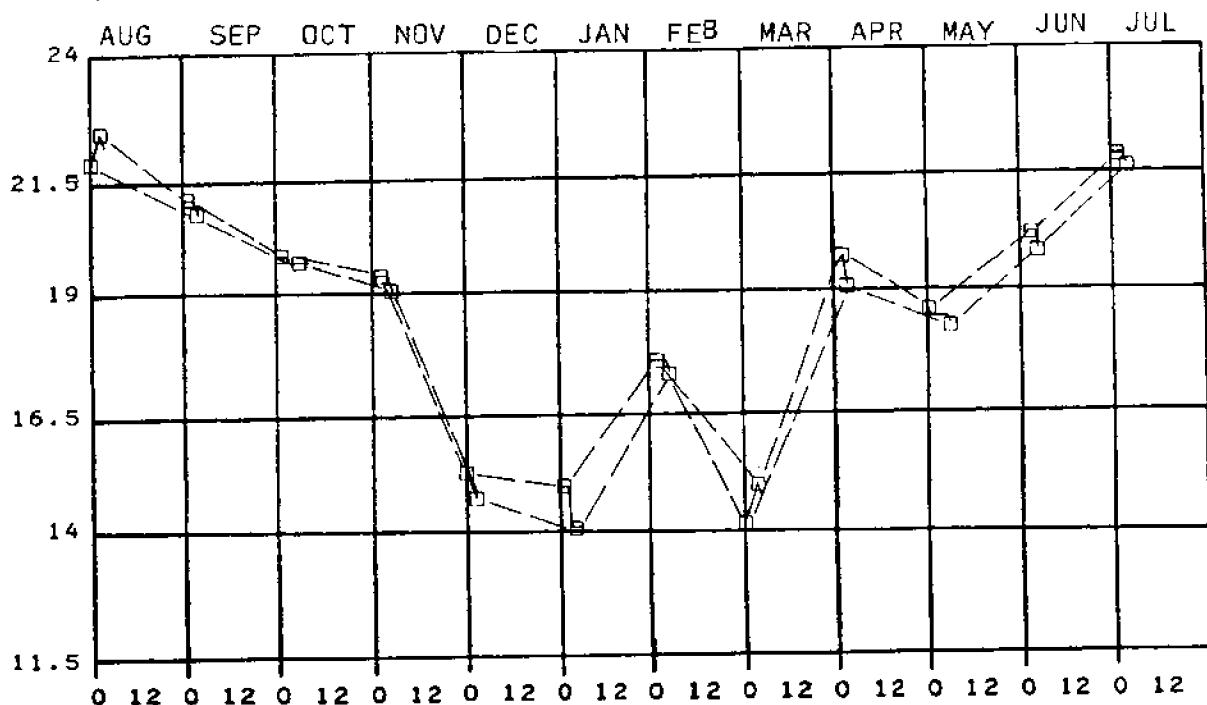
Table 2.8a,b

STATION M8

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. TEMPERATURE (°C)



STATION M8

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. SALINITY (PPT)

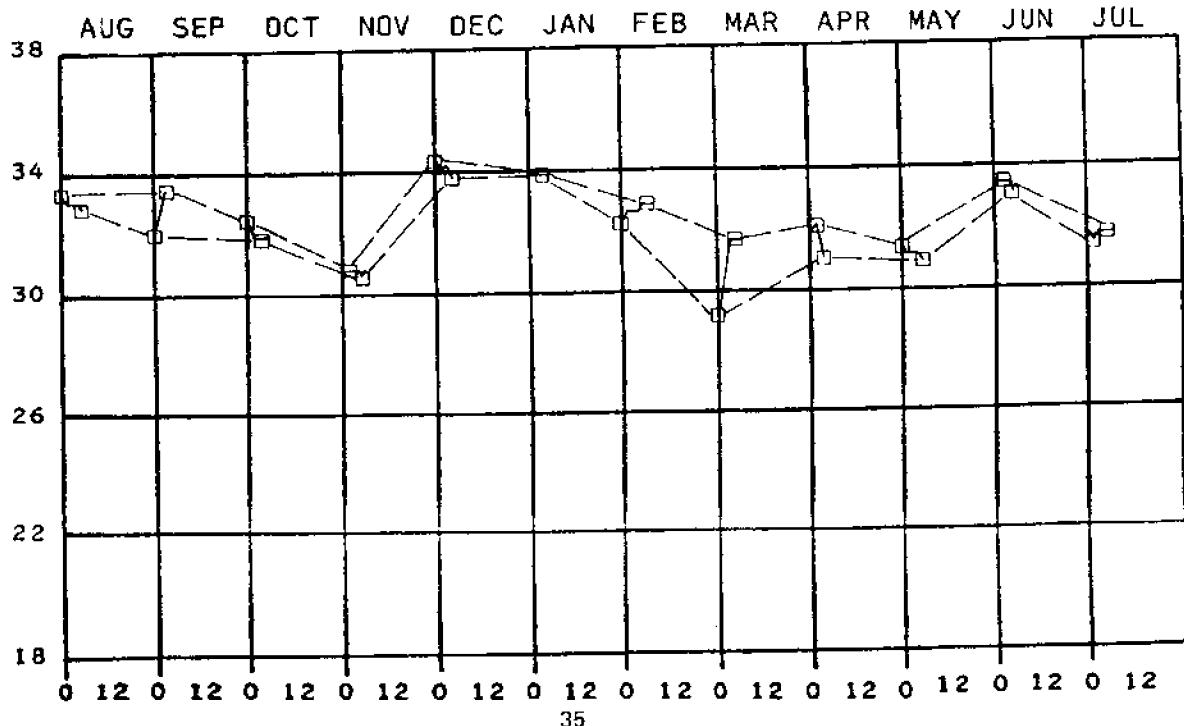


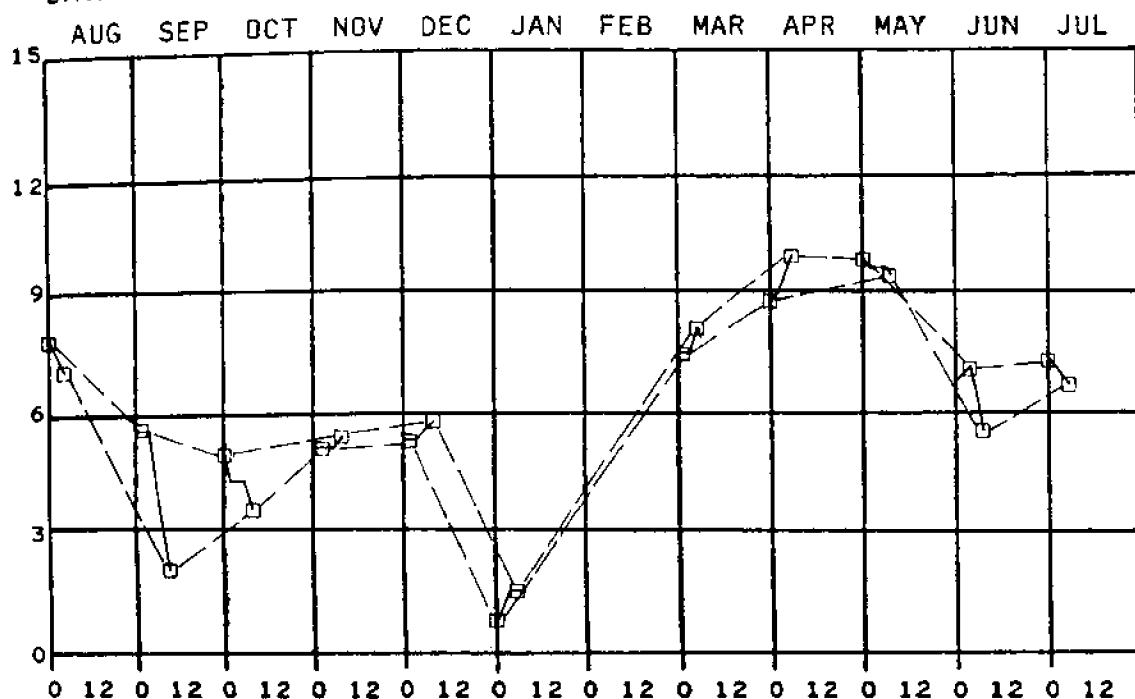
Table 2.8c,d

STATION M8

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. DISSOLVED OXYGEN (PPM)



STATION M8

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

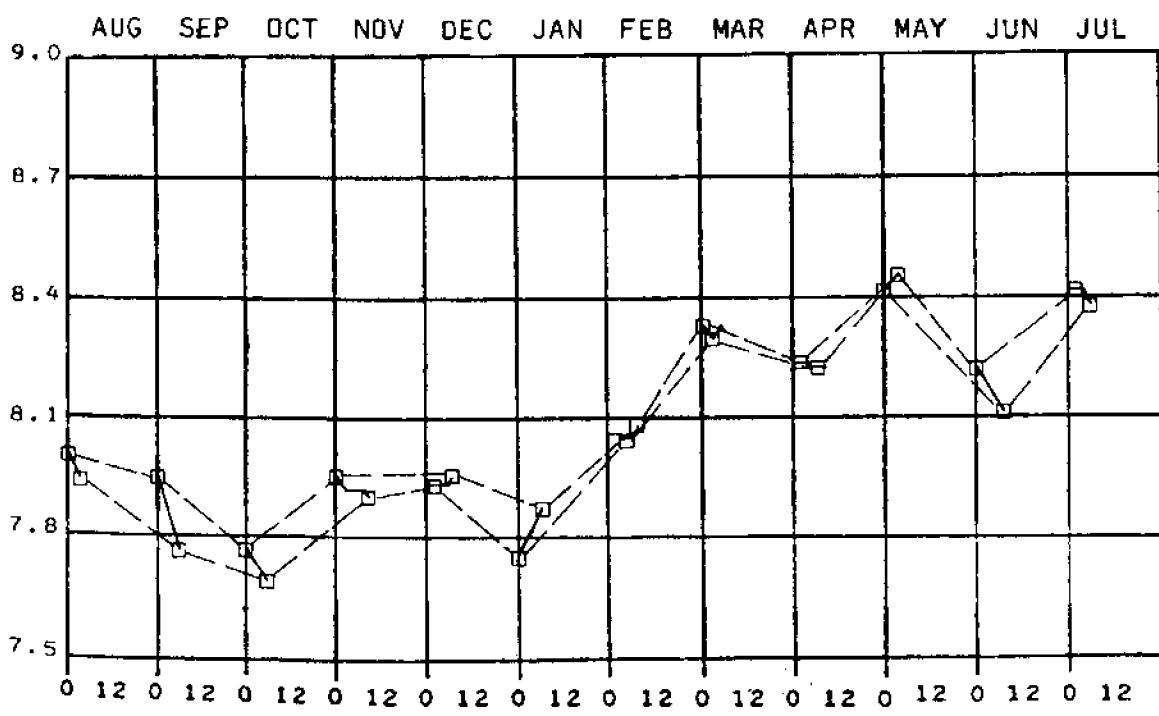
DATA: DEPTH METERS VS. PH (H⁺ ION CONCENTRATION)

Table 2.9a,b

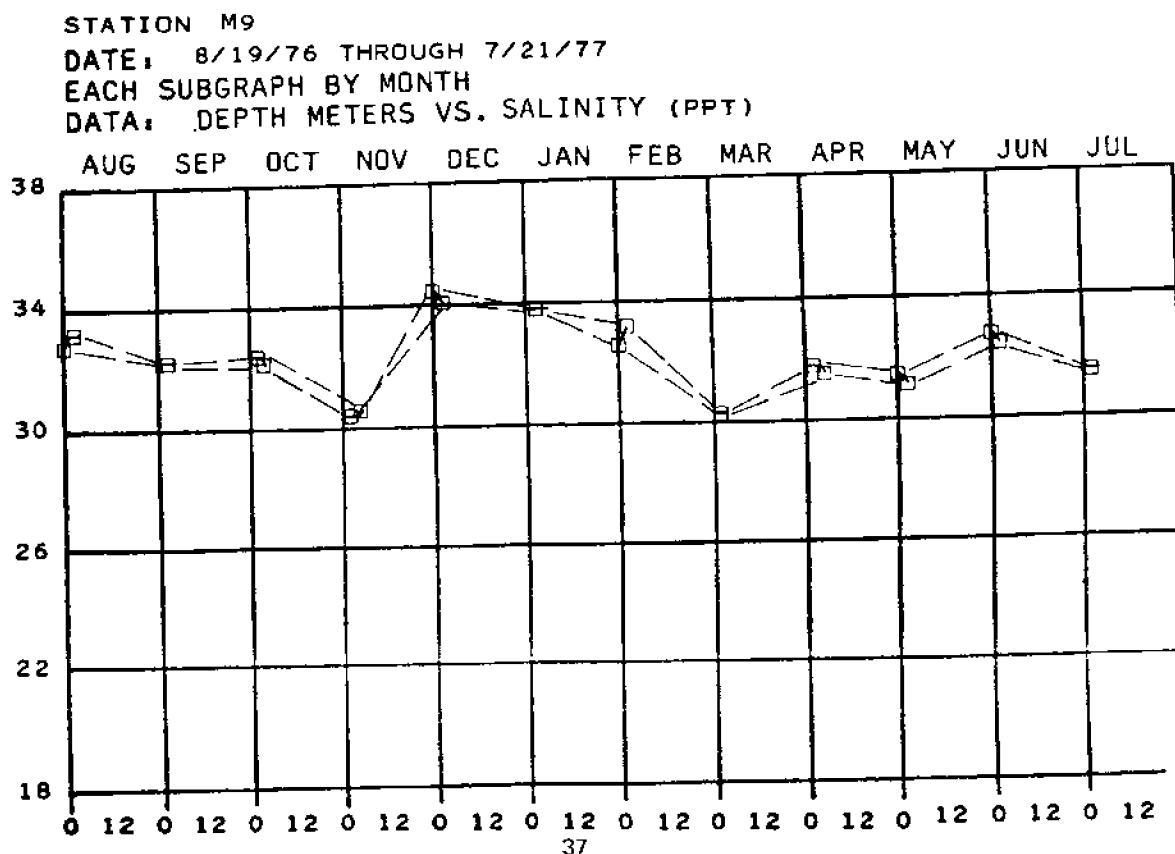
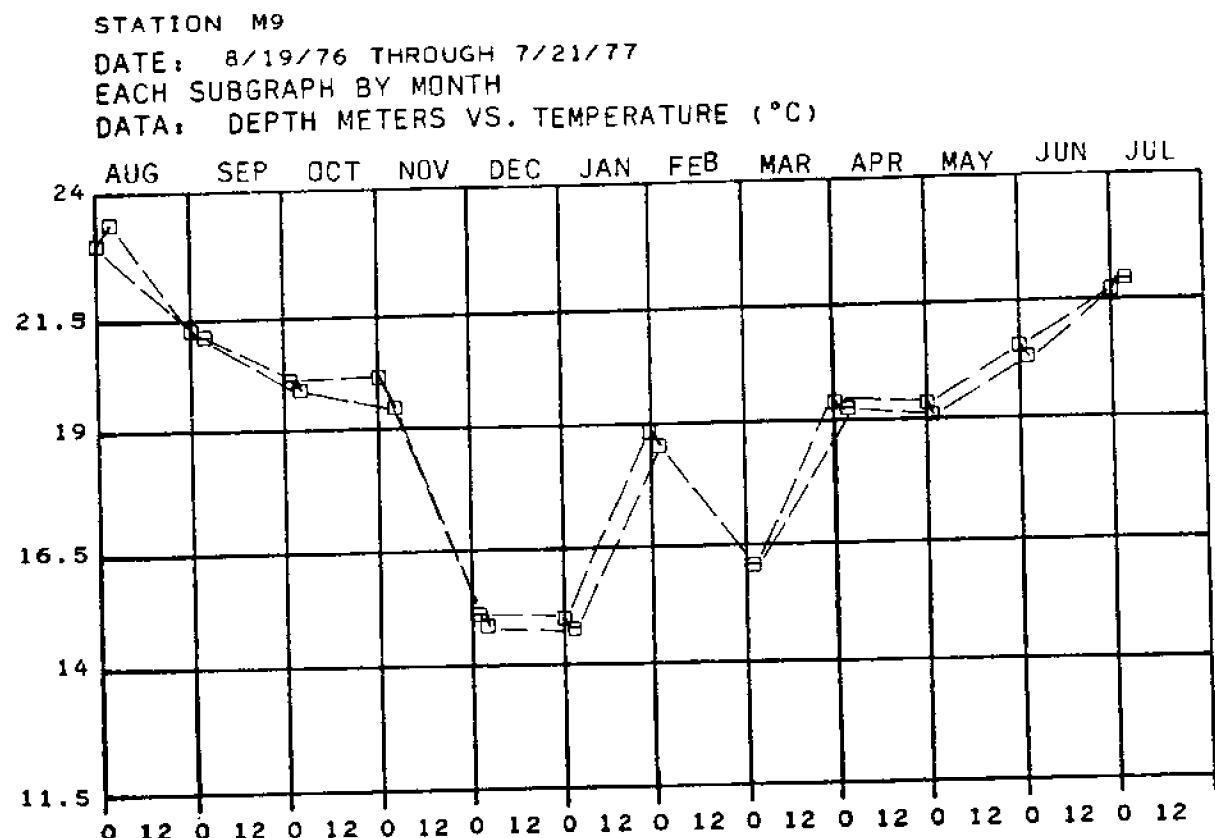


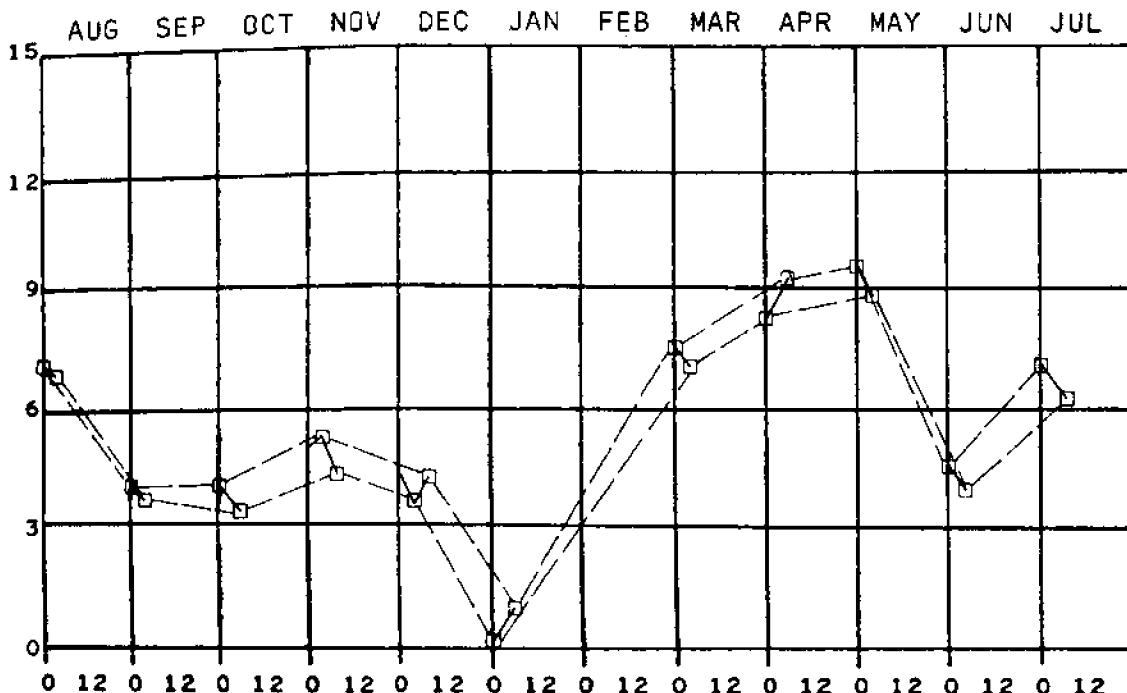
Table 2.9c,d

STATION M9

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. DISSOLVED OXYGEN (PPM)



STATION M9

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

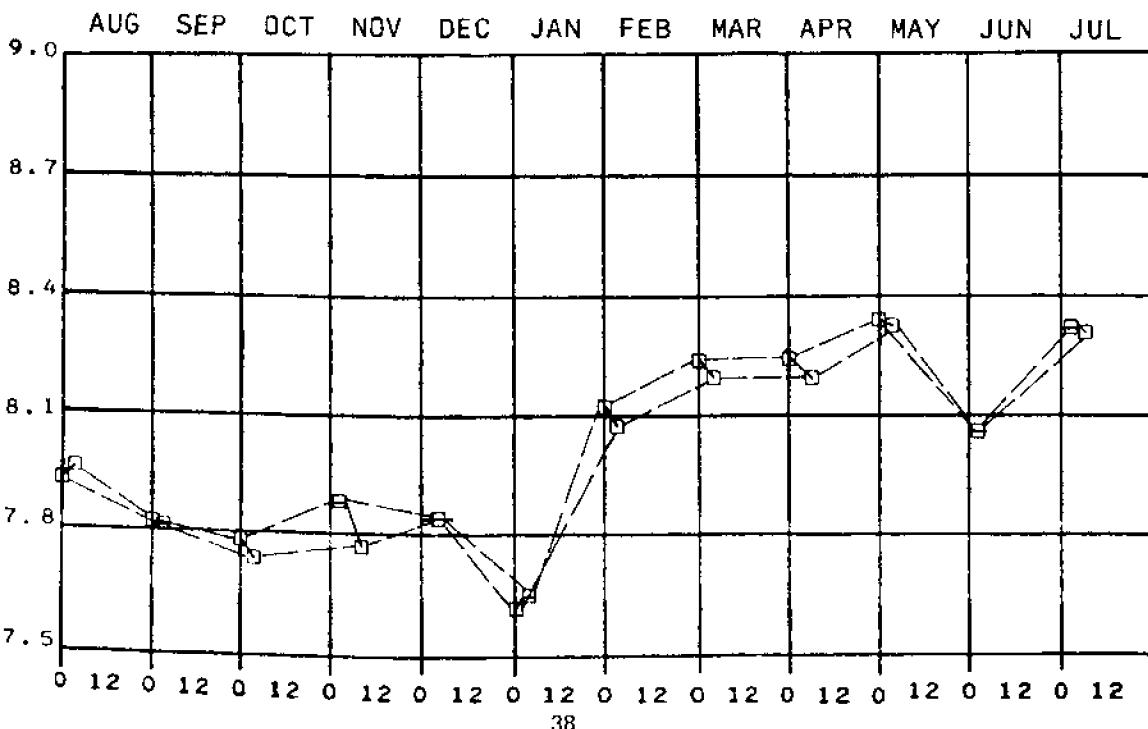
DATA: DEPTH METERS VS. PH (H⁺ ION CONCENTRATION)

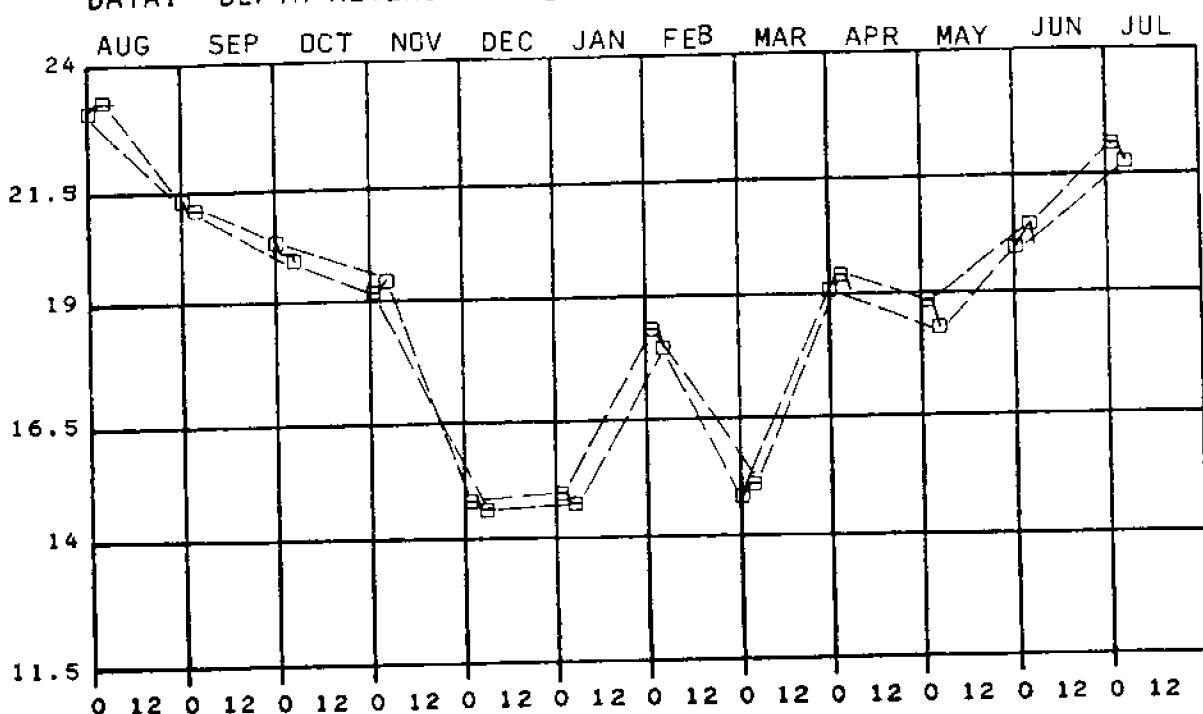
Table 2.10a,b

STATION M10

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. TEMPERATURE (°C)



STATION M10

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. SALINITY (PPT)

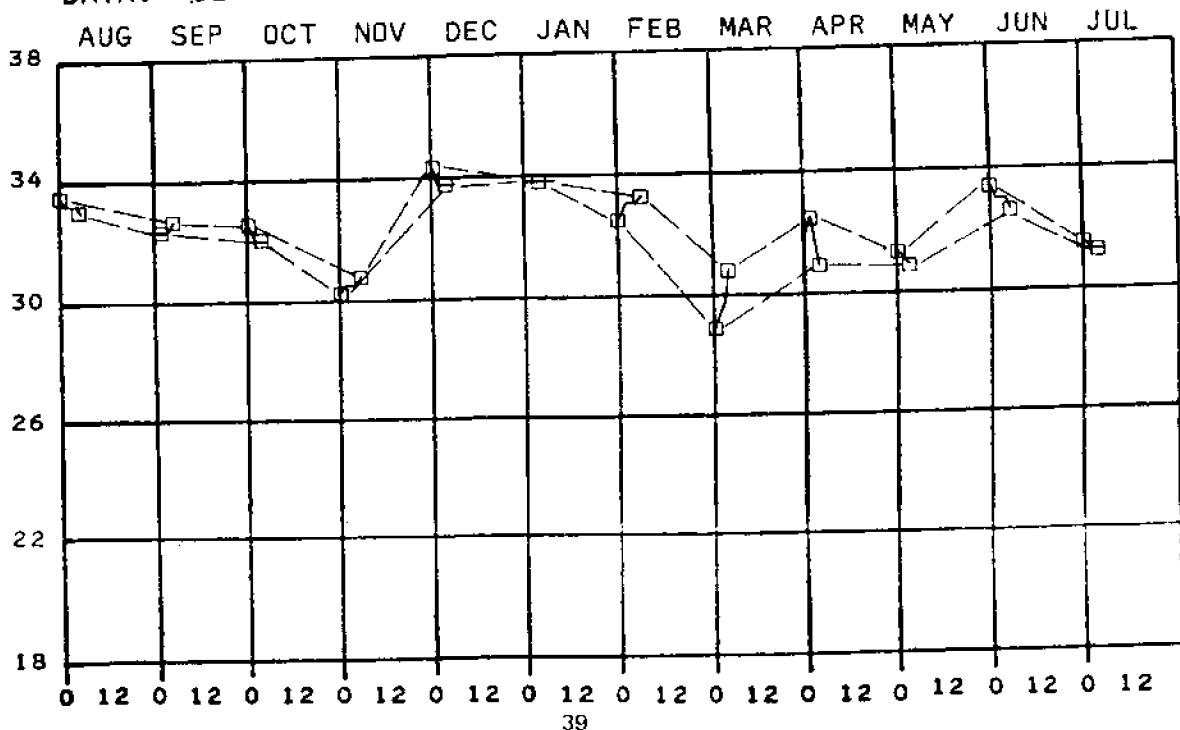


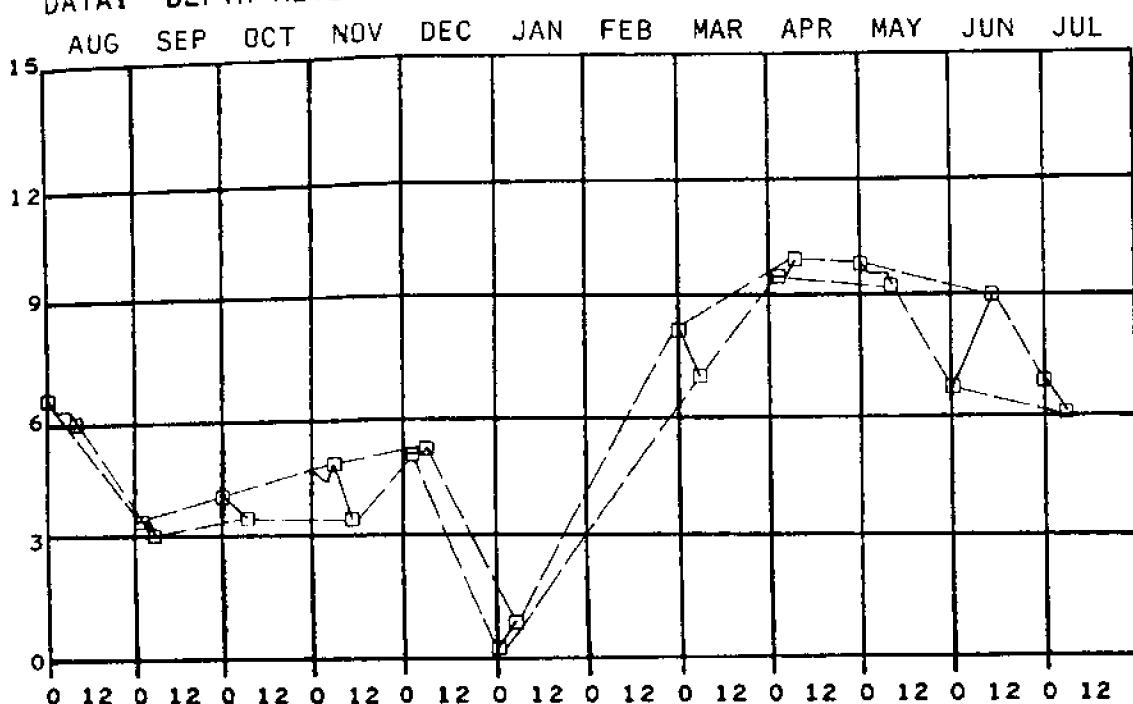
Table 2.10c,d

STATION M10

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. DISSOLVED OXYGEN (PPM)



STATION M10

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

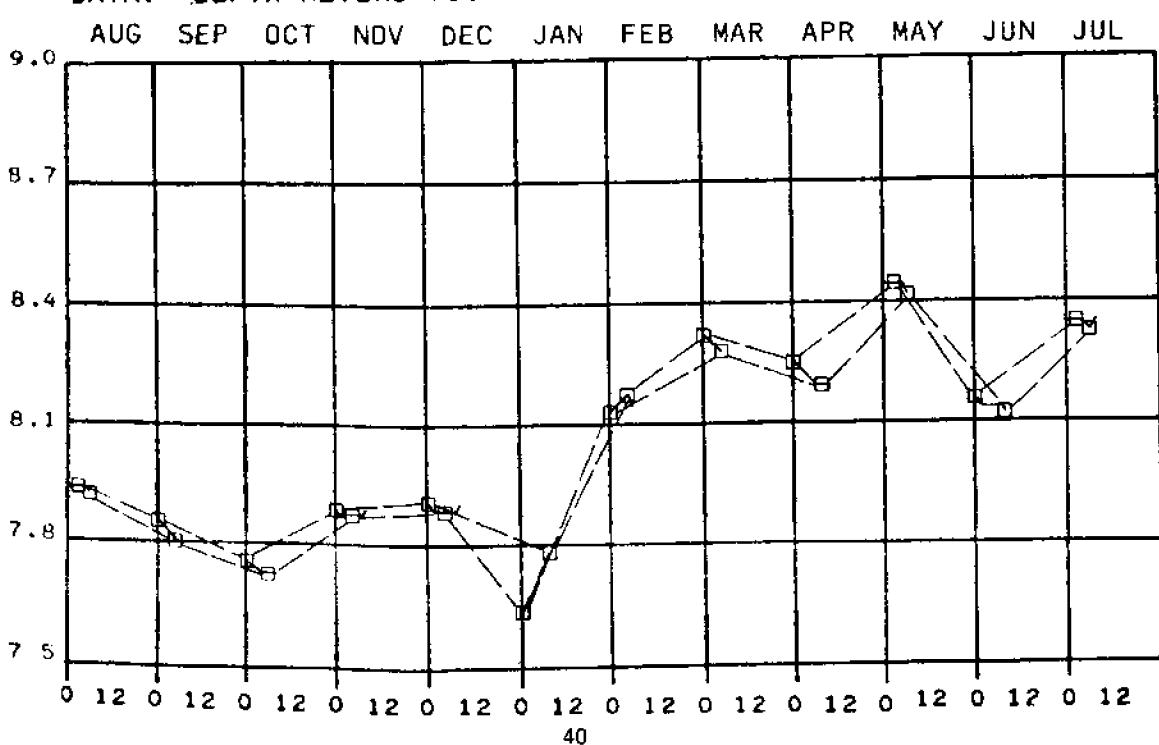
DATA: DEPTH METERS VS. PH (H⁺ ION CONCENTRATION)

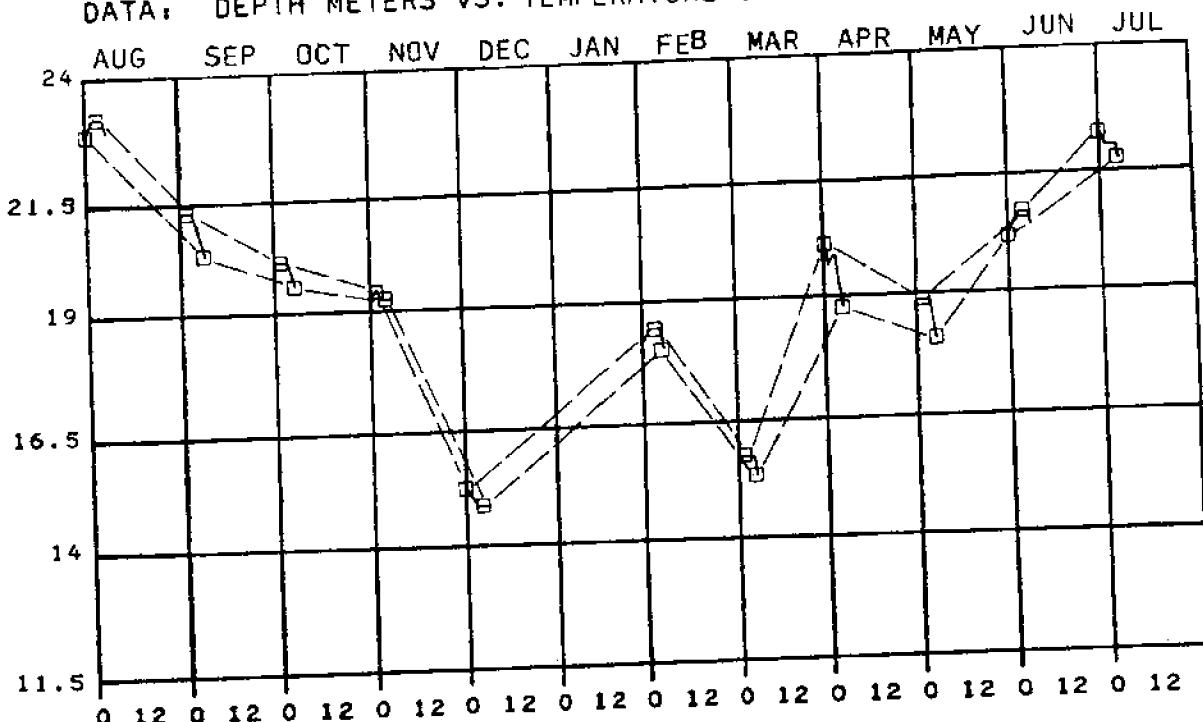
Table 2.11a,b

STATION M11

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. TEMPERATURE (°C)



STATION M11

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. SALINITY (PPT)

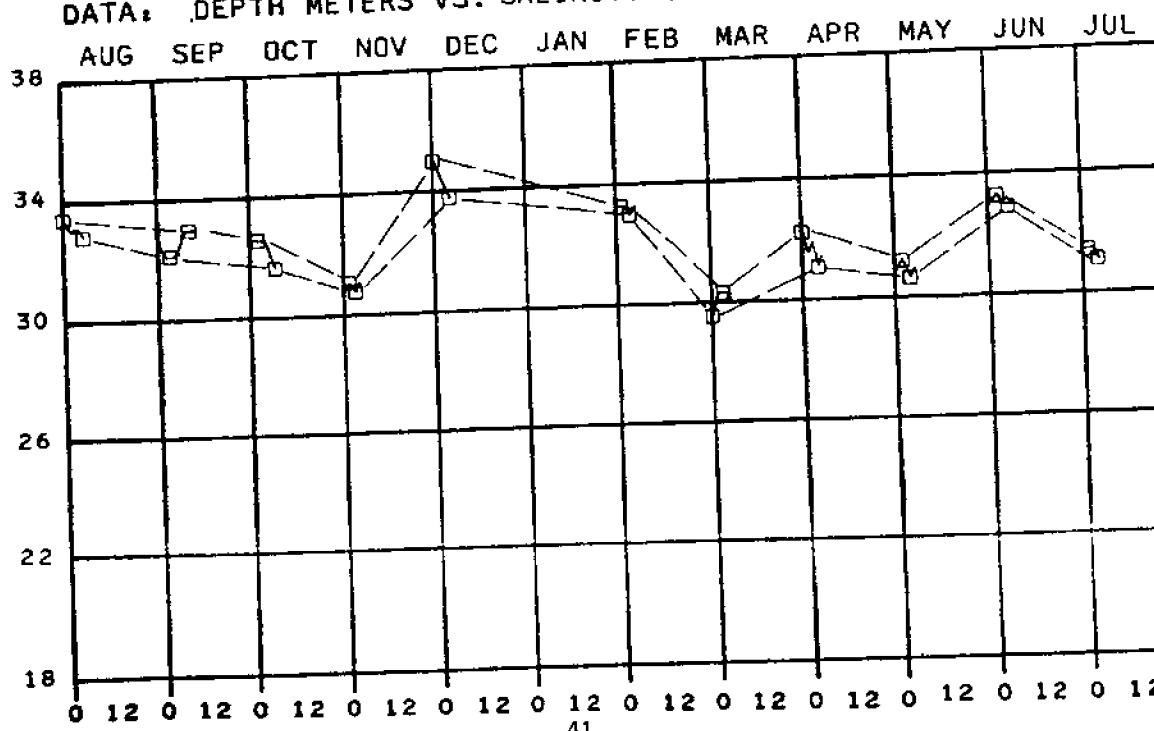


Table 2.11c,d

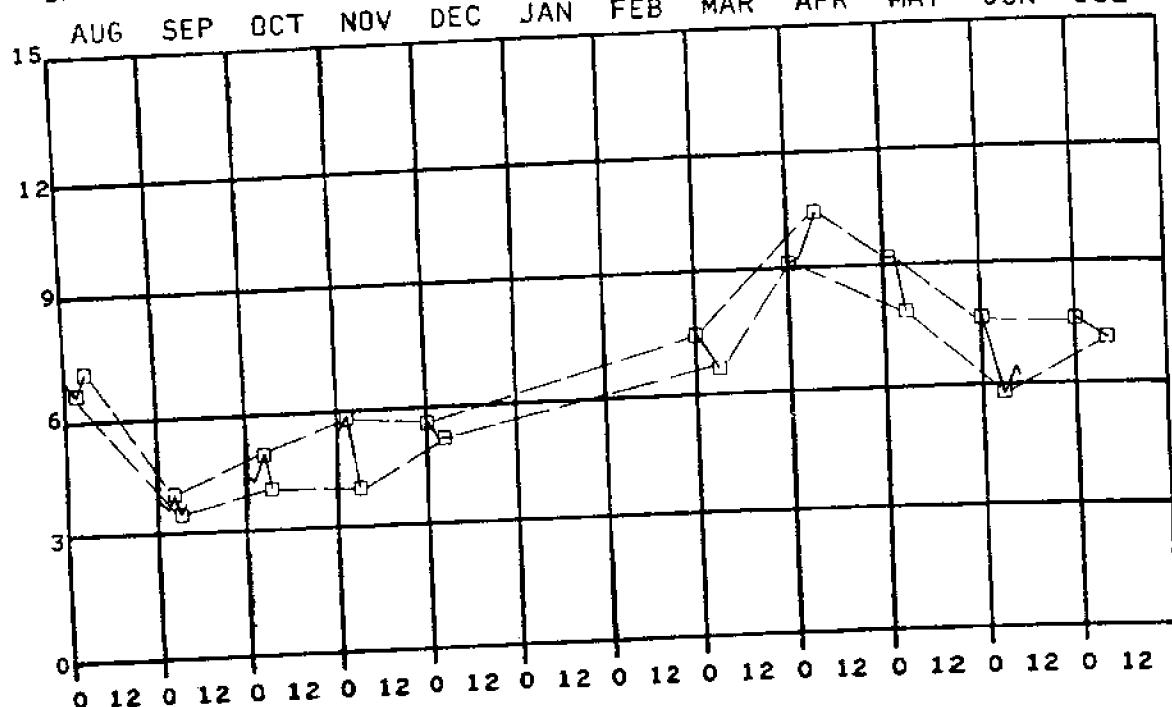
STATION M11

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. DISSOLVED OXYGEN (PPM)

AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL



STATION M11

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. PH (H+ ION CONCENTRATION)

AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL

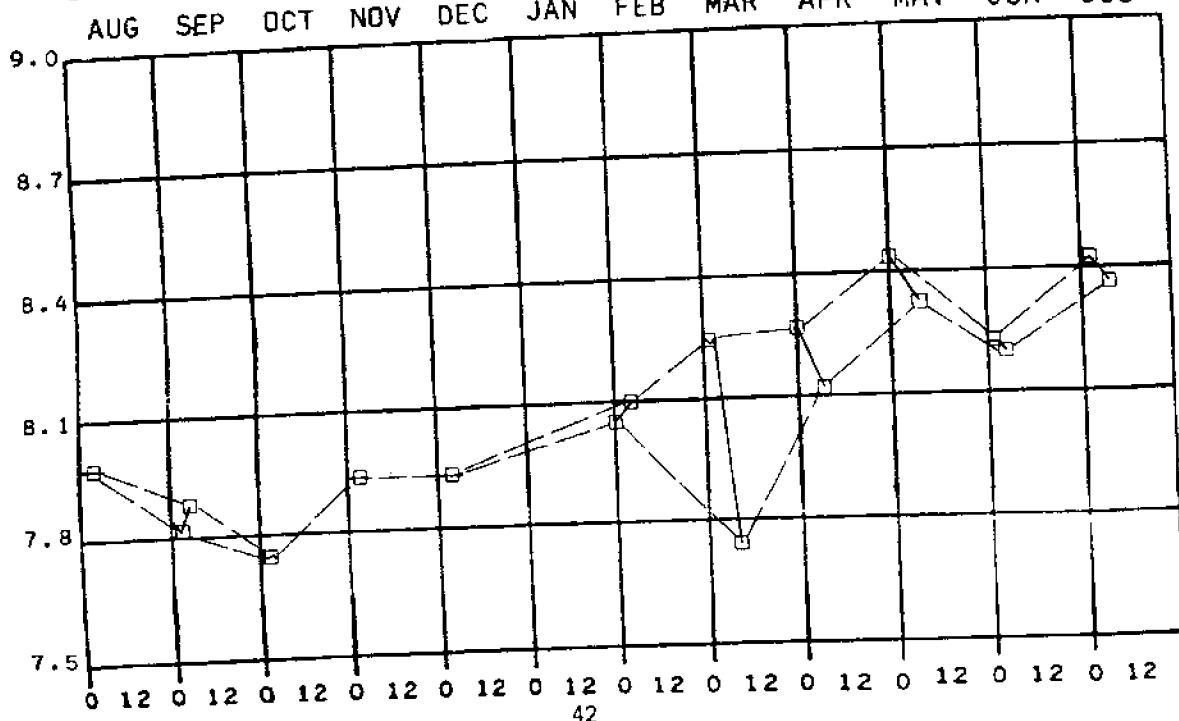


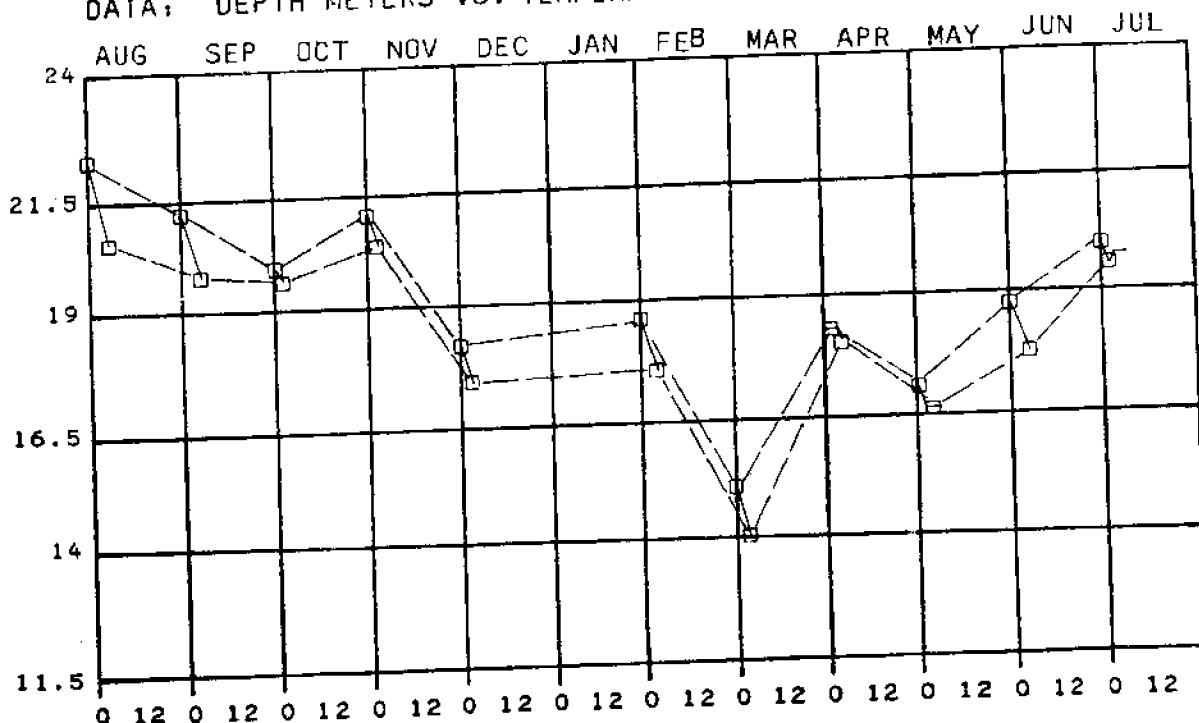
Table 2.12a,b

STATION M12

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. TEMPERATURE (°C)



STATION M12

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. SALINITY (PPT)

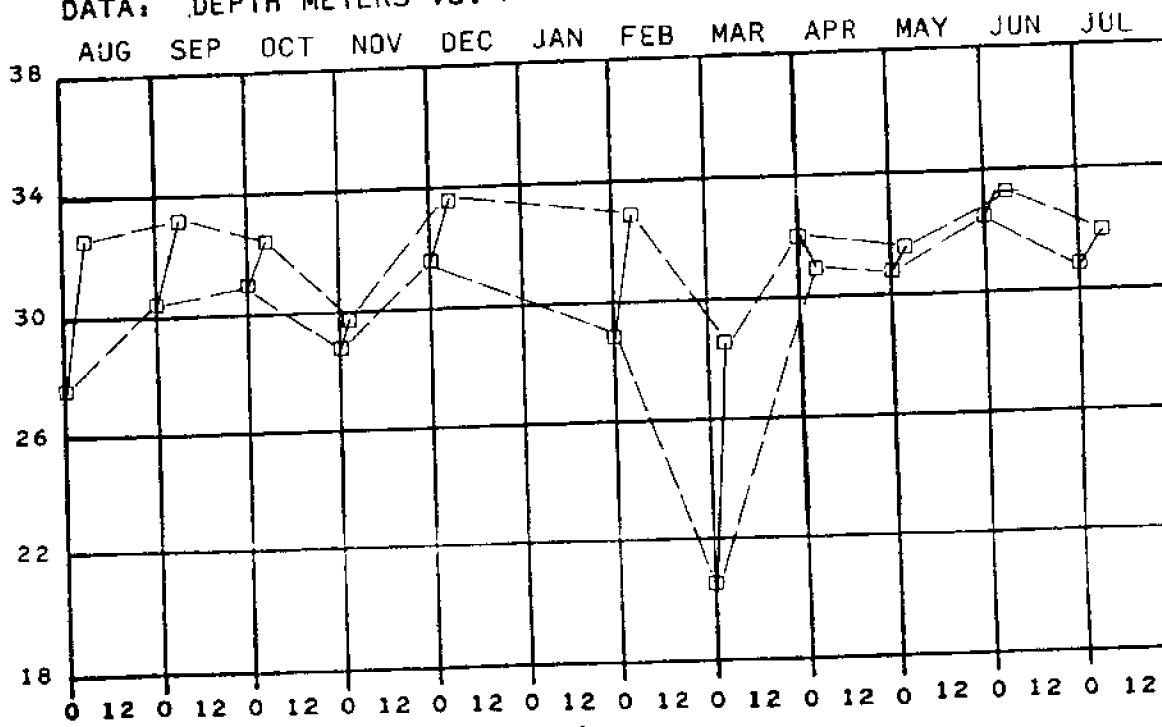


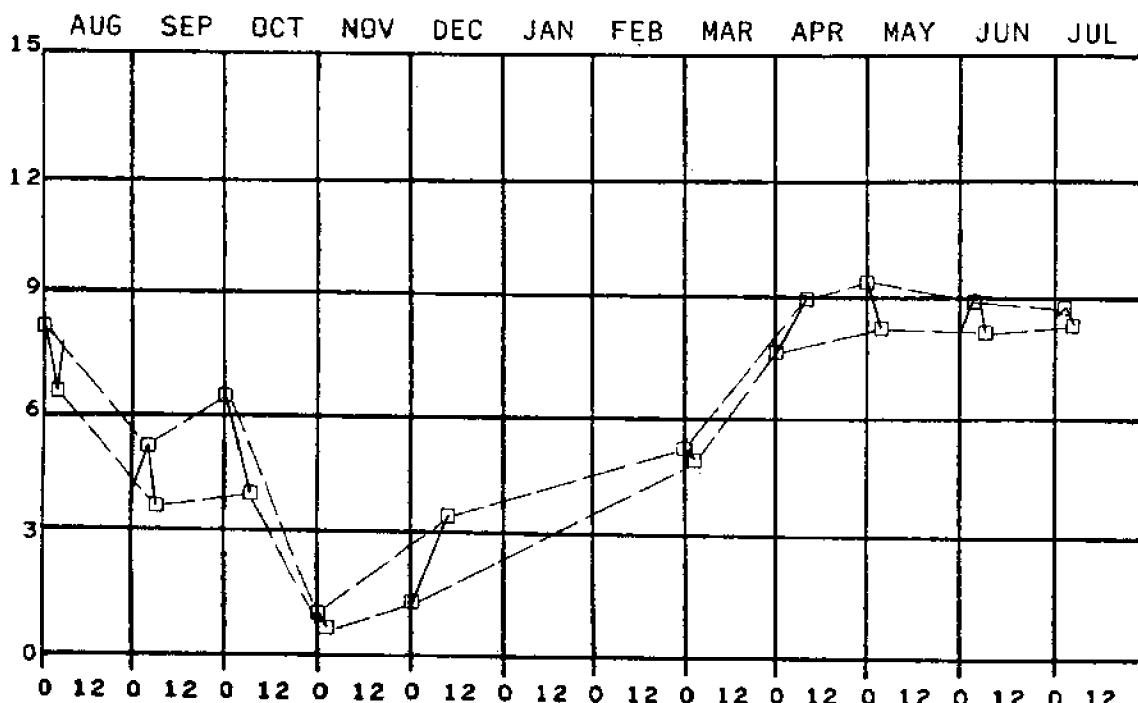
Table 2.12c,d

STATION M12

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. DISSOLVED OXYGEN (PPM)



STATION M12

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. PH (H ION CONCENTRATION)

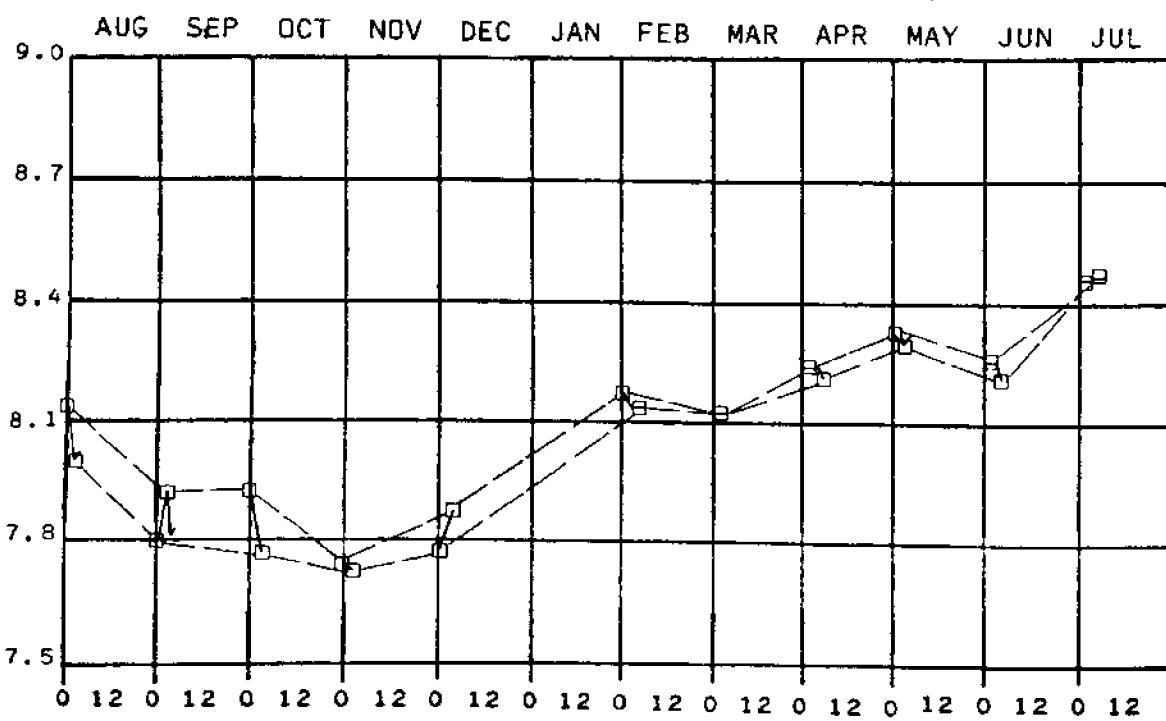


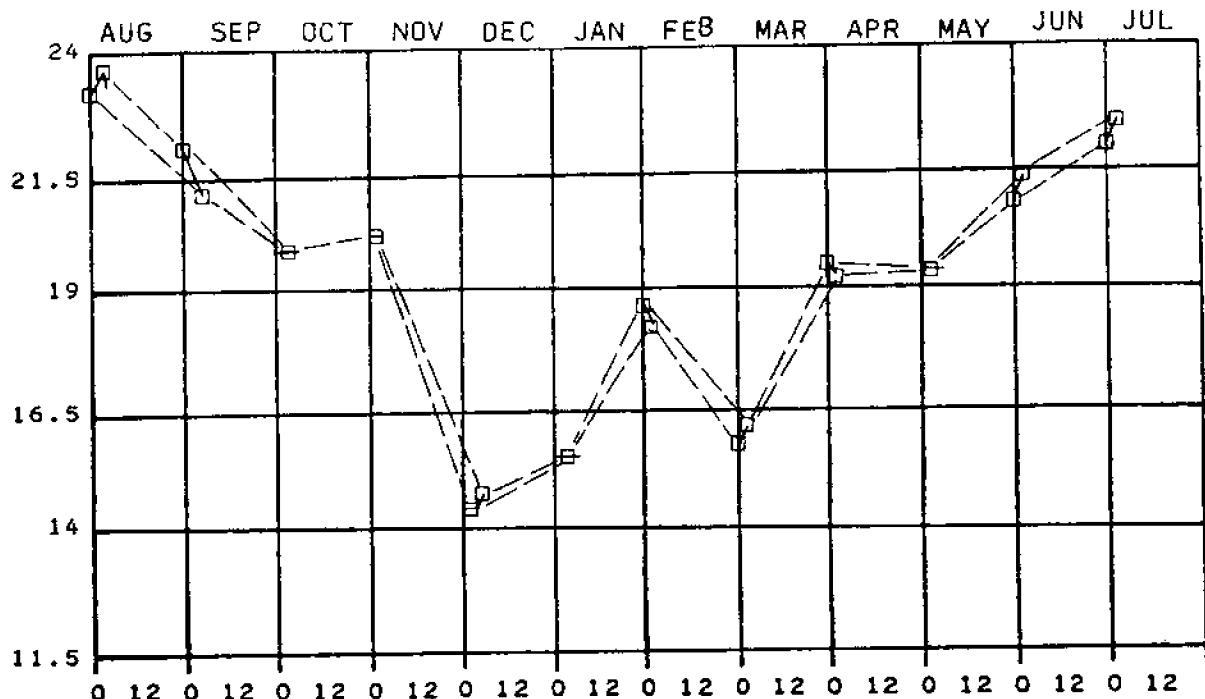
Table 2.13a,b

STATION M13

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. TEMPERATURE (°C)



STATION M13

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. SALINITY (PPT)

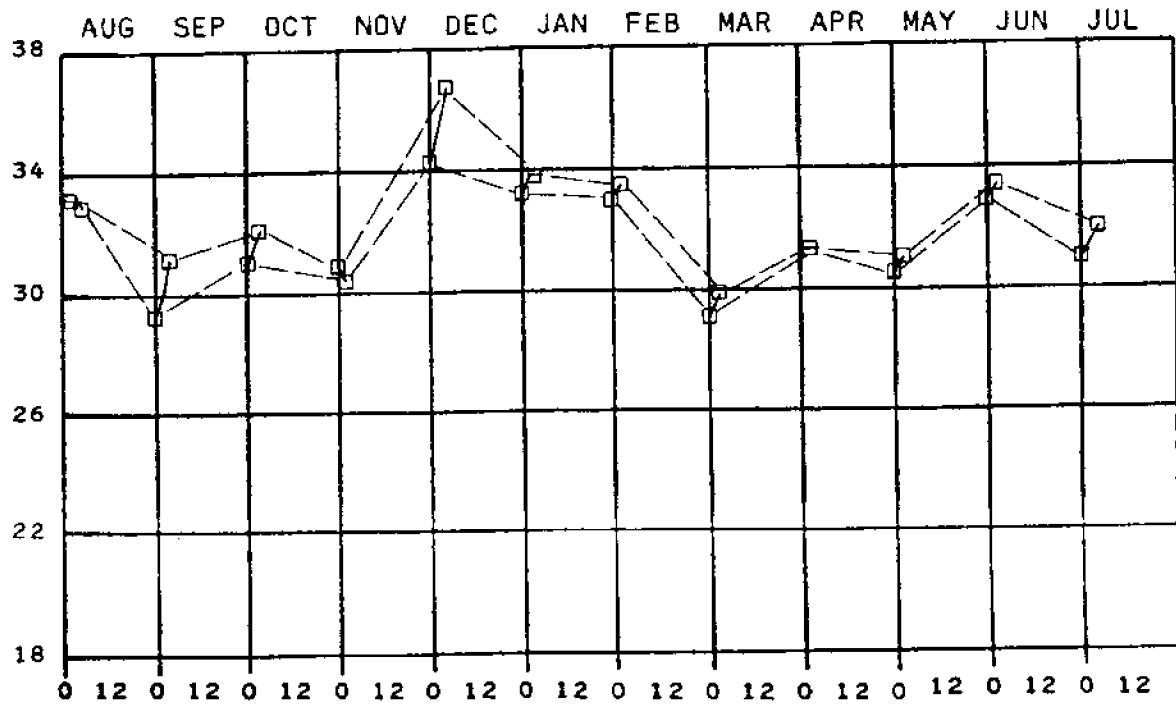


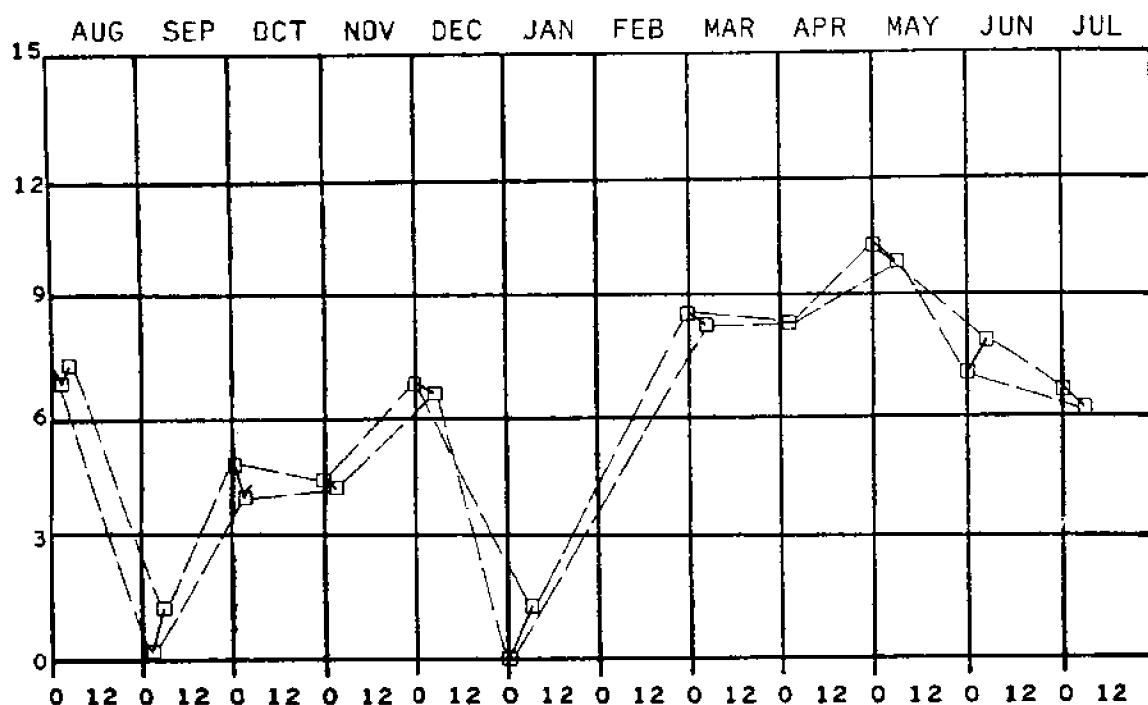
Table 2.13c,d

STATION M13

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. DISSOLVED OXYGEN (PPM)

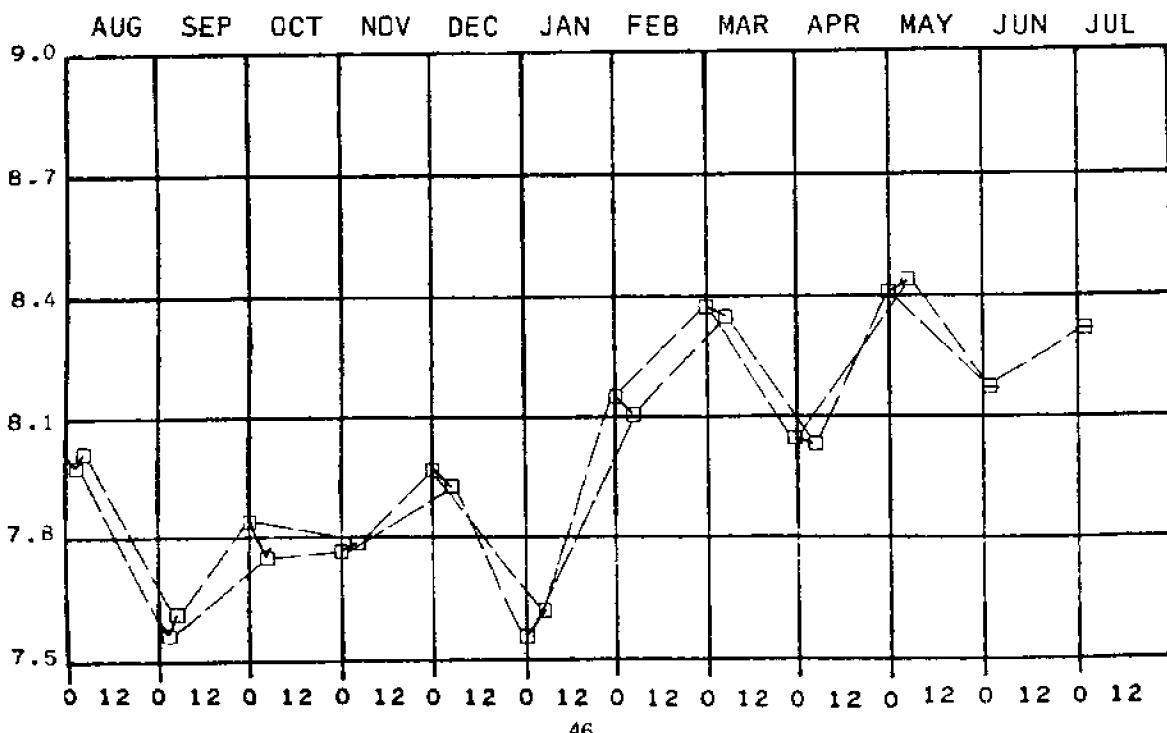


STATION M13

DATE: 8/19/76 THROUGH 7/21/77

EACH SUBGRAPH BY MONTH

DATA: DEPTH METERS VS. PH (H+ ION CONCENTRATION)



CHAPTER 3

POLLUTANTS IN WATER AND SEDIMENT

POLLUTANTS IN WATER AND SEDIMENT

Water

Because the question of the input of pollutants via storm drains is so important to the biotic quality of the marina, water samples were collected on 18 March at six stations and on 21 March at four stations, after a rainfall of 0.89 on 16 March. Tables 3.1 and 3.2 show the results of chemical analyses.

In the three day interval, the immediate oxygen demand (IOD) decreased at stations 4 and 7 but increased at stations 10 and 12, where runoff is heavy. Oil and grease levels decreased somewhat at stations 4, 7 and 20 while organic and total (Kj) nitrogen decreased at all stations sampled both times.

Of the heavy metals, cadmium, chromium, copper, iron, mercury, manganese, nickel, lead and zinc levels in the water decreased at most stations presumably due to the rainfall runoff.

However, levels of pesticides increased at all four stations analyzed. PCB's also increased, possibly indicating a land source for this contaminant. Arsenic and mercury may have increased slightly at station 7 and nickel increased at station 10.

Biological oxygen demand (BOD) analyses were also carried out on samples from the four stations on 21 March. Table 3.5 shows these results. These can be compared with unpublished data from Los Angeles Harbor, where waste effluents enrich the waters. There the BOD readings are about 10 times higher near the outfalls, but are very similar to the marina readings in the rest of the outer Los Angeles Harbor. (AHF, 1976).

Sediments

To determine the physico-chemical constituents of the sediments of MDR, analyses were performed in Dr. K. Y. Chen's Environmental Engineering laboratory at the University of Southern California. Measurements were made of moisture content (MC), dry matter (DM), total organic carbon (TOC), chemical oxygen demand (COD), immediate oxygen demand (IOD), total volatile solids (TVS), sulfide, oil and grease, organic nitrogen, total nitrogen, phosphorus, and the following

heavy metals: arsenic, cadmium, chromium, copper, iron, mercury, manganese, nickel, lead and zinc.

The results of these analyses indicate a high percentage of organic material for station 1 near the mouth of the Ballona Creek flood control channel. Chemical oxygen demand, the oxygen uptake by chemical substances in the substrate, was very high for each station. The presence of oil and grease and certain heavy metals in high concentration, indicate that the adjacent flood control channel (Ballona Creek) and the storm drains which empty into the marina may have a significant influence on the habitat (Table 3.4).

Previous studies (Bowerman et al., 1971) carried out in the marina were not directed toward identifying biological impacts from the storm drainage. In the present investigations the monthly sampling of both biota and water quality assisted in showing seasonal trends. Also, the unusual rainfall pattern led to more specific identification of impacts, when sampling was done before and after the September, January and March storms.

Data on concentrations in water and sediments may be compared with those from Los Angeles-Long Beach Harbor reported earlier by Harbors Environmental Projects (Chen, 1974; Allan Hancock Foundation, 1976).

Table 3.1. Water Analysis for Marina del Rey, March 18, 1977.

Parameter	MDR 4	MDR 7	MDR 10	MDR 12
pH	8.0	8.0	8.1	8.8
Alkalinity	119	119	121	119
COD	188	192	192	172
P	0.1	0.09	0.08	0.09
TOC	7.5	6.8	8.5	5.1
IOD	0.7	0.5	0.65	0.55
ΣS^-	nil	nil	nil	nil
NO_3^-N	0.92	1.05	0.90	0.98
Oil & Grease	1.3	0.6	1.4	2.0
Org-N	0.35	0.35	0.84	0.49
Kj-N	0.35	0.35	0.84	0.49
As	0.007	0.005	0.006	0.006
Cd	0.003	0.004	0.008	0.003
Cr	0.122	0.090	0.160	0.214
Cu	0.022	0.023	0.025	0.016
Fe	0.180	0.075	0.165	0.075
Hg	0.008	0.004	0.002	0.005
Mn	0.032	0.025	0.073	0.125
Ni	0.003	0.015	0.004	0.005
Pb	0.012	0.009	0.028	0.021
Zn	0.051	0.056	0.082	0.028
op'DDE	0.002	0.003	0.003	0.003
op'DDD	-	0.002	0.001	-
op'DDE	-	-	0.008	-
pp'DDE	0.007	0.007	0.007	0.008
pp'DDD	-	0.006	0.003	-
pp'DDT	-	-	0.008	-
Total DDT	0.009	0.018	0.03	0.011
PCB 1242	-	0.07	-	0.16
Total PCB	-	0.07	-	0.16

All units in ppm unless specified.

Table 3.2. Water Analysis for Marina del Rey, March 21, 1977.

Parameter	MDR 4	MDR 7	MDR 10	MDR 11	MDR 12	MDR 13
pH	8.1	8.1	8.0	8.1	8.0	8.1
Alkalinity	121	119	121	119	123	119
COD	192	200	192	188	204	188
P	0.1	0.08	0.1	0.08	0.1	0.09
TOC	6	6	5	5.8	7.2	4.8
IOD	0.4	0.3	1.4	1.5	1.4	1.2
ΣS^{\pm}	nil	nil	nil	nil	nil	nil
NO_3^-N	0.85	0.41	0.89	0.88	1.58	0.67
Oil & Grease	0.20	0.5	0.3	1.5	2.0	2.5
Org-N	0.21	0.21	0.21	0.21	0.28	0.49
Kj-N	0.21	0.21	0.21	0.21	0.28	0.49
As	0.005	0.007	0.006	0.005	0.005	0.006
Cd	0.002	0.002	0.002	0.001	0.001	0.002
Cr	0.072	0.012	0.010	0.215	0.115	0.120
Cu	0.005	0.005	0.006	0.007	0.001	0.005
Fe	0.015	0.027	0.026	0.022	0.027	0.050
Hg	0.006	0.005	0.001	0.001	0.001	0.001
Mn	0.021	0.015	0.043	0.144	0.037	0.045
Ni	0.001	0.001	0.011	0.001	0.001	0.001
Pb	0.002	0.007	0.003	0.002	0.003	0.010
Zn	0.008	0.014	0.025	0.018	0.003	0.018
op'DDE	0.009	0.004	0.008	0.001	0.005	0.002
op'DDD	-	0.002	0.004	-	-	0.006
op'DDT	-	-	0.015	-	-	-
pp'DDE	0.013	0.008	0.012	0.003	0.01	0.004
pp'DDD	-	0.006	0.008	-	-	0.009
pp'DDT	-	-	0.04	-	-	-
Total DDT	0.032	0.020	0.087	0.004	0.015	0.021
PCB 1242	-	0.26	-	-	0.18	-
Total PCB	-	0.26	-	-	0.18	-

All units in ppm unless specified.

Table 3.3. Water Analysis

	<u>Ranges in Open Sea Water (ppm)</u> (ppm) (AHF, 1976)	<u>Ballona Creek at Lincoln</u> <u>Blvd.*</u> March 15, 1977	<u>(mg/l)</u> I II
As		0.005	
Cd	0.003-0.24	0.013	0.014
Cr	0.05-0.8	0.052	0.028
Cu	0.1-0.8	0.032	0.032
Fe	0.4-3.0	0.14	0.16
Hg	0.03-0.15	0.00039	0.00056
Mn	0.4-3.0	0.033	0.033
Ni	0.02-0.75	0.080	0.080
Pb	0.03-0.12	0.15	0.16
Zn	0.2-0.5	0.063	0.070
Ag		0.012	0.012

* Data courtesy of the Los Angeles Flood Control District.

Table 3.4. Sediment Analysis, Marina del Rey.

Station Paramètre	MDR 1	MDR 2	MDR 3	MDR 4	MDR 5	MDR 6	MDR 7	MDR 8	MDR 9	MDR 10	MDR 11
MC %	30.49	44.28	21.44	32.68	52.09	50.45	62.08	50.96	50.98	40.27	51.33
DM %	69.51	59.72	78.56	67.42	47.91	49.55	37.92	49.04	49.02	59.73	48.67
TOC %	212	3.94	0.21	0.76	0.94	0.48	1.35	0.60	0.70	0.80	0.66
COD	41900	108900	14500	29800	52800	41800	66700	45500	34100	92700	44800
IOD	1260	1460	629	744	2370	715	5010	1230	1520	1530	1500
TVS %	5.56	8.55	1.87	4.05	8.01	5.41	9.57	6.94	5.98	10.29	8.32
S=	870	2070	6	23	395	305	2430	360	158	2430	122
Oil & Grease	6920	6300	1050	1180	3010	1830	2030	1460	1580	5170	1440
Org-N	860	1200	3.2	665	730	775	1950	890	1050	1080	780
Total-N	860	1200	3.2	665	730	775	1950	890	1050	1080	780
P	721	776	391	677	1050	591	880	938	1070	910	1170
As	5.25	6.27	2.72	5.56	21.6	10.1	13.9	20.8	15.3	22.9	17.6
Cd	1.12	1.19	0.132	0.589	0.666	0.426	0.621	0.588	0.308	1.03	0.611
Cr	88.1	96.9	27.1	70.6	122	69.8	95.5	94.1	84.8	128	129
Cu	46.3	67.8	10.9	51.8	141	105	161	118	107	270	125
Fe	14800	16900	5230	18700	34400	19800	24800	32300	33100	38100	39100
Hg	0.350	0.426	0.355	0.489	1.140	2.43	2.04	1.45	1.56	1.60	1.43
Mn	216	257	86	259	397	255	310	382	342	333	441
Ni	22.0	32.8	9.1	29.8	56.1	27.2	52.4	46.3	41.6	64.8	59.8
Pb	56.0	74.5	33	96.5	150	63.9	112	63.7	108	359	94.1
Zn	298	393	32	117	227	139	232	195	206	449	218

All units in ppm unless specified.

Table 3.5. Biological Oxygen Demand, 21 March 1977

.89 rainfall 16 March 1977

<u>Station</u>	<u>DO₂ ppm</u>	<u>Salinity ppt</u>	<u>Temperature OC</u>	<u>BOD 5</u>
4	4.25	34.0	15.2	0.68
7	4.00	33.0	15.5	0.54
10	2.80	35.0	16.5	0.0
11	4.20	34.0	15.6	0.54
12	3.00	34.0	16.0	0.68

CHAPTER 4

PHYTOPLANKTON PRODUCTIVITY

PHYTOPLANKTON PRODUCTIVITY

Primary productivity is one measure of the ability of photosynthetic organisms to convert non-living nutrients into biological material, as well as an index of the fertility of the waters being studied. Since phytoplankton form the base of all macroscopic food chains, their productivity is directly related to the amount of food available for invertebrates and fishes.

Unlike the other biological analyses used in this study, primary productivity represents a rate of the biological process of photosynthesis under standardized light conditions, rather than a measurement of a quantity of biotic material present.

The process of photosynthesis is sensitive to environmental changes and to the presence and concentrations of substances such as fertilizer salts, toxins or other chemical substances. Consequently, this measurement is useful in assessing the quality of environments such as Marina del Rey for two important reasons: primary productivity is an indirect measure of food production, and it is directly related to oxygen production by phytoplankton.

Methods

Primary productivity at the stations in Marina del Rey was determined by measuring the amount of radioactively-labeled carbon (^{14}C) incorporated by phytoplankton incubated under controlled illumination for about three hours in ambient temperature sea water. Standing crops, the number of phytoplankters present per volume of water, were determined by filtration of all plankton in one liter of water through Millipore HA filters, followed by extraction of the pigments chemically. The amount of chlorophyll a is determined by spectrophotometry. Since chlorophyll a pigment is directly proportional to the biomass of phytoplankton, a measure of standing crop can be obtained accurately.

The primary productivity and standing crop values obtained for Marina del Rey are quite variable, ranging from high productivity levels which indicate a bloom to depressed values which indicate very low production. There was a general positive relationship between high dissolved oxygen levels and high primary productivity. Low productivity would occur at the times of very low dissolved oxygen following rainfall. Low standing crops of phytoplankton or low assimilation rates for primary production measurements indicate that little photosynthetic production of oxygen was occurring as compared

with the high chemical oxygen demand (COD) due to the storm-water debris. Freshwater flow may inhibit phytoplankton productivity or may temporarily flush the phytoplankton out to sea.

Samples of surface water were collected monthly at stations 1 through 11 for determination of phytoplankton productivity and pigments. The data through August 1977 are shown in Table 4.1. The three figures shown for each data and station are: productivity as milligrams of carbon fixed per hour of incubation per cubic meter (P), chlorophyll *a* as milligrams per liter (C), and assimilation ratio (A) which is derived by dividing productivity by the chlorophyll concentration. This last datum gives information on the amount of biological material that can be produced (productivity) per unit of standing crop (Chlorophyll *a*).

Results

Similar general patterns of seasonal variation were found in these data as occur elsewhere along the southern California coast. The low winter values, starting in December, are followed by a spring bloom of modest proportions in April. Following a minor drop in productivity in May, there are summer and fall patterns of secondary blooms which are localized and sporadic. In the inner stations, winter lows are apparent as early as November.

Notable are the low productivity readings for July 29, 1976 at station 7, when most other stations had average to high values, and very low values for March 17, 1977 at station 10. The low productivity and assimilation ratio values, coupled with reasonable chlorophyll data, were possibly due to the presence of some inhibiting or toxic substance in the localized waters of the station sampled. Values for almost all other stations on March 17 appear to be somewhat low as compared with February and April data, suggesting that the waters were affected by rainfall runoff, but less severely than station 10.

Averages of all of the data for the 14 months reported are presented in Table 4.2 and Figure 4.1. Stations 8 and 1 were the most productive, with average values approaching those found in Los Angeles and Long Beach Harbors (AHF, 1976). Lowest values for productivity were found at stations 3, 7 and 10. Station 3 receives waters from Ballona Lagoon through the tidal gate located on the entrance channel, and station 10 receives drainage from the bird sanctuary area and adjacent property. Station 7 also receives major storm drain flow, which probably includes substances that inhibit phytoplankton

production. This is further supported by the low assimilation values found at these sites.

The overall pattern of productivity, chlorophyll α , and assimilation rates for phytoplankton in the marina reported here show an ill-defined pattern of lower phytoplankton productivity and chlorophyll values with increased distance from the entrance. This is the reverse of the pattern described for the Los Angeles-Long Beach Harbors, where both productivity and chlorophyll values are generally higher than in Marina del Rey by a factor of 2 or 3, and where these values are consistently higher inside the harbor than outside.

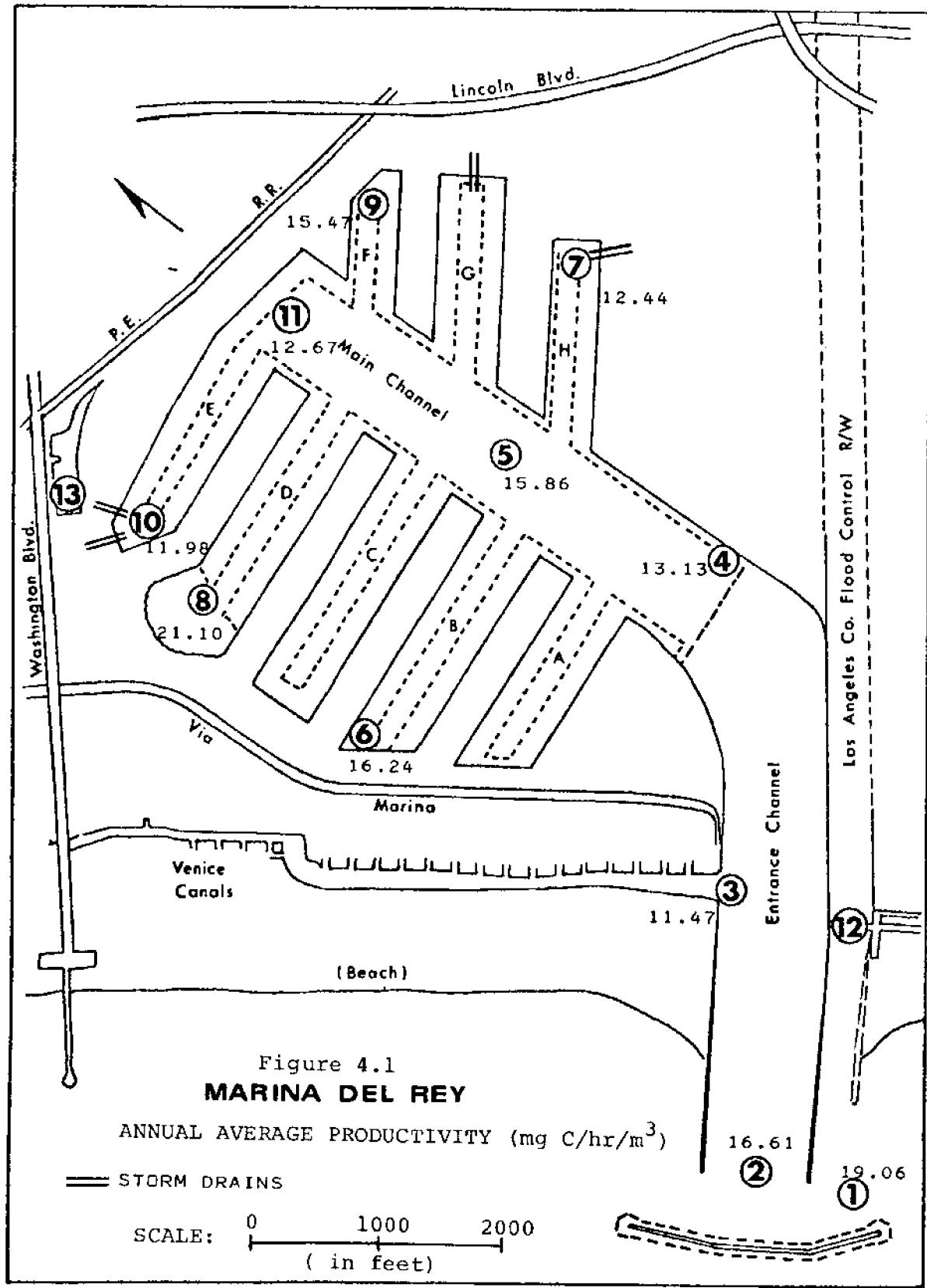


Table 4.1. Phytoplankton Productivity, Chlorophyll α , and Assimilation Ratio based on Chlorophyll α in Marina del Rey.

Station	Date	1976						1977						4.5
		7/29	8/19	9/16	10/14	11/19	12/16	17/20	2/17	3/17	4/21	5/19	6/23	
1 P	89.85	8.25	16.15	16.75	20.84	2.20	3.05	2.80	3.04	18.20	11.99	32.53	22.74	15.42
	6.66	2.03	9.31	3.43	8.22	4.01	2.70	1.52	1.07	3.97	3.47	2.83	5.18	3.11
	13.49	4.06	1.73	4.88	2.54	0.55	1.13	1.84	2.84	4.58	3.46	11.49	4.39	4.96
2 P	34.68	8.03	32.66	18.89	18.35	2.09	3.00	12.90	4.74	16.35	14.15	27.90	23.29	13.55
	6.10	2.12	1.38	3.64	7.32	2.29	1.48	3.46	1.66	2.49	3.05	1.85	37.48	1.21
	5.69	3.79	23.67	5.19	2.51	0.91	2.03	3.73	2.86	7.37	4.64	15.08	0.62	11.20
3 P	11.74	17.25	5.90	27.41	9.62	2.74	1.92	2.34	3.96	30.20	6.79	8.69	19.90	12.14
	20.56	3.46	0.89	5.71	7.26	3.21	0.40	0.37	2.62	2.84	5.57	1.17	28.85	2.97
	0.57	4.99	6.63	4.80	1.33	0.85	4.80	6.32	1.51	10.63	1.22	7.43	0.69	4.09
4 P	17.88	10.18	8.01	23.57	13.16	3.01	3.18	13.26	1.71	23.27	15.32	22.51	15.49	13.29
	9.70	4.00	1.07	10.01	6.14	2.71	0.20	5.15	0.08	2.40	1.91	2.13	1.82	0.65
	1.84	2.55	7.49	2.35	2.14	1.11	15.90	2.58	21.38	9.70	8.02	10.57	8.51	20.45
5 P	14.94	2.29	10.44	62.83	9.58	3.53	4.51	10.79	4.35	13.60	17.43	33.55	11.93	22.12
	2.50	4.25	0.61	3.93	4.74	1.65	0.54	1.77	2.46	0.88	5.78	3.64	-	2.09
	5.98	0.54	17.11	15.99	2.02	2.14	8.35	6.10	1.77	15.45	3.02	9.22	-	10.58
6 P	4.59	14.69	12.63	34.98	8.17	1.17	5.76	20.11	3.66	16.18	12.49	60.54	5.83	26.56
	2.57	1.64	-	6.16	16.98	1.45	-	3.43	2.09	-	9.21	-	0.67	2.47
	1.79	8.96	-	5.68	0.48	0.81	-	5.86	1.75	-	1.36	-	8.70	10.75
7 P	0.18	14.64	5.66	24.92	3.53	3.93	14.43	6.65	2.00	23.44	20.30	12.51	24.28	17.78
	4.08	2.89	0.49	7.26	5.59	3.26	-	2.16	1.35	1.35	5.76	33.54	1.93	1.44
	0.04	5.08	11.55	3.42	0.63	1.21	-	3.08	1.48	1.36	3.52	0.37	12.58	12.35
8 P	50.52	6.93	46.14	22.40	12.91	-	5.04	20.95	3.40	22.06	15.39	6.43	14.98	47.12
	5.41	4.02	-	3.17	5.70	2.13	2.64	2.61	0.85	2.50	7.02	3.37	1.35	4.98
	9.34	1.72	-	7.07	2.26	-	1.91	8.03	4.00	8.82	2.19	1.91	11.10	9.46
9 P	31.08	6.34	9.88	12.13	5.01	-	5.45	11.21	2.40	37.95	32.38	22.52	7.35	17.44
	4.93	3.40	1.81	-	4.30	1.50	1.31	3.68	1.70	1.91	4.19	5.75	4.20	2.04
	6.30	1.86	5.46	-	1.17	-	4.16	3.05	1.41	19.87	7.73	3.92	1.75	8.55
10 P	-	4.68	9.96	41.77	8.52	3.05	5.83	5.48	0.02	33.75	17.41	14.82	7.22	3.29
	23.12	3.36	0.83	1.92	6.08	1.71	0.64	2.35	3.69	-	4.85	-	1.25	2.85
	-	1.39	12.00	21.76	1.40	1.78	8.45	2.33	0.01	-	3.59	-	5.78	1.15
11 P	9.41	10.43	11.67	25.24	6.48	3.06	5.10	8.72	3.94	21.47	21.48	23.14	17.39	9.85
	3.52	3.65	1.16	2.58	1.67	1.22	1.62	2.28	1.06	2.06	9.43	4.80	4.58	1.04
	2.67	2.86	10.06	9.78	3.88	2.51	3.15	3.82	3.72	10.42	2.28	4.82	3.80	9.47

P = Productivity
(mg C/hr./m³)

C = Chlorophyll α
(mg/1)

A = Assimilation Ratio A
(P/C)

Table 4.2. Annual Average Values found at the Marina del Rey Stations.

Station	Productivity (mg C/hr/m ³)	Chlorophyll a (mg/l)	Assimilation (P/C)
1	19.06	4.11	4.64
2	16.61	5.40	3.08
3	11.47	6.13	1.87
4	13.13	3.73	3.83
5	15.86	2.68	5.92
6	16.24	4.61	3.52
7	12.44	5.47	2.27
8	21.10	3.52	5.99
9	15.47	3.13	4.94
10	11.98	4.39	2.73
11	12.67	2.41	5.26

CHAPTER 5

ZOOPLANKTON

ZOOPLANKTON

Zooplankton are tiny organisms that are permanently or temporarily suspended in a water mass and do not produce oxygen by photosynthesis. Although some are able to swim, these organisms are generally not large enough or strong enough to swim against currents. Included in the zooplankton are numerous tiny crustaceans called copepods and cladocerans, which furnish food for many fish and invertebrates, plus the eggs, larvae and some juveniles of other crustaceans, mollusks, polychaete worms, ectoprocts, hydroids and fish.

Methods

Zooplankton were sampled using a conical nylon plankton net $\frac{1}{2}$ meter long with 253μ mesh. The net has an attached flow meter which permits a calculation to be made of the volume of water sampled for each tow. An oblique tow was made by dropping the net with a weighted towline behind the boat and towing for 2-3 minutes. As the net is retrieved it passes through the entire water column and thus captures a sample of zooplankton species found at all depths.

Results

Large numbers of the copepod *Acartia tonsa* were found in the marina during most months. This copepod appears to favor bay and harbor habitats; its density is greatly increased in the inner Los Angeles and Long Beach Harbors (Soule and Oguri, 1976), as compared with the outer harbors. Other copepods and the cladocerans *Evdne nordmanni* and *Penila avirostris* were also present, along with numerous larval stages. While the copepod *Acartia tonsa* was present throughout the marina, the other zooplanktonic organisms seemed to prefer the main channel. Using the Margalef (1951) equation to determine the index of diversity, *i.e.*:

$$d = \frac{S-1}{\ln N}$$

where S is the number of individuals per sample, it is possible to compare zooplankton diversity for various stations. Stations 1-5 (marine entrance and main channel) generally had much higher diversity indices (mean of .69) than stations 6-11 (basins and back of marina) (mean of .26). Therefore marine environments farthest from the ocean contain conditions which are unfavorable to many zooplankton species. *Acartia tonsa* appears to be an exception. Numbers of this copepod increase in the basins and backwater areas. This may be due to lack

of competition from other zooplankton species, since it can tolerate or prefers lower salinities and shallow benthic habitats. *Penilia avirostris* was quite abundant in the outermost stations, whereas it was present only in very minor numbers in Los Angeles-Long Beach Harbors.

Copepods dominated the zooplankton, with *Acartia tonsa* being the most numerous copepod. At times (March and April) *A. tonsa* constituted 100% of the sample in the basins and back of the marina. The second dominant copepod was *Paracalanus parvus*, followed by the cyclopoid copepod *Corycaeus anglicus*. Cladocerans were represented mainly by three species: *Podon polyphemoides*, *Evdne nordmanni* and *Penilia avirostris*. The cladocerans were present mainly at the entrance and the main channel and generally were absent in the inner marina areas. Cladocerans appear to be seasonal; during the spring months (March, April, May) *E. nordmanni* and *P. avirostris* were all but absent. Ascidian larvae also appeared to be seasonal. They were present from July through November, and were absent, or nearly so, from December through May. Their center of abundance was located well within the marina, as might be expected.

During the rainy months, i.e., November through February, *Acartia tonsa* showed a significant drop in concentration at the entrance of Ballona Creek (station 3). Other species did not show as definite a decrease as did *A. tonsa*.

Tables 5.1-5.4 present the zooplankton counts for the major groups or species for each month from July 1976 through May, 1977.

Table 5.1. Zooplankton⁺ found at Marina del Rey, July 29, August 19 and September 16, 1976.

Stn.*	Index	Divers.	Acartia	Paracal.	Podon	Evadne	Penilia	Nauplius	Barnacle
		tonsa	parvus	phemoid.	nordmanni	aviros.	Larvacea	Ascid.	anglicus
7-1	1.2	227	136	14	24	68	291	2	34
-2	1.3	182	105	20	24	39	147	4	22
-3	.81	462	7	2	10	-	14	7	2
-4	1.3	38	1	5	1	1	-	-	-
-5	1.0	645	2	16	2	6	68	-	-
-6	.26	1984	-	4	-	-	227	42	-
-7	.26	48	-	-	-	-	16	-	-
-8	.39	2136	9	-	-	-	-	1	-
-9	.24	4595	-	-	-	-	32	28	-
-10	.25	2603	-	-	-	-	148	99	-
-11	.69	1153	2	9	2	-	143	11	-
8-1	1.4	61	12	15	9	232	27	5	9
-2	1.0	108	26	1	4	248	13	-	6
-3	1.4	106	27	-	2	4	1	2	1
-4	.75	754	-	-	-	1	4	10	17
-5	.40	1895	-	-	-	-	-	65	14
-6	.25	2788	-	-	-	-	-	26	3
-7	.24	3449	-	-	-	-	-	81	-
-8	.22	7190	+	-	-	-	-	94	5
-9	.22	9567	-	-	-	-	-	174	-
-10	.22	7392	-	-	-	-	-	84	-
-11	.50	350	-	-	-	-	-	40	18
9-1	.79	352	55	6	17	122	12	-	-
-2	.86	158	19	2	68	797	10	-	-
-3	.85	1080	38	4	2	4	-	-	2
-4	.52	2002	22	30	-	-	-	6	6
-5	.75	756	12	17	3	-	-	9	9
-6	.25	2595	-	-	-	-	-	4	1
-7	.12	3932	-	-	-	-	-	6	3
-8	.47	584	-	1	-	-	-	10	26
-9	.44	920	-	2	-	-	-	16	6
-10	.37	3021	4	2	38	-	-	51	2
-11	.79	504	2	-	-	-	-	5	4

* Stations are given by month and station (i.e., 7-2 = July, station 2). For complete listing of sampling dates, see Table 5.2.

+ Dominant species only.
(Numbers given are animals/m³)

Table 5.2. Zooplankton found at Marina del Rey, October 14, November 19 and December 16, 1976.

Stn.	* Index	Divers.	Acartia	Paracal.	Podon	Eudane	Penilia	Phemoid.	nordmanni	aviros.	Larvacea	Ascid.	Barnacle	Corycaeus	Nauplius	anglicus	
10-1	1.0	358	126	2	115	127	7	-	-	30	2	45	-	49	49	49	
-2	.73	555	187	-	39	108	30	-	-	1	-	1	1	15	8	8	
-3	1.2	242	12	1	3	6	-	1	1	30	1	5	30	5	5	5	
-4	1.4	241	5	7	23	13	-	2	2	8	65	21	21	21	21	21	
-5	1.4	255	6	1	1	1	-	-	-	126	-	6	6	6	6	6	
-6	.38	2400	-	3	-	-	-	-	-	13	201	27	27	27	27	27	
-7	.32	11760	6	-	-	-	-	-	-	13	6	6	6	6	6	6	
-8	.51	2415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-9#																	
-10	.23	6305	-	-	-	-	-	-	-	-	78	-	-	-	-	8	8
-11	.61	604	2	-	-	-	-	-	-	-	27	38	-	-	28	28	28
11-1	.78	1173	81	114	473	315	-	-	-	7	7	26	-	26	-	26	26
-2	.72	2870	111	65	521	430	-	-	-	12	-	26	-	26	-	26	26
-3	1.1	510	81	58	39	7	-	-	-	7	-	2	-	2	-	2	2
-4	.58	4996	27	47	20	7	-	-	-	7	-	3	-	3	-	3	3
-5	.79	1773	13	108	10	-	-	-	-	6	-	6	-	6	-	6	6
-6	.69	1401	3	3	-	3	-	-	-	3	-	3	-	3	-	3	3
-7	.13	2678	-	-	-	-	-	-	-	3	-	6	-	6	-	6	6
-8	.54	1646	3	6	-	-	-	-	-	3	-	3	-	3	-	3	3
-9	.24	4159	8	-	-	-	-	-	-	3	-	8	-	8	-	8	8
-10	.30	19487	21	42	-	-	-	-	-	-	64	-	-	-	-	-	-
-11	.12	3335	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
12-1	.51	17283	539	-	63	-	-	-	-	1237	-	32	-	32	-	32	32
-2	.76	8337	593	37	185	111	-	-	-	593	-	56	-	56	-	56	56
-3	.59	3379	616	35	246	70	-	-	-	546	-	22	-	22	-	22	22
-4	.68	6490	352	-	154	88	-	-	-	44	-	-	-	-	-	-	-
-5	.40	19783	551	-	79	39	-	-	-	39	-	-	-	-	-	-	-
-6	.49	24171	235	-	188	188	-	-	-	47	-	47	-	47	-	47	47
-7	.09	47296	-	-	64	-	-	-	-	-	-	-	-	-	-	-	-
-8	.18	89094	237	-	-	237	-	-	-	-	-	-	-	-	-	-	-
-9	.10	15895	-	-	42	28	-	-	-	127	-	-	-	-	-	-	-
-10	.29	34012	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-11	.10	35200	175	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Stations are given by month and station (i.e., 7-2 = July, station 2).
For complete listing of sampling dates, see Table 5.2.

|| No revolutions taken.
+ Dominant species only.

(Numbers given are animals/m³.)

Table 5.3. Zooplankton⁺ found at Marina del Rey, January 20, February 17 and March 17, 1977.

Stn.*	Divers. Index	Acartia tonsa	Paracal. parvus	Podon phemoid.	Eudine nordmanni	Penilia avirostris	Larvacea	Ascid.	Barnacle Corycaeus	Nauplius anglicus
1-1	.67	3714	1814	-	43	54	1738	-	119	108
-2	.73	1381	1278	6	-	26	726	-	90	77
-3	.76	930	1158	22	-	6	278	-	72	61
-4	.32	11460	696	-	-	-	470	-	184	-
-5	.40	21145	456	-	-	-	152	-	51	76
-6	.22	8923	25	-	-	-	98	-	-	-
-7	.11	8480	37	-	-	-	-	-	-	-
-8	.11	11553	-	-	-	-	12	-	-	-
-9	.11	7097	10	-	-	-	-	-	-	-
-10	.11	11057	14	-	-	-	-	-	-	-
-11	.27	1655	32	-	-	-	-	-	-	8
2-1	.82	1006	1016	111	1438	80	965	-	70	131
-2	.82	1841	1306	62	572	62	970	-	50	112
-3	.82	944	1294	105	1574	58	804	-	23	116
-4	.58	28623	529	1256	727	66	66	-	-	-
-5	.53	71882	519	1482	222	-	370	-	445	74
-6	.19	36362	137	68	-	-	338	-	-	-
-7	.18	76108	-	-	-	-	-	-	-	84
-8	0	13099	-	-	-	-	-	-	-	-
-9	.11	11290	-	-	-	-	-	-	-	-
-10	0	38322	-	-	-	-	-	-	-	-
-11	.32	11468	56	111	-	-	-	-	-	56
3-1	.64	2265	274	7	-	-	36	-	14	29
-2	.70	1024	114	26	-	-	-	-	15	9
-3	.56	1118	42	2	-	-	-	-	7	7
-4	.13	2212	43	-	-	-	-	-	-	-
-5	.10	22593	72	-	-	-	-	-	-	-
-6	0	43606	-	-	-	-	-	-	-	-
-7	0	10673	-	-	-	-	-	-	-	-
-8	0	14521	-	-	-	-	-	-	-	-
-9	.24	4396	7	4	-	-	-	-	-	-
-10	0	12933	-	-	-	-	-	-	-	-
-11	0	38324	-	-	-	-	-	-	-	-

* Stations are given by month and station (i.e., 7-2 = July, station 2).
For complete listing of sampling dates, see Table 5.2.

+ Dominant species only.

(Numbers are given as animals/m³)

Table 5.4. Zooplankton found at Marina del Rey, April 21, May 19 and June 23, 1977.

Stn.*	Index	Divers.	Acartia	Paracal.	Podon	Eucalan	Penilia	Phemoid.	nordmanni	aviros.	Larvacea	Ascid.	Barnacle	Corycaeus	Barnacle	Nauplius	Nauplius	anglicus
		tonsa	parvus															
4-1	.19	325	31	-	-	33	-	-	-	-	-	-	-	67	-	-	-	-
-2	.08	121	97	-	-	-	-	-	-	-	-	-	353	-	-	-	-	-
-3	.13	14	47	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-
-4	.08	165	868	-	-	-	-	-	-	-	-	-	221	-	-	-	-	-
-5	0	137	017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-6	0	397	08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-7	0	132	164	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-8	0	143	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-9	0	764	06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-10	0	414	89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-11	0	249	07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5-1	.62	585	54	-	-	-	-	-	-	-	-	-	12	-	8	-	1	14
-2	.50	270	8	190	-	-	-	-	-	-	-	-	20	-	27	-	8	14
-3	.51	230	4	56	40	-	-	-	-	-	-	-	8	-	-	-	-	-
-4	.18	617	00	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-
-5	.27	545	36	191	127	-	-	-	-	-	-	-	64	-	-	-	-	-
-6	.58	899	58	3	127	-	-	-	-	-	-	-	10	-	3	-	-	-
-7	.18	797	03	251	-	-	-	-	-	-	-	-	126	-	-	-	-	-
-8	.56	113	39	21	2	-	-	-	-	-	-	-	10	-	5	-	-	-
-9	.28	448	08	41	-	-	-	-	-	-	-	-	-	-	41	-	41	-
-10	.48	420	07	14	-	-	-	-	-	-	-	-	25	-	7	-	4	-
-11	.26	1097	88	-	89	-	-	-	-	-	-	-	89	-	-	89	-	-
6-1	1.2	26	35	2	-	23	-	-	-	-	-	-	23	-	3	-	3	9
-2	.83	4	4	4	-	-	-	-	-	-	-	-	3	-	-	-	-	-
-3	.53	26	13	-	-	3	-	-	-	-	-	-	4	-	-	-	-	-
-4	.47	530	13	-	-	-	-	-	-	-	-	-	17	-	-	-	-	-
-5	.68	15	-	-	1	-	-	-	-	-	-	-	2	-	-	-	-	-
-6	1.1	2	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
-7	.72	10	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
-8	1.1	3	-	-	-	-	-	-	-	-	-	-	5	-	-	2	-	-
-9	.43	90	-	-	-	-	-	-	-	-	-	-	6	-	-	6	-	-
-10	.93	1	-	-	-	1	-	-	-	-	-	-	11	-	-	17	-	-
-11	.53	279	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-

* Stations are given by month and station (i.e., 7-2 = July, station 2).
 For complete listing of sampling dates, see Table 5.2.

CHAPTER 6

BENTHIC ECOLOGY

BENTHIC ECOLOGY

The invertebrates that live in or on the substrate at the bottom of an area such as Marina del Rey give an indication of long term water and sediment quality conditions, as well as indicating the kind of foods available for fishes. Where bottom substrates are subject to a high organic load, low dissolved oxygen (DO), or the presence of hydrogen sulfide (H_2S), few organisms are present and the area may be considered quite polluted. Areas which support only a few more resistant invertebrates such as the polychaete *Capitella capitata* may be subject to conditions which bring toxic organic substances into the system, which carry biological or chemical substances that oxidize and reduce the dissolved oxygen concentration, or which change the salinity. Areas that are less subjected to polluting substances usually support more diverse assemblages of benthic species.

In Marina del Rey a fairly good diversity of benthic invertebrates was observed for most stations. The very tolerant worm *Capitella capitata*, however, was present in large numbers at station 1 at the south entrance of the breakwater. Since this station lies off the Ballona Creek flood control channel, organic materials and other oxygen-reducing substances are transported down-channel, while salinity changes are induced by the tidal prism. Such impacts must cause this area to be unsuitable to a normal benthic assemblage.

Also, the Southern California Edison effluent of hot brines and, at times, anti-fouling chemicals, are released into Ballona Creek nearby. The extent to which this might affect the marina is not precisely known, but the impact appears to be limited to the flood control channel.

Appendix D contains species lists and counts obtained from the benthic sampling. Because of boat problems at the Department of Small Craft Harbors, sampling was carried out only three times, starting October 28, 1976.

Computer analysis of data will be carried out to determine distribution patterns and seasonality when the second year of data is completed.

CHAPTER 7

SETTLING AND FOULING ORGANISMS

SETTLING AND FOULING ORGANISMS

A number of marine invertebrates have planktonic larval stages which settle out of the water column after certain stages are completed; these are known as the meroplankton. Some of these organisms may be capable of crawling about as adults, or they may settle out of the water column and become firmly attached to pilings, wharfs, rocks, boat hulls, and almost any other substrate available in a harbor. The literature on fouling is extensive because such organisms cause great economic costs for maintenance of boats and harbor facilities.

Samples taken by plankton tows may represent very transitory populations which respond rapidly to changing localized water conditions. Benthic samples may indicate a more reduced fauna than is representative of the actual potential for supporting life in the water column if toxic substances have accumulated in bottom sediments or antifouling substances are in use. For these reasons HEP has utilized settling racks suspended from buoys or docks at 3 meters depth to assess the numbers and species of organisms that are carried in marina waters but may not survive there extensively as adults. Eggs, larvae and small adult organisms pass through the plastic mesh screen cover and settle on glass slides mounted horizontally in a wood frame. Larvae metamorphose and establish themselves in the "habitat"; some polychaetes even build tubes from detritus. The settling rack technique is more fully discussed in AHF, 1976.

In Marina del Rey eight stations were selected for settling racks, which were deployed for two-month intervals in order to get a longer growth period on each rack. In waters such as Los Angeles-Long Beach Harbors, nutrient levels are too high to permit this because racks would be covered over with hydroids at certain seasons within one month.

Racks were deployed at stations 1, 3, 4, 6, 7, 8, 9 and 11. Occasionally a rack is lost due to storms or vandalism, so not all stations are represented for all periods. Racks were deployed beginning in August 1976, at bimonthly intervals. Data are presented in Appendix E; dates given are those on which racks were recovered at the end of the bimonthly period.

The dominant fauna in August-October was the tunicate *Ciona intestinalis*, at stations 3, 4, 6, 7 and 8, with counts above 300 up to 1500 at station 8. Also present at station 1

in counts of about 200-300 were *Hydroides pacifica*, *Caprella equilibra* and *Jassa falcata*. At stations 7 and 9, 200-300 *Polydora ligni* occurred, while at stations 8 and 11 the isopod *Paracerceis sculpta* was dominant.

In October-December, 1976 nearly 300 *Jassa falcata* occurred at station 1 but were dominated by 1650 bay mussels, *Mytilus edulis*. The amphipod *Eriechtonius brasiliensis* was most numerous at stations 3 and 4, while *Ciona* were numerous at station 6.

In December-February, 1977 over 500 of the polychaete *Polyphthalmus pictus* were present at station 1, but nearly 4500 *Jassa falcata* were there also, along with 1400 *Mytilus*. Over 1000 *Corophium acherusicum* occurred at station 8.

In February-April, 1977 over 6,000 *Jassa falcata* occurred at station 1, and 279 were at station 3. At stations 4, 7 and 9, *Spirorbidae* were dominant; at station 4, *Eriechtonius* was also numerous. At all other stations and dates no species reached counts of 200 or more.

In Los Angeles-Long Beach Harbors, in 1973 and 1974 settling racks, *Jassa falcata* was the most numerous, *Corophium acherusicum* was second and *Ciona intestinalis* was third. *Mytilus edulis* was eighth.

CHAPTER 8

ICHTHYOLOGY

ICHTHYOLOGY

The fishes living within a harbor area such as Marina del Rey are very good indicators of the quality of the habitat. Although fish populations can be quite transitory, normally resident populations become established in harbor and bay areas if conditions are suitable.

One of the main reasons for this study was to determine if indeed a depauperate fish fauna was present within the marina, and, if so, what factors were responsible. The sport-fishing catch from the fishing dock and the park seemed to indicate the presence of few fishes; however, no investigation of fish populations within Marina del Rey has ever been made.

A preliminary survey of the fish fauna was made on June 23, 1977 consisting of three ten-minute bottom trawls and a 15-foot semi-balloon otter trawl, plus three hour-long sets with a 100-foot multisized gill net. The trawls were made in the outer main channel near station 2, in the inner main channel near station 5, and in Basin D near station 8 (see Figure 8.1). The two sampling methods were used in order to census both demersal species and those found in the water column itself.

A total of 630 individuals were captured, including representatives of 13 species. Approximately 500 young anchovies (50-80 mm in length) were captured in Basin D), and this one trawl thus greatly increased the total number of fish sampled in the study. Other species present in sizeable numbers were white croaker (40), California halibut (33), and spotted sand bass (12). The latter two species were all young fish, but the presence of these desirable sportfishes within the marina is encouraging.

The regular monthly water quality survey also was carried out on June 23, 1977, and dissolved oxygen concentrations were found to be quite high throughout the marina. Apparently under such circumstances the marina is a suitable habitat for schooling fish such as the northern anchovy. The protected water and high concentrations of certain copepod species appear to be quite suitable for the anchovy. Other species such as the white croaker and the California halibut may be resident within the marina throughout the year. Further sampling of the fish fauna over several seasons will allow this to be determined.

Table 8.1 presents data from the June, 1977 fish census. The master species list from nearby King Harbor is given in Table 8.2 (Courtesy of Dr. John S. Stephens).

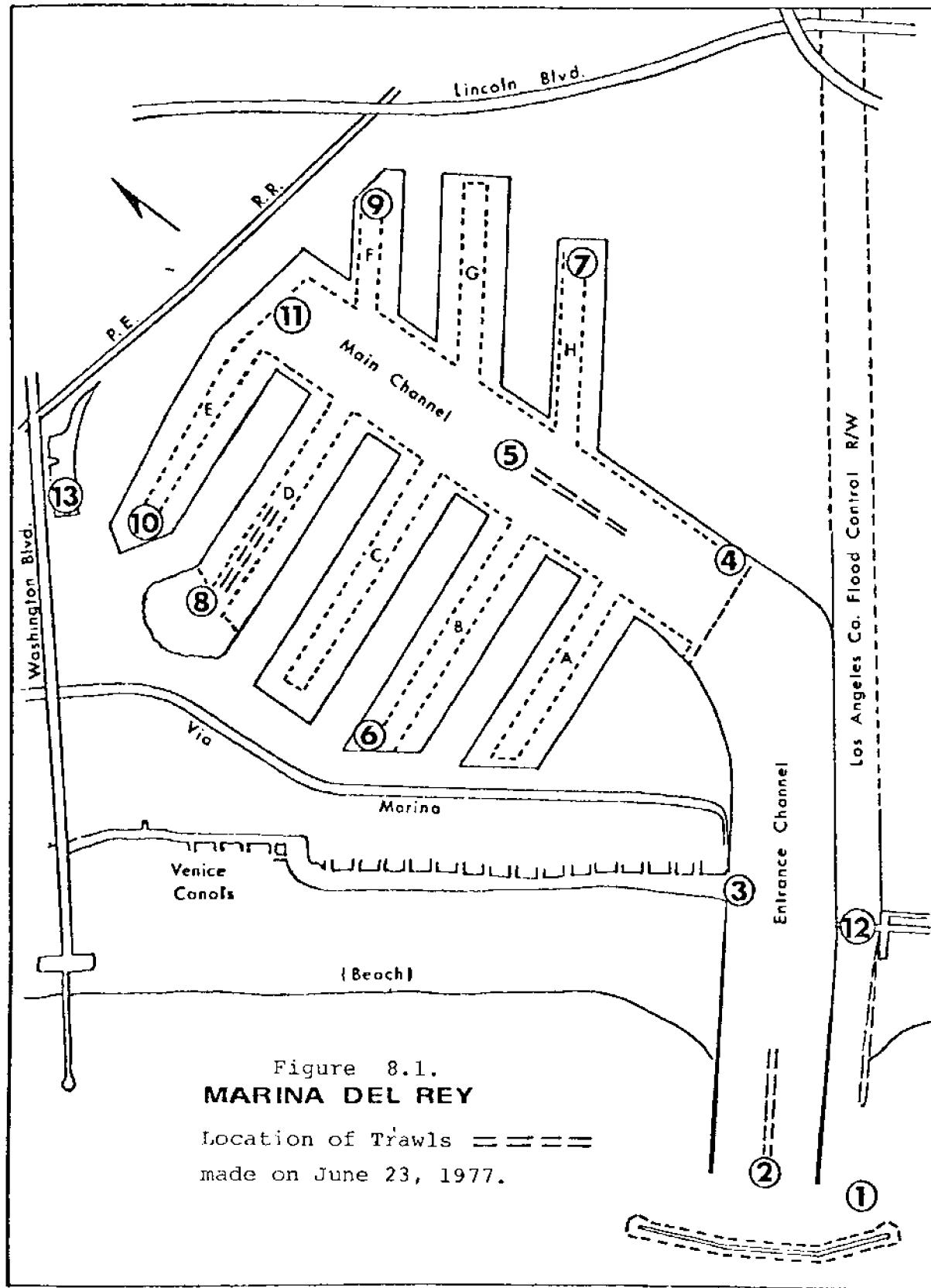


Table 8.1. MARINA DEL REY FISH CENSUS
June 23, 1977

OTTER TRAWLS (10 min.)

Trawl 1. From station 2 up channel, midway between jetties

<u>Species</u>	<u>Size</u>	<u>Number</u>
<i>Paralichthys californicus</i> (California halibut)	40-60 mm 150-200 mm	15 10
<i>Hypsopsetta guttulata</i> (Diamond turbot)	180 mm	1
<i>Embiotica jacksoni</i> (Black surfperch)	150 mm	1
<i>Syngnathus leptorhynchus</i> (Bay pipefish)	300 mm	1
<i>Cymatogaster aggregata</i> (Shiner surfperch)	80-100 mm juveniles	3 12
<i>Paralabrax maculatusfasciatus</i> (Spotter sand bass)	juveniles	9
Unidentified juvenile surfperch		1
" larvae		1
<i>Rimicola muscarum</i> (Kelp clingfish)	10 mm	1

Trawl 2. From station 5 toward station 11, main channel

<i>Genyonemus lineatus</i> (White croaker)	200-250 mm juveniles	10 25
<i>Paralichthys californicus</i> (California halibut)	150-200 mm	5
<i>Paralabrax maculatusfasciatus</i> (Spotted sand bass)	juveniles	3
<i>Urolophus halleri</i> (Round stingray)	450 mm	2
<i>Engraulis mordax</i> (Northern anchovy)	50-80 mm	15

Table 8.1. (continued)

Trawl 3. Basin D from station 8 outward. (Time: 1220-1230 PDT)

<u>Species</u>	<u>Size</u>	<u>Number</u>
<i>Paralichthys californicus</i> (California halibut)	150 mm 450 mm	2 1
<i>Genyonemus lineatus</i> (White croaker)	200-250 mm	3
<i>Engraulis mordax</i> (Northern anchovy)	50-80 mm	500 (estimate)
<i>Leptocottus armatus</i> (Staghorn sculpin)	100 mm	1
<i>Hypsopsetta guttulata</i> (Diamond turbot)	160 mm	1

GILL NET SETS (1 hour)

Gill net set 1. Parallel to breakwater at station 2.
(In at 0815 PDT)

<i>Atherinopsis californiensis</i> (Jack smelt)	320 mm	4
<i>Genyonemus lineatus</i> (White croaker)	220 mm	1

Gill net set 2. Near station 5 parallel to sea wall of park.
(In at 0935 PDT)

<i>Sphyraena argentea</i> (California barracuda)	450 mm	1
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Gill net set 3. Near station 8 in Basin D. (In at 1050 PDT)

<i>Genyonemus lineatus</i> (White croaker)	200 mm	1
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Table 8.2. Common Fish Species of King Harbor.

<i>Anisotremus davidsonii</i>	<i>Pleuronichthys coenosus</i>
<i>Artedius spp.</i>	<i>Pleuronichthys decurrens</i>
<i>Atherinops affinis</i>	<i>Pleuronichthys ritteri</i>
<i>Brachyistius frenatus</i>	<i>Pleuronichthys verticalis</i>
<i>Caulolatilus princeps</i>	<i>Porichthys myriaster</i>
<i>Cheilotrema saturnum</i>	<i>Quietula y-cauda</i>
<i>Chromis punctipinnis</i>	<i>Rhacochilus toxotes</i>
<i>Citharichthys stigmaeus</i>	<i>Rhacochilus vacca</i>
<i>Clinocottus analis</i>	<i>Rhinobatus productus</i>
<i>Coryphopterus nicholsii</i>	<i>Sarda chilensis</i>
<i>Cymatogaster aggregata</i>	<i>Sebastes auriculatus</i>
<i>Embiotica jacksoni</i>	<i>Sebastes carnatus</i>
<i>Engraulis mordax</i>	<i>Sebastes miniatus</i>
<i>Gibbonsia elegans</i>	<i>Sebastes mystinus</i>
<i>Gibbonsia metzi</i>	<i>Sebastes paucispinis</i>
<i>Girella nigricans</i>	<i>Sebastes serranoides</i>
<i>Gobiesox rhessodon</i>	<i>Sebastes vexillaris</i>
<i>Halichoeres semicinctus</i>	<i>Seriphus politus</i>
<i>Hermosilla azurea</i>	<i>Scorpaena guttata</i>
<i>Heterodontus francisci</i>	<i>Scorpaenichthys marmoratus</i>
<i>Heterostichus rostratus</i>	<i>Squatina californica</i>
<i>Hexagrammos stelleri</i>	<i>Synodus lucioceps</i>
<i>Hippoglossina stomata</i>	<i>Trachurus symmetricus</i>
<i>Hyperprosopon argenteum</i>	<i>Urolophus halleri</i>
<i>Hypsoblennius gentilis</i>	<i>Kystereurys liolepis</i>
<i>Hypsoblennius gilberti</i>	
<i>Hypsoblennius jenkinsi</i>	
<i>Hypsopsetta guttalata</i>	
<i>Hypsurus caryi</i>	
<i>Hypsypops rubicundus</i>	
<i>Leiocottus hirundo</i>	
<i>Lythrypnus dalli</i>	
<i>Medialuna californiensis</i>	
<i>Menticirrhus undulatus</i>	
<i>Micrometrus minimus</i>	
<i>Myliobatus californica</i>	
<i>Neoclinus blanchardi</i>	
<i>Neoclinus stephensae</i>	
<i>Neoclinus uninotatus</i>	
<i>Odontopyxis trispinosa</i>	
<i>Ophiodon elongatus</i>	
<i>Orthonopias triacus</i>	
<i>Oxyjulis californica</i>	
<i>Oxyplebrius picta</i>	
<i>Paraclinus integripinnis</i>	
<i>Paralabrax clathratus</i>	
<i>Paralabrax maculatofasciatus</i>	
<i>Paralabrax nebulifer</i>	
<i>Paralichthys californicus</i>	
<i>Parophrys vetulus</i>	
<i>Phanerodon furcatus</i>	
<i>Pimelometopon pulchrum</i>	
<i>Platyrhinoidis triseriata</i>	

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APPENDIX A

THE DEVELOPMENT OF THE MARINE
COMMUNITIES IN
MARINA DEL REY, CALIFORNIA*

by

Donald J. Reish, Ph.D.

* This section is adapted from unpublished field notes made by Dr. Reish in 1960-1962, with Dr. Reish's comments on comparative ecological succession studies at Marina del Rey and Alamitos Bay, California.

THE DEVELOPMENT OF THE MARINE COMMUNITIES
IN MARINA DEL REY, CALIFORNIA

Description of the Environment in the Vicinity of Marina del Rey Prior to the Construction of the Marina

The environment in the area occupied by the Marina del Rey consisted of ancient sand dunes, some of which were under cultivation and others were covered largely with xerophytic vegetation. Four areas inland from the ocean contained sea water with varying degrees of salinity but only one of these, Lake Los Angeles, was within the area to be occupied by the marina. The other three marina areas, the Venice Canals, the mouth of Ballona Creek and Del Rey Lagoon, were not included in the area occupied by the marina.

None of these marine areas were surveyed for biota prior to construction of the marina, and no published data exists in the literature on the marine biota of either Lake Los Angeles or Ballona Creek prior to construction of the marina. However, Woodwick (1953) listed some of the species present in the Venice Canals and Del Rey Lagoon. He recorded the polychaetes *Polydora nuchalis*, *Streblospio benedicti* and *Capitella capitata*.

Construction of Marina del Rey, 1960-1962

Dredging to construct Marina del Rey began in 1960; the rock jetties had been put into place prior to the initiation of dredging activities. A floating dredge was brought in and began dredging at the channel entrance. After a short time, a dirt dam was constructed ocean-side of the dredge to minimize disturbance from currents; water was pumped in as dirt was removed. The concrete retaining walls outlining the basin were constructed, and later rock was brought in to prevent undercutting of the walls by currents. Dredging and basic construction of the marina was completed in 1962. An offshore protective jetty was added about 1965 for further protection of the boats within the marina against surge.

Unpublished Data

According to unpublished field notes by Reish in the summer of 1960, the Ballona Creek side of the middle jetty contained barnacles and *Littorina* in the upper tidal zone with mussels below. On the Playa del Rey side of the channel (south side) the rocks were covered with the alga *Enteromorpha* in the upper tide zone, with nothing but brown scum below.

On July 1, 1960, the middle jetty in the old area had brown algae, mussels, and barnacles, while a new area had only algae in the upper tidal zone. In the sandy intertidal area, many *Ligidia* were found on the sand, with thousands of *Polydora ligni* and *Corophium acherusicum* in the sand.

On September 1, 1960 green algae were still present on the jetties. The Ballona jetty had mussel beds, barnacles, and *Littorina* above the algae; however, some barnacles were dead.

By November 14, 1960 new areas dredged were being colonized by algae. On the Ballona Creek side of the jetty, no algae were found, but small mussel beds were present, with barnacles, limpets and *Littorina* above them. Farther out on the jetty no *Littorina* were seen. Black patches were seen between mussel beds. In places *Gigartina*, a red alga, was found, but no kelp.

Near the bend in the main channel excavation (present station 4 area) juvenile *Polydora* were abundant in a chlorinity of 17.9 %. Near the bridge, in the marina channel opposite the present station 12, one adult *Polydora* was found, along with a few copepods and many large *Capitella capitata*. At the end of present slip B, adult and juvenile *Polydora* were found (Figure A1).

On February 12, 1961 on the Playa del Rey side of the creek, mussels, barnacles, limpets and a few *Littorina* were present, with little *Enteromorpha*. Seaward of this there were patches of *Ulva* as well. In the lower tide area sea anemones, *Gigartina* and *Sabellaria* were found. The marina area was closed off for construction of retaining walls, but sand taken from opposite the bridge contained a few *Capitella capitata*, some oligochaetes and many *Polydora ligni* with eggs. Chlorinity was 18.8 %. *Mitella* occurred in the mussel beds, and starfish *Pisaster*, and the crab *Pachygrapsus* was found on the Playa del Rey side of Ballona Creek jetty. Little algae was seen. Within the marina at the end of slip C, many tubes of *Polydora* were found, as well as live specimens of *Polydora ligni*, *Capitella capitata* and *Corophium acherusicum*.

By June, 1961, mussel beds were growing in the marina, as well as barnacles, limpets, *Pisaster*, *Littorina*, *Pachygrapsus*, *Sabellaria*, and algae. *Enteromorpha* was reduced to small tufts. Opposite the tide gates, the mud was black and foul. *Capitella*, *Corophium*, and many copepods were present. Chlorinity there was 19.0 %.

On August 1, 1961, the oldest exposed areas had mussels and limpets; the next oldest has limpets only, and the youngest had limpets and algae. In the mussel zone, some *Pisaster* were seen, along with *Mitella*, *Pachygrapsus* and limpets. In the barnacle zone were two species of barnacles, limpets, and *Littorina*. In the inner area at the end of the main channel at E, a green algal scum was growing and marks showed where mussels had been previously attached. A few *Mitella* and *Pachygrapsus* were seen.

Collections made in Ballona Creek at Jefferson Boulevard contained the following:

Capitita ambiseta
Podarke pugettensis
Polydora ligni (common)
Corophium acherusicum (common)
Phoronid (common)
Hydroides norvegica
Capitella capitata
Ctenodrilus serratus
Nereid
Flatworm

In the jetty area, in six feet of water with sandy bottom were found:

Polynoid
Phyllodocid
Amphipods
Spionids
Phoronids
Capitellids
Prionospio

On September 1, 1961, mud samples taken in 3 feet of water near the present station 4 included the following:

Hydroides norvegica
Neanthes succinea
Polydora ligni (dominant)
Podarke pugettensis
Callianassa californica
Phoronid

The chlorinity was 20.3 % at that location.

Near the bridge by the marina jetty in 3 feet of water included:

Neanthes succinea, with eggs (dominant)
Polydora ligni
 Phoronid
Prionospio cirrifera
Callianassa californica
Dorvillea articulata
Capitella capitata
Podarke pugettensis

Chlorinity was 20.3 ‰.

At the end of Slip B, the chlorinity was 20.8 ‰. Muds contained *Polydora ligni*, *Capitella capitata*, and a phoronid with eggs.

In September, 1961, the marina main channel was dredged open to the sea. Dr. Reish carried out these studies without funding, and only with the help of his associates. Consequently, no collections were made again until October 5, 1962. Three locations were sampled: Station 1 at the entrance to Slip A; Station 2 at the entrance to Slip B; and Station 3 at the inner end of Slip B.

Fauna found at Station 1, in fine mud, were as follows:

Capitella ambiseta
Spiochetopterus sp.
Nerinides acuta
Polydora ligni
Spiophanes ? *fimbriata*
Prionospio cirrifera
Tharyx sp.
Eteone sp.
Capitella capitata
Macoma nasuta
Chione californiensis
 Phoronid
 Red-eyed amphipod
 Flatworm

Station 2 yielded a fauna which was not quite as diversified as that found at Station 1. One difference which was noted was that the mud here (also fine) had very little H₂S present.

Capitella capitata
Dorvillea articulata
Capitella ambiseta
Macoma nasuta
Prionospio cirrifera
 Phoronid

Station 3 showed a fauna similar to that in Station 1; This station also had an H₂S layer present in the fine mud.

Capitita ambiseta
Polydora ligni
Tharyx parvus
Ampharete arctica
Nephtys caecoides
Tellina sp., white
Chione undatellum
Macoma secta
Solen sp.
Phoronid

Another set of samples was taken in December of 1962, from Stations 1 and 3. The great increase in diversity is evident, although the numbers of specimens present in the samples are not generally large. The dominant organism by far is *Capitita ambiseta*, which is present in large numbers.

The fauna from Station 1 are as follows:

Dorvillea articulata
Nephtys caecoides
Pectinaria californiensis
Armandia bioculata
Polydora ligni
Tharyx parvus
Eumida sanguinea
Capitella capitata
Capitita ambiseta
Prionospio pinnata
Spiophanes missionensis
Goniada littorea
Amphicteis scaphobranchiata
Macoma nasuta
Chione undatella
Phoronopsis sp.
Cumacean

The fauna from Station 3 shows a species diversity nearly as great as at Station 1:

Capitita ambiseta
Polydora ligni
Capitella capitata
Prionospio cirrifera
Spiophanes missionensis
Armandia bioculata

Halosydnajohnsoni
Prionospio pygmaeus
Ampharete arctica
Nephtys caecoides
Pectinaria californiensis
Hiatella arctica
Solen sicarius
Phoronopsis sp.
Protothaca staminea

Comparative Ecological Colonization Studies

Some biological samples were taken during construction of the marina, but the picture is incomplete because of the inability to take a boat into the area to do benthic sampling. Fortunately, a detailed study was made in Long Beach Marina, located in Alamitos Bay, simultaneously and by the same individual, so that the fragmentary data from Marina del Rey coincides in time with that taken in Alamitos Bay. Since the settlement of benthic animals was followed during the construction of Basin 1 of Long Beach Marina in 1956-1958 and the construction in 1959-1961 of Basins 2-4 (Reish, 1963) those findings can be used to indicate what occurred on the benthos in Marina del Rey.

Prior to a discussion of the settlement of marine animals on the bottom of Marina del Rey, it is important to consider the reproductive cycles of many of these animals. In more northern latitudes than that of Los Angeles County, marine animals have a very limited reproductive season, which is generally in the spring. Settlement of larvae then takes place shortly thereafter or later, depending upon the type of larval life. However, the reproductive cycle of many of these invertebrate animals is different in southern California. Many species are capable of reproducing throughout the year or have very long reproductive periods (Reish, 1959, 1961a). The type of colonization that would take place within the bottom of a new marina would reflect the difference in latitude.

For the organisms, a new marina represents a new area available for colonization which had not been there previously. Any new structure, such as a dock, piling, jetty, etc., or a newly dredged bottom offers new available substrate. Marine organisms produce far more larvae than can ever survive, so that a new area offers a home for at least some of these.

While no one has studied colonization of organisms in a new marina in more northern latitudes it seems logical to

assume that development of a marine benthic community would be slow because of the limited reproductive seasons of the nearby populations. However, in southern California, colonization on the bottom would be rapid. This was the case for Long Beach Marina in Alamitos Bay, as described below.

Long Beach Marina was an expansion of an existing bay into a land area. The initial samples were taken two weeks after the particular area was dredged, but no animals were observed. However, it is possible that the very young stages were present within the sample, but passed through the openings of the screen when the sample was washed. The first animals were collected seven weeks after dredging, at which time seven species comprising 18 specimens were collected. At 14 weeks, 94 specimens, representing 13 species, were collected. The number of species and specimens continued to increase over the next year.

Biomass, or the weight of the animals collected, was determined at each collecting period in order to find out the rate of change of this important parameter. The data for the settlement of marine organisms could then be summarized over a time period, according to the number of species present, the number of specimens, and biomass. All three parameters followed the same pattern over time: a rapid initial rise was followed by a decrease, then an increase but not to the former level, followed by a plateau. The increase in the number of species occurred first and the rapid increase in biomass occurred last. Apparently, what took place was a rapid settlement of many species of larvae. Since there were no adults present to feed upon them, most of them presumably survived, accounting for a large increase in the number of specimens present. Since all of these animals were small, the biomass was small. But as those young animals grew, not only did they increase in weight (biomass), but also they began to compete with one another for space, food, etc., so that the population decreased as a result of the increase in biomass. But later the biomass decreased, to a lesser extent, with the loss of some of the organisms. The second increase, which led to a plateau in number of species, specimens and biomass, probably represented a second period of reproduction and settlement. However, these larvae had to compete with the existing population, which then led to a steady state in the population on the bottom.

No community succession of benthic organisms was observed, although there was succession in colonization. Settlement of one assemblage of animals was necessary for a settlement of subsequent assemblages. In fact, some of the earliest animals to settle were the dominant members of the community two years

later, and were the same as those in nearby regions which were not dredged. The polychaetous annelids *Capitita ambiseta*, *Prionospio cirrifera*, *Cossura candida*, *Lumbrineris minima*, and *Haploscoloplos elongatus* were abundant soon after dredging was completed and dominated the benthic community throughout the 2.7 years of study. A total of 78 different species of macro-invertebrates were collected, of which 63 percent were polychaetes, 17 percent were molluscs, 12 percent were crustaceans, and the remaining 8 percent were sea anemones, turbularians, nemerteans, sipunculids, phoronids, and echinoderms.

The population of benthic animals has remained relatively constant during the ensuing 15 years. Two major red tides have occurred during this time, which have caused massive kills of marine organisms throughout Alamitos Bay, including those living on and in the benthos. The death of the benthic fauna was the result of the depletion of dissolved oxygen throughout the water column. After the recovery from the red tide, resettlement of the benthos was again rapid, but in this case it was largely by the pollution indicator polychaete *Capitella capitata*. The natural population soon after began to settle, and *Capitella* disappeared about six months after the outbreak of the red tide.

The population of benthic animals is similar within Long Beach Marina in Alamitos Bay and Marina del Rey. It remains relatively similar throughout the year, with variations occurring as the result of a local change, a particularly successful reproductive period by one or more species, etc. If the area has adequate water circulation and is relatively free of pollution, then the benthic population should remain normal or "healthy" for as long as these conditions prevail. If, however, changes in construction are made which limit water circulation, or if polluting substances are allowed to be discharged into the marina, then the population will change. One sensitive species will die and be excluded, leaving only the pollution-tolerant species. It is possible by taking benthic samples and studying the species present, to assess the health of the area.

Construction of new rock breakwaters, a groin, concrete pilings and boat floats provides a new surface for settlement of marine organisms. Settlement of organisms takes place in a series of stages, or succession, in which one stage with a characteristic group of organisms is followed by a second stage with its characteristic group of organisms. This process continues until a biological equilibrium, or climax community, is reached. In southern California protected waters, the length of time required for the development has been observed to be two to three years.

The first macroscopic organisms to appear on these structures are the green algae *Enteromorpha* and *Ulva* (sea lettuce). The growth of these species usually becomes a nuisance within a few months, depending upon the season, because of their rapid growth and the absence of any herbivores (algal-eating animals). As these algae grow, large quantities will break off, float or sink, and later decompose, which causes odors and perhaps dissolved oxygen depletion in areas of limited water circulation. As the herbivores appear the algae is eaten, resulting in a state of equilibrium. The condition of massive green algal growths attached to these structures will then be controlled by the herbivores unless there is a massive die-off of animals due to dissolved oxygen depletion. During the period of heaviest algal growth, which is of about two months duration, it may be necessary to remove the green algae floating on the surface in order to prevent serious odor problems and possible dissolved oxygen depletion. It should be emphasized that surfaces of rocks, pilings, and floats should not be scraped, as this will remove the newly settled young herbivores.

Animals begin to settle on these structures during the extensive algal growth period so that within two to three years the following organisms might be present in the following zones:

Rocks and Pilings:

Splash Zone - *Ligia occidentalis* (rock louse) = *Ligidia*
Pachygrapsus crassipes (striped shore crab)
Neither organism is very common on pilings.

High Tide Zone - *Chthamalus fissus* (small acorn barnacle)
Littorina sp. (Periwinkle snail)
Acmaea spp. (limpets)

Mid-Tide Zone - *Balanus glandula* (acorn barnacle)
Acmaea spp. (limpets)
Mytilus edulis (bay mussel) - large beds
On the rocks facing the ocean, *Mytilus edulis* is present in small patches; different species of acorn barnacles are more common.

Minus Tides - On the rocks within the marina and pilings *Mytilus edulis* is the dominant organism with many other species of organisms living among them. The accidentally introduced

brown seaweed from Japan, *Sargassum muticum*, may form an extensive subtidal zone. The fronds of this alga may break off and become a nuisance by becoming entangled within the props of boats. It may be necessary to remove this alga from time to time. Patches of *Mytilus edulis*, some *Pisaster ochraceus* (ochre starfish), and *Strongylocentrotus purpuratus* (purple sea urchin) occur.

Boat Floats:

Since the boat floats rise and fall with the tides, there is no tidal zonation. The community of marine organisms on a boat float is dominated by *Mytilus edulis*, *Ulva* and *Enteromorpha*, and various species of tunicates (sea squirts), such as *Ciona intestinalis* and *Styella plicata*, whose presence may vary with the season. Once established, these organisms will become permanent residents of these zones. Many smaller organisms are found living among these larger species, especially the amphipods and polychaetes.

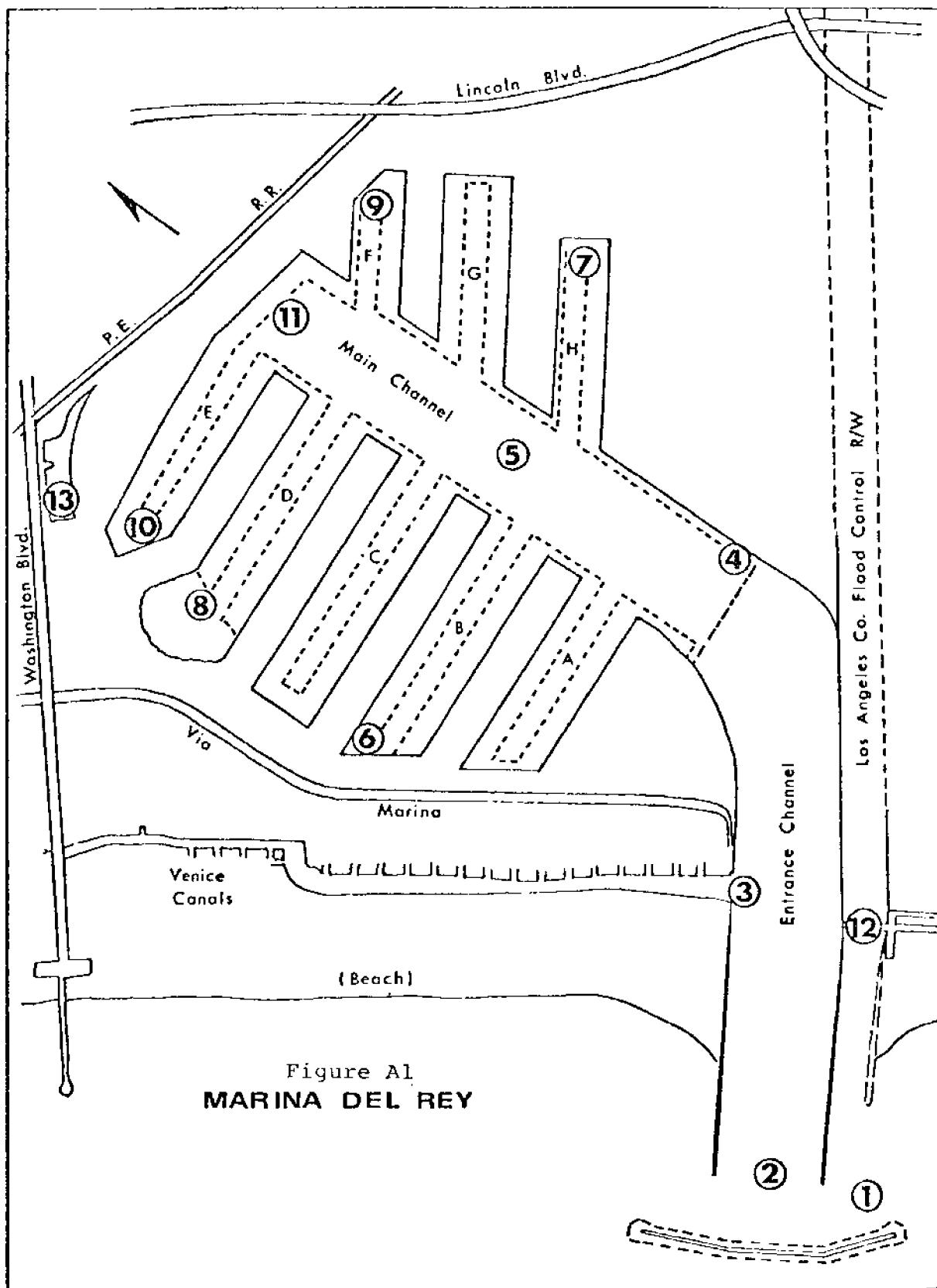


Figure A1
MARINA DEL REY

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APPENDIX B

Temperature, Salinity, Dissolved
Oxygen, pH and Turbidity
Data

August, 1976

through

July, 1977

Table 1. Conversion Table for Fahrenheit and Centigrade Temperature Scales.

$^{\circ}\text{C}$	$^{\circ}\text{F}$															
5.0	41.0	8.6	47.5	12.2	54.0	15.8	60.4	19.4	66.9	23.0	73.4	26.6	79.9	30.2	86.4	
.1	.2	.7	.7	.3	.1	.9	.6	.5	.67.1	.1	.6	.7	.80.1	.3	.5	
.2	.4	.8	.8	.4	.3	16.0	.8	.6	.3	.2	.8	.8	.2	.4	.7	
.3	.5	.9	48.0	.5	.5	.1	61.0	.7	.5	.3	.9	.9	.4	.5	.9	
.4	.7	9.0	.2	.6	.7	.2	.2	.8	.6	.4	74.1	.1	.6	.6	87.1	
.5	.9	.1	.4	.7	.9	.3	.3	.9	.8	.5	.3	.1	.8	.7	.3	
.6	42.1	.2	.6	.8	55.0	.4	.5	20.0	68.0	.6	.5	.2	81.0	.8	.4	
.7	.3	.3	.7	.9	.2	.5	.7	.1	.2	.7	.7	.3	.1	.9	.6	
.8	.4	.4	.9	13.0	.4	.6	.9	.2	.4	.8	.8	.4	.3	.3	31.0	
.9	.6	.5	49.1	.1	.6	.7	62.1	.3	.5	.9	75.0	.0	.5	.5	.8	
6.0	.8	.6	.6	.3	.2	.8	.8	.2	.4	.7	24.0	.2	.6	.7	.7	
.1	43.0	.7	.5	.3	.2	.9	.9	.4	.5	.9	.1	.4	.7	.9	.7	
.2	.2	.8	.6	.4	.6	56.1	17.0	.6	.6	69.1	.2	.6	.8	82.0	.0	
.3	.3	.9	.8	.5	.5	.3	.1	.8	.7	.3	.7	.9	.2	.2	.7	
.4	.5	10.0	50.0	.6	.6	.5	.2	63.0	.8	.4	.4	.4	.9	28.0	.4	.4
.5	.7	.1	.2	.7	.7	.7	.3	.1	.9	.6	.5	.1	.6	.1	.6	
.6	.9	.2	.4	.8	.8	.8	.4	.3	21.0	.8	.6	.3	.2	.8	.3	
.7	44.1	.3	.5	.9	57.0	.5	.5	.1	70.0	.7	.3	.5	.3	.9	83.1	
.8	.2	.4	.7	14.0	.2	.6	.7	.2	.2	.8	.6	.4	.4	.4	.4	
.9	.4	.5	.9	.1	.4	.7	.9	.3	.3	.9	.8	.5	.5	.3	.3	
7.0	.6	.6	51.1	.2	.6	.8	64.0	.4	.5	25.0	.7	.7	.6	.5	.5	
.1	.8	.7	.3	.3	.7	.9	.2	.5	.7	71.1	.2	.2	.7	.7	.7	
.2	45.0	.8	.4	.4	.9	18.0	.4	.6	.7	.1	.3	.5	.9	84.0	.8	
.3	.1	.9	.6	.5	58.1	.1	.6	.7	.9	.2	.4	.7	.7	.2	.2	
.4	.3	11.0	.8	.6	.6	.3	.2	.8	.8	.2	.4	.4	.8	.4	.9	
.5	.5	.1	52.0	.7	.7	.5	.3	.9	.9	.4	.5	.9	.1	.4	.5	
.6	.7	.2	.2	.8	.6	.4	.4	65.1	22.0	.6	.6	78.1	.2	.6	.6	
.7	.9	.3	.3	.9	.8	.5	.3	.1	.8	.7	.3	.3	.7	.3	.7	
.8	46.0	.4	.5	15.0	59.0	.6	.5	.2	72.0	.8	.4	.7	.4	.4	.9	
.9	.2	.5	.7	.1	.2	.2	.7	.3	.1	.1	.9	.6	.5	.5	.5	
8.0	.4	.6	.9	.2	.2	.4	.8	.8	.4	.3	26.0	.1	.7	.7	.5	
.1	.6	.7	53.1	.3	.5	.5	.9	.6	.5	.5	.1	.9	.6	.6	.3	
.2	.8	.8	.2	.4	.4	.7	.7	.3	.2	.6	.7	.2	.2	.8	.6	
.3	.9	.9	.4	.5	.9	.1	.4	.7	.9	.3	.3	.3	.9	.8	.8	
.4	47.1	12.0	.6	.6	60.1	.2	.6	.8	73.0	.2	.5	.5	.5	30.0	86.0	
.5	.3	.1	.8	.8	.8	.7	.7	.7	.7	.7	.7	.1	.1	.2	.2	

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 8/19/76

TIME: 835

STATION: M1 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	20.80	29.40	8.90	8.15	74.00
1	20.40	32.20	10.30	8.14	80.00
2	20.40	32.70	10.70	8.15	80.50
3	20.10	32.70	10.50	8.13	83.00
4	20.00	32.80	10.60	8.14	85.00
5	19.70	32.90	10.70	8.14	88.00
6	19.30	32.70	10.90	8.14	85.00
7	18.00	32.40	10.90	8.12	-1.00

DATE: 9/16/76

TIME: 1015

STATION: M1 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	19.90	35.60	7.20	8.08	86.50
1	19.90	35.70	7.20	8.08	85.50
2	19.90	32.80	7.10	8.07	84.50
3	19.90	32.80	7.10	8.07	85.00
4	19.90	32.90	7.10	8.07	83.50
5	19.80	32.90	7.10	8.07	78.00
6	19.70	32.70	6.90	8.05	75.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 10/14/76

TIME: 1012

STATION: M1 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	19.80	30.90	6.20	7.93	76.00
1	19.70	31.10	6.20	7.92	82.00
2	19.60	31.20	6.40	7.91	83.00
3	19.50	31.20	6.40	7.91	84.50
4	19.40	31.20	6.20	7.89	82.50
5	19.10	30.90	5.60	7.86	80.50
6	18.90	30.90	5.70	7.83	81.00
7	18.80	31.30	5.70	7.82	80.50

DATE: 11/19/76

TIME: 845

STATION: M1 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	18.30	30.60	8.00	8.12	-1.00
1	18.70	30.80	8.20	8.13	-1.00
2	18.70	30.90	8.10	8.14	-1.00
3	18.90	31.00	8.30	8.14	-1.00
4	18.90	31.00	8.00	8.12	-1.00
5	19.00	31.00	7.90	8.12	-1.00
6	19.00	30.90	7.60	8.08	-1.00
7	18.90	30.90	7.30	8.08	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 12/16/76

TIME: 825

STATION: M1

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	16.50	32.60	5.70	8.10	74.00
1	16.60	32.60	5.80	8.10	73.50
2	16.60	32.70	6.20	8.12	77.00
3	17.10	33.00	6.60	8.13	80.00
4	17.10	33.60	6.70	8.12	83.00
5	17.10	33.70	6.70	8.12	84.00
6	17.00	33.80	6.80	8.12	86.50
7	16.90	33.90	6.90	8.11	86.00
8	16.90	33.90	6.50	8.10	87.50

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 1/20/77

TIME: 913

STATION: M1

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	16.80	34.9	3.90	7.82	-1.00
1	16.90	34.2	3.60	7.88	-1.00
2	16.90	34.2	3.20	7.91	-1.00
3	16.90	34.2	3.20	7.80	-1.00
4	16.90	34.2	3.20	7.76	-1.00
5	16.90	34.2	3.20	7.74	-1.00
6	16.90	34.2	3.00	7.73	-1.00
7	16.80	34.2	2.80	7.80	-1.00
8	16.00	34.2	2.80	7.82	-1.00
9	15.50	34.1	2.90	7.81	-1.00
10	15.50	34.0	2.80	7.77	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 2/17/77

TIME: 835

STATION: M1 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	18.00	33.80	3.00	8.42	80.00
1	18.00	33.60	2.70	8.39	79.50
2	18.00	33.60	2.68	8.37	79.00
3	17.90	33.70	2.60	8.35	79.50
4	17.90	33.60	2.60	8.34	81.00
5	17.80	33.60	2.70	8.34	83.50
6	17.50	34.50	3.00	8.35	87.00
7	17.20	33.90	2.50	8.22	83.50
8	-1.00	-1.00	-1.00	-1.00	74.00

DATE: 3/17/77

TIME: 840

STATION: M1 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0.0	13.00	26.80	8.10	8.37	39.00
1.0	13.10	27.60	8.10	8.32	47.50
2.0	13.50	30.20	8.00	8.32	67.00
3.0	13.50	30.30	8.20	8.32	78.50
4.0	13.60	30.50	8.10	8.31	79.00
5.0	13.50	30.40	8.00	8.27	67.00
6.0	13.30	30.70	7.70	8.26	64.00
7.0	13.30	30.80	7.90	8.25	55.00
8.0	13.20	30.90	7.90	8.25	70.00

MISSING DATA VALUE IS -1.0

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 4/21/77

TIME: 920

STATION: M1 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	18.00	31.40	11.00	8.32	64.00
1.0	17.80	31.20	11.30	8.31	65.50
2.0	17.70	31.10	11.80	8.29	67.50
3.0	17.40	31.00	12.20	8.27	68.00
4.0	17.40	31.00	12.60	8.24	71.50
5.0	16.60	30.50	12.90	8.19	73.00
6.0	16.40	30.70	12.80	8.16	74.00
7.0	16.10	30.80	12.30	8.14	70.00

DATE: 5/19/77

TIME: 845

STATION: M1 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	16.40	30.90	9.50	8.32	72.00
1	16.40	31.00	9.40	8.32	75.00
2	16.40	31.00	9.10	8.31	77.00
3	15.70	30.60	8.80	8.28	82.00
4	15.60	30.80	8.70	8.29	81.50
5	15.20	30.50	8.10	8.24	78.00
6	14.70	30.50	7.80	8.22	76.00
7	14.60	30.80	7.80	8.22	75.00

MISSING DATA VALUE IS -1.0
 HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 6/23/77

TIME: 847

STATION: M1

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	18.60	32.60	7.40	8.23	77.00
1	18.20	32.40	7.50	8.24	79.00
2	18.10	32.50	7.70	8.24	82.00
3	17.40	32.50	7.80	8.27	84.50
4	17.00	32.60	7.50	8.21	85.50
5	16.90	32.80	7.40	8.20	86.00
6	16.70	32.80	7.20	8.19	86.50
7	16.20	32.60	7.00	8.17	85.50
8	15.50	32.30	6.40	8.11	80.00

DATE: 7/21/77

TIME: 835

STATION: M1

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	20.36	30.30	7.96	8.50	73.50
1.0	20.20	30.30	8.38	8.50	80.00
2.0	19.90	30.40	9.06	8.56	80.00
3.0	19.80	30.50	9.49	8.60	83.00
4.0	19.80	30.50	9.58	8.55	85.00
5.0	19.10	30.20	9.50	8.55	86.00
6.0	18.87	30.12	8.90	8.48	80.00
7.0	17.93	30.25	8.11	8.45	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 8/19/76

TIME: 848

STATION: M2 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	20.30	31.80	9.30	8.13	78.00
1	20.40	32.80	9.40	8.12	79.00
2	20.60	33.40	9.10	8.12	79.00
3	20.20	32.90	10.00	8.12	79.00
4	20.10	33.00	9.70	8.10	80.50
5	19.70	32.90	10.00	8.11	80.50
6	19.40	33.20	10.60	8.13	82.50

DATE: 9/16/76

TIME: 915

STATION: M2 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	20.10	35.70	7.60	8.12	88.00
1	20.20	35.80	7.50	8.12	89.00
2	20.20	35.80	7.60	8.12	90.00
3	20.20	35.80	7.50	8.11	90.00
4	20.20	35.90	7.50	8.10	90.50
5	20.20	36.00	7.50	8.10	89.00
6	20.10	36.00	7.40	8.08	87.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 10/14/76

TIME: 1025

STATION: M2

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
1	19.70	31.60	6.70	7.93	85.50
2	19.70	31.50	6.50	7.91	84.00
3	19.60	31.60	6.50	7.91	84.00
4	19.40	31.40	6.50	7.90	87.50
5	19.00	30.70	6.40	7.86	90.00
6	18.80	30.60	6.30	7.85	89.00
7	18.60	30.50	6.20	7.84	89.00

DATE: 11/19/76

TIME: 900

STATION: M2

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	18.70	30.90	7.40	8.05	-1.00
1	18.80	30.90	7.30	8.06	-1.00
2	18.80	31.00	7.20	8.06	-1.00
3	18.80	31.00	7.10	8.07	-1.00
4	18.90	31.00	7.20	8.08	-1.00
5	18.90	31.00	7.10	8.07	-1.00
6	18.90	31.00	7.10	8.07	-1.00
7	18.90	31.00	7.00	8.05	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 12/16/76

TIME: 840

STATION: M2

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	16.20	32.20	5.90	8.09	87.50
1	16.90	33.40	6.90	8.11	88.50
2	16.90	33.70	6.80	8.11	91.00
3	16.90	33.80	6.80	8.11	92.00
4	16.90	33.80	6.70	8.11	92.00
5	16.70	34.00	6.30	8.08	93.00
6	16.60	33.90	6.00	8.06	93.00

DATE: 1/20/77

TIME: 928

STATION: M2

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	16.90	34.0	1.80	7.68	-1.00
1	16.90	34.2	2.90	7.71	-1.00
2	16.90	34.2	3.20	7.74	-1.00
3	16.00	34.2	3.00	7.78	-1.00
4	15.90	34.1	2.70	7.81	-1.00
5	15.50	34.1	2.60	7.84	-1.00
6	15.50	34.1	2.50	7.86	-1.00
7	15.50	34.1	2.20	7.84	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 2/17/77

TIME: 855

STATION: M2 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	17.90	33.50	1.60	8.39	65.00
1	17.90	33.50	2.00	8.39	73.00
2	17.90	33.50	2.00	8.38	73.00
3	17.90	33.50	2.00	8.35	73.50
4	17.90	33.50	2.10	8.36	73.50
5	17.90	33.50	1.90	8.36	73.00
6	17.90	33.50	1.80	8.35	73.50

DATE: 3/17/77

TIME: 907

STATION: M2 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	13.40	28.10	8.60	8.30	47.50
1.0	13.30	28.90	8.30	8.28	54.50
2.0	13.30	29.00	8.10	8.25	63.00
3.0	13.40	30.70	7.60	8.26	67.50
4.0	13.40	30.80	7.80	8.25	60.00
5.0	13.30	31.00	7.70	8.24	55.00
6.0	13.30	31.00	7.50	8.22	42.50

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 4/21/77

TIME: 928

STATION: M2

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	17.50	31.20	8.40	8.22	52.00
1.0	17.40	31.20	8.70	8.22	51.50
2.0	17.40	31.10	9.30	8.20	51.00
3.0	17.10	31.10	10.10	8.18	49.00
4.0	16.90	31.00	11.00	8.14	46.50
5.0	16.80	31.10	11.60	8.15	43.50

DATE: 5/19/77

TIME: 900

STATION: M2

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	16.20	31.10	9.50	8.35	65.50
1	16.30	31.10	9.30	8.100	65.00
2	16.30	31.10	8.90	8.31	62.00
3	16.30	31.10	8.70	8.29	79.00
4	15.80	30.80	8.30	8.25	81.00
5	15.60	30.90	8.50	8.27	82.00
6	15.20	30.70	7.80	8.22	68.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 7/21/77

TIME: 845

STATION: M2 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O. PPM	PH H ION CONC	TURBIDITY %
0.0	20.50	30.40	7.14	8.45	67.00
1.0	20.40	30.70	7.25	8.46	79.00
2.0	20.20	30.50	7.45	8.45	79.50
3.0	19.80	30.50	7.55	8.45	81.00
4.0	19.60	30.40	7.40	8.42	82.00
5.0	19.20	30.50	7.26	8.42	83.00

DATE: 6/23/77

TIME: 908

STATION: M2 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O. PPM	PH H ICN CONC	TURBIDITY %
0	19.00	33.20	7.70	8.26	77.00
1	18.30	33.00	7.60	8.25	77.00
2	18.10	32.50	7.50	8.22	80.00
3	17.60	32.60	7.40	8.21	81.00
4	17.20	32.60	7.30	8.19	83.50
5	16.60	32.80	6.90	8.17	84.00

815

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 8/19/76

TIME: 905

STATION: M3 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	21.70	33.50	8.70	8.04	72.00
1	21.80	33.40	8.70	8.02	74.00
2	21.70	33.00	8.00	8.02	76.00
3	21.30	33.00	8.00	8.03	73.50
4	-1.00	-1.00	-1.00	-1.00	72.50

DATE: 9/16/76

TIME: 1026

STATION: M3 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	20.40	32.40	5.30	7.97	79.50
1	20.40	32.50	5.20	7.96	78.50
2	20.30	32.50	5.10	7.95	77.00
3	20.20	32.70	5.70	8.03	80.50
4	19.90	32.70	5.80	8.01	79.00

DATE: 10/14/76

TIME: 1045

STATION: M3 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	19.90	32.20	6.30	7.87	75.50
1	19.90	32.20	6.40	7.87	76.50
2	19.90	32.10	5.80	7.84	78.00

MISSING DATA VALUE IS -1.0

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 11/19/76

TIME: 919

STATION: M3 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	18.80	30.90	6.10	7.98	-1.00
1	18.90	30.90	6.20	7.98	-1.00
2	18.90	30.90	6.20	7.98	-1.00
3	18.90	30.90	5.60	7.99	-1.00

DATE: 12/16/76

TIME: 850

STATION: M3 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	16.30	33.80	6.30	8.07	63.50
1	16.30	33.70	6.00	8.15	71.00
2	16.20	33.80	5.70	8.13	69.00
3	16.20	33.80	5.80	8.03	68.50
4	16.20	33.80	5.80	8.03	68.00

DATE: 1/20/77

TIME: 947

STATION: M3 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	16.10	34.00	1.00	7.66	-1.00
1	16.10	34.50	1.50	7.70	-1.00
2	15.50	34.30	1.90	7.75	-1.00
3	15.50	34.20	1.90	7.79	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 2/17/77

TIME: 912

STATION: M3 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	17.80	33.20	-1.00	8.40	74.00
1	17.80	33.30	-1.00	8.38	77.00
2	17.90	33.40	-1.00	8.44	76.50
3	17.90	33.50	-1.00	8.43	76.50
4	-1.00	-1.00	-1.00	-1.00	-1.00

DATE: 3/17/77

TIME: 925

STATION: M3 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	14.00	29.80	7.70	8.28	53.00
1.0	14.10	29.90	7.60	8.27	53.50
2.0	14.10	30.30	7.40	8.24	58.50
3.0	13.80	30.90	7.20	8.22	65.00
4.0	13.70	31.10	6.90	8.22	73.00
5.0	13.60	31.20	6.70	8.21	72.00
6.0	13.60	31.30	6.50	8.21	68.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 4/21/77

TIME: 940

STATION: M3

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	18.50	31.50	8.10	8.25	40.50
1.0	18.40	31.50	8.40	8.24	40.50
2.0	18.30	31.60	8.70	8.23	39.00
3.0	17.80	31.10	9.01	8.20	50.50
4.0	17.40	31.10	9.50	8.19	58.00
5.0	17.40	31.20	10.30	8.17	56.50

DATE: 5/19/77

TIME: 915

STATION: M3

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	17.40	31.10	9.90	8.45	32.00
1	17.60	31.30	9.80	8.41	35.00
2	17.60	31.30	9.50	8.39	36.50

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 6/23/77

TIME: 924

STATION: M3 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	19.30	33.20	7.20	8.24	68.50
1	19.40	33.20	6.60	8.19	74.00

DATE: 7/21/77

TIME: 905

STATION: M3 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	20.60	31.10	8.40	8.45	81.00
1.0	20.90	31.06	8.12	8.45	80.00
2.0	20.90	31.15	7.82	8.42	80.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 8/19/76

TIME: 916

STATION: M4 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	21.80	33.50	9.50	8.07	71.00
1	22.00	33.40	9.40	8.07	72.50
2	22.00	33.40	9.00	8.06	73.50
3	21.90	33.20	8.00	8.04	75.00
4	21.70	33.00	8.20	8.04	76.50
5	20.90	32.70	8.20	8.05	73.50

DATE: 9/16/76

TIME: 1045

STATION: M4 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.40	32.40	5.50	7.94	84.00
1	20.40	32.40	5.40	7.92	84.00
2	20.40	32.40	5.20	7.92	84.00
3	20.00	32.60	5.70	7.99	81.00
4	19.90	32.70	5.80	7.99	78.00
5	19.80	32.80	5.60	7.98	75.00
6	19.70	32.80	5.30	7.97	70.50

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 10/14/76

TIME: 1210

STATION: M4 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	20.30	32.40	11.90	8.11	30.00
1	20.30	32.30	11.30	8.12	31.50
2	20.10	32.10	7.30	8.04	52.50
3	19.90	32.00	5.80	7.85	74.00
4	19.80	32.00	5.30	7.83	78.50

DATE: 11/19/76

TIME: 931

STATION: M4 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	18.80	30.90	5.30	7.95	-1.00
1	19.00	30.90	5.20	7.95	-1.00
2	19.00	30.90	5.10	7.95	-1.00
3	19.10	30.90	5.40	7.95	-1.00
4	19.10	31.00	5.10	7.95	-1.00
5	19.00	31.00	5.10	7.95	-1.00
6	19.00	31.10	6.00	8.03	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 12/16/76

TIME: 915

STATION: M4

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	15.90	33.80	5.30	7.98	80.50
1	15.80	33.90	5.10	7.96	80.50
2	15.70	33.90	4.70	7.93	77.50
3	15.60	33.40	4.70	7.91	72.50
4	15.60	33.90	4.50	7.90	66.00
5	15.60	33.90	4.50	7.90	62.50

DATE: 1/20/77

TIME: 945

STATION: M4

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	15.80	33.90	1.40	7.63	-1.00
1	15.90	34.00	1.20	7.67	-1.00
2	15.90	34.00	1.60	7.72	-1.00
3	15.00	33.90	1.30	7.76	-1.00
4	15.00	34.90	1.20	7.79	-1.00
5	15.00	34.90	1.20	7.81	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 2/17/77

TIME: 940

STATION: M4

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	17.50	33.20	-1.00	8.20	55.50
1	17.70	33.00	-1.00	8.20	70.00
2	17.50	33.20	-1.00	8.18	70.50
3	17.50	33.20	-1.00	8.14	69.50
4	17.40	33.30	-1.00	8.11	68.50
5	17.30	33.30	-1.00	8.14	66.50
6	-1.00	-1.00	-1.00	-1.00	-1.00

DATE: 3/17/77

TIME: 1000

STATION: M4

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	14.20	29.60	7.60	8.32	52.00
1.0	14.20	29.90	7.30	8.25	55.00
2.0	14.30	30.50	7.20	8.24	56.00
3.0	14.20	31.00	7.10	8.23	55.00
4.0	14.00	31.20	6.90	8.20	60.00
5.0	13.90	31.30	6.80	8.19	52.50

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 4/21/77

TIME: 1000

STATION: M4 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0.0	18.80	31.90	7.90	8.22	34.50
1.0	18.90	32.00	8.20	8.21	34.00
2.0	18.90	31.90	8.60	8.20	36.00
3.0	18.40	31.50	8.90	8.18	41.50
4.0	17.90	31.10	9.50	8.17	49.50
5.0	17.70	31.20	10.60	8.16	51.50
6.0	17.70	31.30	11.70	8.15	52.50

DATE: 5/19/77

TIME: 930

STATION: M4 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	17.50	31.20	8.50	8.34	51.50
1	17.40	31.20	8.10	8.32	54.00
2	17.30	31.20	8.20	8.32	52.00
3	17.10	31.20	8.10	8.30	53.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 6/23/77

TIME: 945

STATION: M4 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	19.30	33.20	7.60	8.24	70.00
1	19.60	33.20	7.60	8.23	72.50
2	19.70	33.20	7.60	8.23	73.50
3	19.70	33.20	7.50	8.22	74.00
4	19.40	33.00	7.20	8.19	74.50
5	18.90	32.60	7.00	8.18	73.50

DATE: 7/21/77

TIME: 915

STATION: M4 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0.0	21.10	30.99	8.56	8.42	74.00
1.0	21.10	31.30	7.89	8.41	80.00
2.0	21.10	31.20	7.71	8.41	81.00
3.0	21.00	31.10	7.56	8.39	73.00
4.0	19.00	29.90	7.10	8.38	69.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 8/19/76

TIME: 925

STATION: M5 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	21.60	33.50	8.20	8.03	73.00
1	22.00	33.40	8.10	8.02	73.00
2	22.00	33.50	8.00	8.02	67.50
3	22.20	33.40	8.00	8.02	67.00
4	22.20	33.30	8.20	8.02	64.50
5	22.00	33.10	7.20	7.99	48.00

DATE: 9/16/76

TIME: 1100

STATION: M5 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.50	32.40	4.80	7.91	83.00
1	20.60	32.30	4.70	7.88	83.00
2	20.50	32.40	4.70	7.88	82.50
3	20.50	32.40	4.70	7.88	77.00
4	20.20	32.60	5.60	7.97	78.00
5	19.90	32.70	5.20	7.95	74.50

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 10/14/76

TIME: 1108

STATION: M5 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.10	32.40	5.90	7.82	69.00
1	20.10	32.40	6.20	7.84	65.50
2	20.00	32.20	5.50	7.81	61.50
3	19.80	32.10	4.70	7.76	68.50
4	19.70	32.00	5.20	7.79	72.00
5	19.50	31.70	5.00	7.78	72.00

DATE: 11/19/76

TIME: 953

STATION: M5 MARINA DEL REY

DEPTH METERS	TEMPERATURE CFN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	19.20	30.80	5.00	7.93	-1.00
1	19.20	30.90	4.80	7.92	-1.00
2	19.20	30.90	4.80	7.92	-1.00
3	19.20	30.90	4.90	7.93	-1.00
4	19.10	31.00	5.40	7.98	-1.00
5	19.10	31.10	5.70	8.00	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 12/16/76

TIME: 930

STATION: M5 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	15.50	33.70	5.30	7.96	68.00
1	15.50	33.80	5.20	7.95	75.00
2	15.50	33.80	5.40	7.96	78.00
3	15.50	33.80	5.30	7.96	81.00
4	15.50	33.80	4.90	7.93	82.00
5	15.50	33.80	4.70	7.91	76.00

DATE: 1/20/77

TIME: 1008

STATION: M5 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	15.50	33.9	0.0	7.66	-1.00
1	15.50	33.9	0.90	7.70	-1.00
2	14.90	33.9	1.10	7.76	-1.00
3	14.90	33.9	1.10	7.78	-1.00
4	14.90	34.9	0.90	7.82	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 2/17/77

TIME: 1000

STATION: M5 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	18.00	33.30	-1.00	8.12	42.00
1	17.90	33.90	-1.00	8.18	47.50
2	17.80	33.20	-1.00	8.17	41.50
3	17.60	33.10	-1.00	8.19	42.50
4	17.50	33.40	-1.00	8.20	49.50
5	17.50	33.40	-1.00	8.20	52.00
6	17.50	33.40	-1.00	8.20	44.50

DATE: 3/17/77

TIME: 1003

STATION: M5 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0.0	14.60	29.80	8.00	8.30	57.50
1.0	14.50	30.00	7.30	8.28	56.50
2.0	14.60	30.50	7.20	8.24	57.50
3.0	14.30	31.20	6.90	8.20	61.00
4.0	14.20	31.30	6.60	8.18	49.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 4/21/77

TIME: 1005

STATION: M5 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	18.80	31.90	9.05	8.21	27.00
1.0	19.10	32.10	9.13	8.21	28.00
2.0	19.00	31.90	9.30	8.18	27.00
3.0	18.40	31.30	9.70	8.47	30.00
4.0	18.00	31.20	9.60	8.13	38.00
5.0	17.60	31.10	9.20	8.12	40.00

DATE: 5/19/77

TIME: 940

STATION: M5 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	17.90	31.40	9.50	8.43	36.50
1	17.90	31.40	9.30	8.42	35.00
2	18.00	31.40	9.20	8.41	31.00
3	17.50	31.10	8.50	8.34	50.00
4	17.20	31.10	8.20	8.32	58.00
5	16.70	31.10	7.80	8.29	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MAPTEK

DATE: 6/23/77

TIME: 1008

STATION: M5 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	19.90	33.40	8.10	8.28	69.50
1	20.00	33.20	8.00	8.26	69.00
2	20.00	33.10	7.90	8.23	64.50
3	19.80	33.00	7.90	8.22	68.00
4	19.40	32.80	7.80	8.20	70.00

DATE: 7/21/77

TIME: 930

STATION: M5 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	21.60	31.50	8.48	8.44	83.00
1.0	21.70	31.50	8.22	8.44	82.00
2.0	21.50	31.20	7.94	8.44	75.00
3.0	20.50	30.70	7.50	8.40	77.00
4.0	20.10	30.60	6.50	8.33	59.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 8/19/76

TIME: 945

STATION: M6 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	21.50	33.30	6.70	7.97	74.50
1	21.80	33.30	6.20	7.95	77.00
2	21.90	33.30	5.70	7.93	77.00
3	22.00	33.30	5.70	7.93	76.50

DATE: 9/16/76

TIME: 1115

STATION: M6 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.50	32.60	4.10	7.85	85.00
1	20.60	32.60	3.50	7.82	87.00
2	20.70	32.70	3.40	7.79	74.00

DATE: 10/14/76

TIME: 1235

STATION: M6 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.10	32.50	4.90	7.78	72.50
1	20.00	32.40	4.90	7.77	76.00
2	20.00	32.40	4.70	7.75	77.00
3	19.80	32.30	3.50	7.74	73.50
4	-1.00	-1.00	-1.00	-1.00	53.50

MISSING DATA VALUE IS -1.0

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 11/19/76

TIME: 1007

STATION: M6 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	18.90	30.80	5.30	7.92	-1.00
1	19.20	30.90	5.30	7.92	-1.00
2	19.20	30.90	5.10	7.90	-1.00
3	19.20	31.00	4.60	7.90	-1.00

DATE: 12/16/76

TIME: 945

STATION: M6 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	15.50	33.90	5.30	7.94	78.00
1	15.50	33.80	5.30	7.94	80.50
2	15.40	33.80	5.20	7.93	81.00
3	15.40	33.90	5.20	7.93	83.00

DATE: 1/20/77

TIME: 1025

STATION: M6 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	15.00	33.9	0.0	7.62	-1.00
1	15.00	33.9	0.50	7.69	-1.00
2	14.50	34.9	0.60	7.72	-1.00

MISSING DATA VALUE IS -1.0

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 2/17/77

TIME: 1014

STATION: M6

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	17.40	33.10	-1.00	8.01	53.00
1	17.20	33.30	-1.00	8.01	55.00
2	17.20	33.40	-1.00	8.02	56.50

DATE: 3/17/77

TIME: 1045

STATION: M6

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0.0	14.40	29.80	7.80	8.27	55.00
1.0	14.70	30.70	7.40	8.25	57.50
2.0	14.70	31.30	7.20	8.22	58.00
3.0	14.80	31.80	6.80	8.21	50.00

DATE: 4/21/77

TIME: 1020

STATION: M6

MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0.0	18.70	31.70	9.70	8.23	42.00
1.0	18.86	31.60	9.80	8.23	42.00
2.0	18.70	31.40	10.30	8.21	41.00
3.0	18.70	31.40	10.80	8.22	40.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 5/19/77

TIME: 957

STATION: M6 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	18.00	31.40	10.20	8.45	25.00
1	18.00	31.50	10.00	8.45	28.00
2	18.00	31.50	9.90	8.45	29.00
3	17.90	31.50	9.90	8.42	28.00

DATE: 6/23/77

TIME: 1021

STATION: M6 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	19.50	33.30	6.50	8.18	84.00
1	19.70	33.30	6.40	8.17	82.00
2	19.70	33.20	6.70	8.17	77.00
3	19.50	33.00	6.60	8.14	77.00

DATE: 7/21/77

TIME: 945

STATION: M6 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	21.40	31.58	7.00	8.91	59.00
1.0	21.50	31.65	6.86	8.35	87.00
2.0	21.50	31.61	7.26	8.38	87.00
3.0	21.30	31.56	7.32	8.37	87.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 8/19/76

TIME: 1120

STATION: M7 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	22.60	33.40	8.10	8.01	68.00
1	22.90	33.40	8.00	8.00	69.50
2	22.90	33.40	8.00	7.99	69.50
3	22.80	33.20	7.50	7.97	69.00

DATE: 9/16/76

TIME: 942

STATION: M7 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	21.00	32.00	5.10	7.78	77.50
1.0	20.80	32.00	5.10	7.78	84.50
2.0	20.70	32.00	4.90	7.78	85.50
3.0	20.40	32.30	3.58	7.78	75.00
4.0	20.10	32.60	3.28	7.73	-1.00

DATE: 10/14/76

TIME: 1153

STATION: M7 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.20	32.40	7.90	7.98	66.00
1	20.20	32.40	8.00	7.98	64.00
2	20.10	32.10	5.40	7.79	65.50
3	19.80	31.80	3.40	7.74	65.50
4	19.80	32.00	3.40	7.71	60.00

MISSING DATA VALUE IS -1.0

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 11/19/76

TIME: 1203

STATION: M7 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	19.80	31.00	5.10	7.92	-1.00
1	19.90	30.90	5.00	7.92	-1.00
2	19.80	30.90	5.80	7.92	-1.00
3	19.60	30.80	5.50	7.91	-1.00

DATE: 12/16/76

TIME: 1140

STATION: M7 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	15.90	35.10	4.90	7.87	62.00
1	15.60	34.40	4.80	7.87	73.50
2	15.60	34.30	4.80	7.87	74.00
3	15.50	34.00	4.90	7.86	75.50

DATE: 1/20/77

TIME: 1152

STATION: M7 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	15.00	34.9	1.10	7.56	-1.00
1	15.00	34.9	1.10	7.66	-1.00
2	15.00	34.9	1.10	7.68	-1.00
3	15.00	34.9	1.10	7.70	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARPEK

DATE: 2/17/77

TIME: 1200

STATION: M7 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	18.70	33.00	-1.00	8.12	71.00
1	18.50	33.10	-1.00	8.12	74.00
2	18.50	33.10	-1.00	8.11	75.00
3	18.50	33.10	-1.00	8.11	80.00

DATE: 3/17/77

TIME: 1210

STATION: M7 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0.0	15.90	30.30	7.90	8.24	57.00
1.0	15.70	30.70	7.50	8.21	54.00
2.0	15.00	31.00	6.90	8.19	14.50

DATE: 4/21/77

TIME: 1131

STATION: M7 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0.0	19.80	32.10	9.20	8.23	39.50
1.0	20.00	32.10	9.40	8.23	39.00
2.0	19.90	31.50	10.10	8.19	36.50
3.0	18.60	31.10	10.70	8.15	28.50

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 5/19/77

TIME: 1128

STATION: M7 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	18.70	31.70	9.30	8.37	37.00
1	18.80	31.70	9.20	8.37	36.50
2	18.70	31.60	8.80	8.34	34.00
3	18.00	31.30	7.50	8.29	12.00

DATE: 6/23/77

TIME: 1147

STATION: M7 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.60	33.20	12.30	8.48	47.00
1	20.70	33.20	11.70	8.44	44.00
2	20.70	33.20	11.40	8.40	53.50

DATE: 7/21/77

TIME: 1105

STATION: M7 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	22.00	31.99	7.30	8.38	57.00
1.0	22.10	32.07	7.29	8.38	59.00
2.0	22.10	31.99	7.32	8.38	67.00
3.0	21.40	31.61	6.22	8.32	72.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 8/19/76

TIME: 1010

STATION: M8 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	22.00	33.60	7.70	8.00	72.00
1	22.60	33.50	7.50	7.99	72.00
2	22.70	33.50	7.40	7.98	72.00
3	22.60	33.40	7.30	7.96	70.00

DATE: 9/16/76

TIME: 1135

STATION: M8 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	21.00	32.30	5.50	7.95	77.50
1	21.00	32.40	5.50	7.94	78.00
2	20.90	32.70	3.00	7.82	76.50
3	20.80	33.00	2.00	7.75	77.00

DATE: 10/14/76

TIME: 1128

STATION: M8 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	20.10	32.40	4.70	7.77	73.00
1	20.10	32.30	4.40	7.76	74.00
2	20.00	32.20	4.40	7.75	74.00
3	20.00	32.20	4.30	7.74	72.50
4	20.00	32.20	3.60	7.72	72.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 11/19/76

TIME: 1035

STATION: M8 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	19.30	30.80	5.20	7.95	-1.00
1	19.40	30.80	5.20	7.94	-1.00
2	19.40	30.80	5.20	7.93	-1.00
3	19.20	30.70	5.30	7.93	-1.00
4	19.10	30.80	4.40	7.90	-1.00

DATE: 12/16/76

TIME: 1017

STATION: M8 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	15.40	34.40	5.40	7.93	72.00
1	15.30	34.00	5.40	7.93	76.00
2	15.20	34.10	5.50	7.93	83.50
3	15.10	33.90	5.80	7.95	84.00

DATE: 1/20/77

TIME: 1047

STATION: M8 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	15.00	33.9	0.90	7.75	-1.00
1	15.00	33.9	1.30	7.78	-1.00
2	14.10	33.9	1.60	7.83	-1.00
3	14.10	33.9	1.60	7.88	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 2/17/77

TIME: 1037

STATION: M8 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	17.90	32.60	-1.00	8.07	69.00
1	17.90	32.80	-1.00	8.07	69.00
2	17.90	32.80	-1.00	8.06	68.50
3	17.50	33.10	-1.00	8.06	66.00
4	17.50	33.10	-1.00	8.08	66.00

DATE: 3/17/77

TIME: 1108

STATION: M8 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	14.50	29.50	7.50	8.33	49.00
1.0	15.20	31.30	7.50	8.00	51.00
2.0	15.30	31.80	8.00	8.33	53.00
3.0	15.20	31.80	7.90	8.29	53.50

DATE: 4/21/77

TIME: 1035

STATION: M8 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	19.70	32.00	8.90	8.23	24.00
1.0	19.80	32.10	9.00	8.23	25.50
2.0	19.60	31.70	9.10	8.22	26.00
3.0	19.10	31.40	9.60	8.22	15.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 5/19/77

TIME: 1020

STATION: M8 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	18.40	31.60	10.10	8.42	21.50
1	18.30	31.50	9.90	8.43	20.00
2	18.30	31.40	9.90	8.44	18.00
3	18.20	31.40	9.80	8.43	16.50

DATE: 6/23/77

TIME: 1043

STATION: M8 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.20	33.30	7.00	8.22	48.00
1	20.40	33.40	7.10	8.21	58.50
2	20.40	33.40	7.20	8.20	61.00
3	20.00	33.00	5.60	8.11	59.00

DATE: 7/21/77

TIME: 1005

STATION: M8 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	22.00	31.80	7.48	8.41	92.00
1.0	22.00	31.70	7.33	8.41	89.00
2.0	21.90	31.80	7.35	8.40	89.00
3.0	21.80	31.80	7.18	8.39	87.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 8/19/76

TIME: 1055

STATION: M9 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	23.00	33.10	7.30	7.93	70.00
1	23.20	33.20	7.20	7.94	70.50
2	23.30	33.20	7.10	7.95	-1.00

DATE: 9/16/76

TIME: 1218

STATION: M9 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	21.30	32.30	4.90	7.82	84.50
1	21.20	32.30	4.70	7.81	85.00
2	21.20	32.30	4.20	7.81	84.00

DATE: 10/14/76

TIME: 1325

STATION: M9 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.30	32.50	4.90	7.78	60.00
1	20.30	32.50	4.80	7.77	69.00
2	20.10	32.30	3.60	7.75	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 11/19/76

TIME: 1249

STATION: M9 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.30	30.40	5.00	7.88	-1.00
1	20.10	30.40	5.30	7.89	-1.00
2	19.90	30.40	4.80	7.89	-1.00
3	19.70	30.60	4.30	7.78	-1.00

DATE: 12/16/76

TIME: 1115

STATION: M9 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	15.40	34.30	4.60	7.83	62.00
1	15.40	34.00	3.90	7.83	62.00
2	15.30	34.00	4.10	7.83	60.00
3	15.20	34.00	4.30	7.83	-1.00

DATE: 1/20/77

TIME: 1133

STATION: M9 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	15.10	33.9	0.20	7.64	-1.00
1	15.00	33.9	1.10	7.66	-1.00
2	15.00	33.9	1.20	7.66	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 2/17/77

TIME: 1133

STATION: M9 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	18.80	32.90	-1.00	8.12	38.00
1	18.50	33.20	-1.00	8.09	47.00

DATE: 3/17/77

TIME: 1150

STATION: M9 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	16.00	30.40	7.80	8.26	62.50
1.0	16.00	30.40	7.40	8.22	62.00

DATE: 4/21/77

TIME: 1110

STATION: M9 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	19.60	31.90	8.57	8.25	16.00
1.0	19.50	31.90	8.94	8.20	10.00
2.0	19.50	31.60	9.01	8.17	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 5/19/77

TIME: 1106

STATION: M9 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	19.30	31.60	9.50	8.35	12.00
1	19.10	31.50	8.90	8.34	10.00

DATE: 6/23/77

TIME: 1123

STATION: M9 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.40	32.90	4.80	8.07	34.00
1	20.30	32.80	4.30	8.07	52.00

DATE: 7/21/77

TIME: 1050

STATION: M9 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	21.90	31.80	7.11	8.34	55.00
1.0	22.00	31.80	6.75	8.34	60.00
2.0	22.00	31.80	6.38	8.33	60.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 8/19/76

TIME: 1030

STATION: M10 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	22.80	33.50	6.40	7.94	74.50
1	22.90	33.40	6.20	7.94	75.00
2	22.90	33.40	6.20	7.94	75.00
3	22.90	33.30	6.10	7.93	74.00

DATE: 9/16/76

TIME: 1200

STATION: M10 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	21.30	32.40	3.40	7.84	86.00
1	21.10	32.40	3.40	7.82	82.00
2	21.10	32.60	3.00	7.80	78.00

DATE: 10/14/76

TIME: 1300

STATION: M10 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	20.20	32.50	4.30	7.76	75.00
1	20.10	32.30	4.00	7.74	74.00
2	20.10	32.20	3.90	7.73	74.50
3	20.00	32.20	3.60	7.73	73.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 11/19/76

TIME: 1057

STATION: M10 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	19.20	30.60	4.80	7.89	-1.00
1	19.20	30.70	4.60	7.88	-1.00
2	19.30	30.70	4.90	7.88	-1.00
3	19.40	30.80	3.30	7.89	-1.00

DATE: 12/16/76

TIME: 1035

STATION: M10 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	15.00	34.10	5.30	7.91	77.00
1	15.00	33.90	5.30	7.90	83.50
2	14.90	33.90	5.40	7.90	84.00
3	14.90	33.90	5.30	7.91	84.50

DATE: 1/20/77

TIME: 1105

STATION: M10 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	15.20	33.9	0.30	7.66	-1.00
1	15.20	33.9	0.50	7.69	-1.00
2	14.90	33.9	0.80	7.73	-1.00
3	14.90	33.9	0.90	7.78	-1.00

B50

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 2/17/77

TIME: 1100

STATION: M10 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	18.00	32.70	-1.00	8.14	72.00
1	18.00	33.00	-1.00	8.18	73.00
2	17.90	33.00	-1.00	8.20	73.00
3	17.80	33.20	-1.00	8.17	71.50
4	-1.00	-1.00	-1.00	-1.00	67.00

DATE: 3/17/77

TIME: 1115

STATION: M10 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0.0	14.90	29.20	8.00	8.33	58.00
1.0	15.20	29.70	7.50	8.31	54.50
2.0	15.20	30.80	7.00	8.29	55.00

DATE: 4/21/77

TIME: 1053

STATION: M10 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0.0	19.30	32.00	9.40	8.25	37.50
1.0	19.50	32.10	9.40	8.23	38.50
2.0	19.50	31.90	9.60	8.21	36.00
3.0	19.10	31.50	9.70	8.21	31.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 5/19/77

TIME: 1040

STATION: M10 MARINA DEL REY

DEPTH METERS	TEMPFRATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	18.90	31.40	9.80	8.44	23.00
1	18.90	31.30	9.60	8.44	21.00
2	18.70	31.20	9.60	8.44	7.00
3	18.20	31.10	9.20	8.42	15.00

DATE: 6/23/77

TIME: 1100

STATION: M10 MARINA DEL REY

DEPTH METERS	TEMPFRATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	20.10	33.40	7.00	8.15	55.50
1	20.30	33.30	8.10	8.14	62.50
2	20.40	33.30	8.60	8.14	61.50
3	20.10	33.10	9.00	8.08	69.50

DATE: 7/21/77

TIME: 1020

STATION: M10 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0.0	22.30	31.70	7.05	8.36	80.00
1.0	22.30	31.67	6.89	8.36	63.00
2.0	22.10	31.60	6.51	8.32	83.00
3.0	22.00	31.60	6.05	8.26	83.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 8/19/76

TIME: 1045

STATION: M11 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	22.80	33.50	7.10	7.97	71.50
1	23.00	33.40	7.00	7.96	69.00
2	23.00	33.40	6.90	7.97	69.00
3	22.80	33.30	7.20	7.97	59.00

DATE: 9/16/76

TIME: 1209

STATION: M11 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	21.30	32.40	3.80	7.84	84.50
1	21.30	32.30	3.60	7.82	85.00
2	21.00	32.30	4.00	7.86	83.50
3	20.70	32.60	3.40	7.87	75.00
4	20.40	32.60	3.70	7.88	60.00

DATE: 10/14/76

TIME: 1315

STATION: M11 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	20.20	32.60	4.50	7.73	75.00
1	20.20	32.60	4.40	7.73	75.50
2	20.10	32.50	4.70	7.75	75.00
3	19.90	32.30	4.80	7.76	54.00
4	19.80	32.20	4.30	7.75	52.50

MISSING DATA VALUE IS -1.0

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 11/19/76

TIME: 1205

STATION: M11 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	19.40	30.90	5.60	7.92	-1.00
1	19.50	31.00	5.90	7.92	-1.00
2	19.40	30.90	4.40	7.92	-1.00
3	19.40	31.00	4.20	7.92	-1.00

DATE: 12/16/76

TIME: 1100

STATION: M11 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	15.60	34.60	5.70	7.92	80.00
1	15.50	34.10	5.30	7.92	83.50
2	15.30	34.00	5.10	7.92	84.00
3	15.30	33.90	5.10	7.93	85.00

DATE: 2/17/77

TIME: 1116

STATION: M11 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	18.10	33.30	-1.00	8.05	42.50
1	18.20	33.30	-1.00	8.06	53.00
2	18.20	33.20	-1.00	8.07	53.00
3	17.90	33.30	-1.00	8.10	51.00

MISSING DATA VALUE IS -1.0

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 3/17/77

TIME: 1315

STATION: M11 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	15.80	29.90	7.60	8.25	55.00
1.0	15.80	30.10	7.10	8.24	56.50
2.0	15.80	30.10	6.80	8.25	65.00
3.0	15.20	30.00	6.70	7.75	47.50

DATE: 4/21/77

TIME: 1101

STATION: M11 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	20.20	32.10	9.15	8.28	32.50
1.0	19.70	31.70	9.21	8.27	31.50
2.0	19.80	31.80	9.43	8.22	24.00
3.0	19.20	31.30	9.80	8.18	15.00
4.0	18.90	31.50	10.40	8.15	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 5/19/77

TIME: 1055

STATION: M11 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	18.90	31.40	9.10	8.42	22.00
1	18.90	31.60	9.10	8.40	21.50
2	18.50	31.20	8.80	8.36	7.00
3	17.90	31.30	8.00	8.31	10.00

DATE: 6/23/77

TIME: 1112

STATION: M11 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.50	33.20	7.60	8.21	52.00
1	20.70	33.30	5.90	8.21	63.00
2	20.70	33.20	6.30	8.19	65.00
3	20.60	33.20	6.20	8.18	65.00

DATE: 7/21/77

TIME: 1035

STATION: M11 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	22.40	31.95	7.86	8.41	57.00
1.0	22.30	31.92	7.80	8.42	66.00
2.0	22.30	31.91	7.66	8.41	62.00
3.0	21.90	31.72	7.22	8.37	53.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 8/19/76

TIME: 1140

STATION: M12 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	22.50	26.90	8.20	8.12	45.00
1	21.00	30.70	6.80	8.01	78.00
2	20.80	32.10	7.80	8.02	74.00

DATE: 9/16/76

TIME: 1303

STATION: M12 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	21.30	30.60	4.10	7.80	79.00
1	20.80	31.80	5.40	7.92	75.50
2	20.60	32.20	3.70	7.81	72.00
3	20.40	32.70	3.60	7.82	21.00

DATE: 10/14/76

TIME:

STATION: M12 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.10	31.40	6.30	7.93	-1.00
1	20.00	31.50	5.80	7.91	-1.00
2	19.90	31.70	4.00	7.78	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 11/19/76

TIME: 1330

STATION: M12 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	21.20	29.50	2.10	7.73	-1.00
1	20.60	29.80	1.90	7.72	-1.00

DATE: 12/16/76

TIME: 1205

STATION: M12 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	18.00	32.10	2.20	7.79	-1.00
1	17.70	33.20	2.90	7.85	-1.00
2	17.50	33.80	3.30	7.86	-1.00

DATE: 2/17/77

TIME: 1227

STATION: M12 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	18.50	29.70	-1.00	8.20	68.00
1	18.10	32.50	-1.00	8.15	81.00
2	18.00	32.70	-1.00	8.15	82.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 3/17/77

TIME: 1245

STATION: M12 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	14.90	20.60	5.30	8.12	61.00
1.0	14.00	28.60	5.20	8.12	65.00

DATE: 4/21/77

TIME: 1212

STATION: M12 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	18.40	32.00	7.80	8.24	65.50
1.0	18.40	31.90	8.40	8.24	69.00
2.0	18.30	31.70	9.00	8.19	72.00

DATE: 5/19/77

TIME: 1200

STATION: M12 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	17.10	31.00	9.20	8.34	80.00
1	16.80	31.20	8.80	8.32	92.00
2	16.80	31.30	8.60	8.34	94.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 6/23/77

TIME: 1130

STATION: M12 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0	18.80	32.70	8.40	8.26	80.00
1	18.40	32.90	8.90	8.26	78.50
2	18.30	33.00	8.90	8.23	77.00
3	18.20	33.00	8.30	8.22	76.50
4	-1.00	-1.00	-1.00	-1.00	78.00

DATE: 7/21/77

TIME: 1122

STATION: M12 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.02 PPM	PH H ION CONC	TURBIDITY %
0.0	20.25	31.20	8.76	8.48	79.00
1.0	20.11	31.30	8.78	8.48	75.00
2.0	20.15	31.40	8.82	8.49	76.00
3.0	20.15	31.50	8.74	8.49	75.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 8/19/76

TIME: 1200

STATION: M13 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	23.00	33.40	7.30	8.00	82.00
1	23.40	33.40	7.00	7.99	81.00
2	23.30	33.30	7.30	8.01	78.00

DATE: 9/16/76

TIME: 1325

STATION: M13 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	21.90	29.80	0.40	7.60	64.00
1	21.70	31.20	0.20	7.54	69.50
2	21.40	31.90	1.30	7.62	69.50

DATE: 10/14/76

TIME:

STATION: M13 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.20	31.60	4.80	7.82	-1.00
1	20.20	31.70	4.00	7.75	-1.00
2	20.20	31.80	4.30	7.76	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 11/19/76

TIME: 1350

STATION: M13 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ICN CONC	TURBIDITY %
0	20.30	30.50	4.60	7.77	-1.00
1	20.30	30.40	4.50	7.78	-1.00

DATE: 12/16/76

TIME:

STATION: M13 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ICN CONC	TURBIDITY %
0	14.50	34.30	7.00	7.98	-1.00
1	14.50	34.70	6.90	7.96	-1.00
2	14.80	36.00	6.80	7.95	-1.00

DATE: 1/20/77

TIME: 1240

STATION: M13 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ICN CONC	TURBIDITY %
0	15.50	33.7	0.0	7.57	-1.00
1	15.50	33.9	1.30	7.64	-1.00
2	15.50	33.9	1.40	7.70	-1.00

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 2/17/77

TIME: 1300

STATION: M13 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	18.70	33.00	-1.00	8.14	70.00
1	18.50	33.20	-1.00	8.03	74.60

DATE: 3/17/77

TIME: 1300

STATION: M13 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	15.80	29.20	8.50	8.38	25.00
1.0	15.90	29.70	8.20	8.33	30.00

DATE: 4/21/77

TIME: 1150

STATION: M13 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	20.00	31.80	8.40	8.07	44.50
1.0	19.90	31.80	8.40	8.06	43.50

HARBORS ENVIRONMENTAL PROJECTS

MARTEK

DATE: 5/19/77

TIME: 1215

STATION: M13 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	18.90	31.20	10.40	8.41	32.00
1	18.90	31.30	9.80	8.45	18.50

DATE: 6/23/77

TIME: 1145

STATION: M13 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0	20.90	33.00	7.20	8.18	80.00
1	21.20	33.20	7.70	8.17	76.00

DATE: 7/21/77

TIME: 1140

STATION: M13 MARINA DEL REY

DEPTH METERS	TEMPERATURE CEN	SALINITY 0/00	D.O2 PPM	PH H ION CONC	TURBIDITY %
0.0	22.40	31.70	6.60	8.32	91.00
1.0	22.60	32.10	6.30	8.32	87.00

APPENDIX C

ZOOPLANKTON SPECIES by Month

Population Code Intervals

0 = many, present, few, etc.
(non-numerical quantity)

1 = 1 - 99

2 = 100 - 999

3 = 1000 - 9999

4 = 10,000 - above

-/= species occurrence not detected

5 = presence of colonial animal
that cannot be counted as individuals

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 7/29/76	STATION: M2	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 116 REVOLUTIONS:	441					
ANIMAL						
ANNELIDA						
POLYCHAETA	*					
*	*					
*	*	*			1	1
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-GAMMARIDEA	*					
*	*	*			1	26
CLADOCERA	*					
*						
EVADNE		NORDMANNI			1	12
*						OTHER
PENILIA		AVIROSTRIS			1	34
*						OTHER
POON		POLYPHEMOIDES			1	7
*						OTHER
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		CLAUSI			1	6
*						MALE
ACARTIA		CLAUSI			1	3
*						FEMALE
ACARTIA		CLAUSI			1	1
*						IMMATURE
ACARTIA		TONSA			1	50
*						IMMATURE
ACARTIA		TONSA			1	11
*						MALE
ACARTIA		TONSA			1	53
*						FEMALE
PARACALANIDAE						
PARACALANUS	*	PARVUS			1	6
*						MALE
PARACALANUS	*	PARVUS			1	46
*						FEMALE
PARACALANUS	*	PARVUS			1	16
*						IMMATURE
PSEUDOCALANIDAE						
CLAUSOCALANUS	*	*			1	5
*						IMMATURE
CLAUSOCALANUS	*	*			1	2
*						FEMALE
TORTANIDAE						
TORTANUS	*	DISCAUDATUS			1	2
*						IMMATURE
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS	*	ANGLICUS			1	15
*						FEMALE
CORYCAEUS	*	ANGLICUS			1	2
*						MALE
GITHONIDAE						
CITHONA	*	SIMILIS			1	1
*						OTHER
COPEPODA-MARPACTICOIDA	*					
*	*	*			1	5
*	*	*				OTHER
DECAPODA						
BRACHYURA	*	*			1	3
*	*	*				ZOEA
THORACICA	*					
*						
(BARNACLE)	*	*			1	1
*		*				NAUPLIUS
(BARNACLE)	*	*			1	2
ASCHELMINTHES						
NEMATODA	*					
*						
*	*	*			1	61
*	*	*				OTHER

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 7/29/76	STATION: M1	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 116 REVOLUTIONS:	441					
<hr/>						
--BRYOZOA(ECTOPROCTA)						
*	*	*				
*	*	*				
*	*	*				
CHAETODONATHA	*	*				
*	*	*				
*	*	*				
CHORDATA	(ARROW-WORM)	*				
OSTEICHTHYS	*					
*	*	*				
*	*	*				
*	*	*				
CHORDATA-UROCHORDATA						
ASCIDIACEA	*					
*	*	*				
LARVACEA	*	*				
*	*	*				
APPENDICULARIA	*	*				
CNTDARTA (COELENTERATA)	*					
HYDROZCA	*					
*	*	*				
ANIMAL						
MOLLUSCA						
PELECYPCDA	*					
*	*	*				
*	*	*				
1	9					
<hr/>						
LARVA						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 7/29/76	STATION: M2	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 18 REVOLUTIONS:	201					
ANIMAL						
ANELICIA						
POLYCHAETA						
*						
*	*		1	1		OTHER
ARTHROPODA						
CRUSTACEA						
*						
*	*		1	2		NAUPLIUS
(COPEPOD)						
AMPHIPODA-GAMMARIDEA						
*						
*	*		1	2		OTHER
CLADOCERA						
*						
EVADNE	NORDMANNI		1	11		OTHER
*	AVIROSTRIS		1	16		OTHER
PELVIA						
*	POLYPHEMOIDES		1	9		OTHER
COPEPODA-CALANIDA						
ACARTIIDAE						
ACARTIA	CLAUST		1	3	FEMALE	
*	CLAUST		1	2	MALE	
ACARTIA	TONSA		1	26	MALE	
*	TONSA		1	30	FEMALE	
ACARTIA	TONSA		1	27		IMMATURE
*						
CALANIDAE						
CALANUS	HELGOLANDICUS		1	3		IMMATURE
*						
PARACALANIDAE						
PARACALANUS	PARVUS		1	6	MALE	
*	PARVUS		1	11		IMMATURE
PARACALANUS	PARVUS		1	31	FEMALE	
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA		1	2		IMMATURE
*						
PSEUDOCALANIDAE						
CLAUSOCALANUS	*		1	1	MALE	
*	*		1	1	FEMALE	
CLAUSOCALANUS	*		1	3		IMMATURE

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	REVOLUTIONS:	WATER TEMP:	POP CODE	POP COUNT	SEX	MATURITY
7/29/76	N2	201					
ALIQUOT:							
TORTANIDAE							
TORTANUS							
COPEPODA-CYCLOPOIDA							
CORYCAEIDAE							
CORYCAEUS							
TACHIDIIDAE							
EUTERPINA							
DECAPODA							
BRACHYURA							
CARIDEA							
(SHRIMP)							
ASCHELMINTHES							
NEMATODA							
BRYOZOA(ECTOPROCTA)							
CHAETOGNATHA							
CHORDATA							
GSTEICHTHYS							

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	MATERIAL:	POP CODE	POP COUNT	SEX	MATURITY
7/29/76	M2	MARINA DEL REY				
ALIQUOT:	18 REVOLUTIONS:	201				
<hr/>						
ANIMAL						
CHORDATA						
OSTEICHTHYS						
*						
*						
*						
*						
CHORDATA-UROCHORDATA						
ASCIDIACEA						
*						
*						
*						
LARVACEA						
*						
*						
APPENDICULARIA						
*						
CNIDARIA (COELENTERATA)						
HYDROZOA						
*						
*						
*						
MOLLUSCA						
GASTROPODA						
*						
*						
*						
			1	1		LARVA
			1	3		LARVA
			1	67		OTHER
			1	20		MEDUSAE
			1	1		LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 7/29/76	STATION: M3	YARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUIT: 18 REVOLUTIONS:	182					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
CLADOCERA	*					
EUDNE	NORDMANNI	1	4		OTHER	
*						
PODON	POLYPHEMOIDES	1	1		OTHER	
*						
COPEPODA-CALANOIDA						
ACARTIICAE						
ACARTIA	CLAUSI	1	1		FEMALE	
*						
ACARTIA	TONSA	1	21		MALE	
*						
ACARTIA	TONSA	2	151		FEMALE	
*						
ACARTIA	TONSA	1	19		IMMATURE	
*						
PARACALANOIDA						
PARACALANUS	PARVUS	1	1		FEMALE	
*						
PARACALANUS	PARVUS	1	2		IMMATURE	
*						
COPEPODA-CYCLOPOIDA						
CORYCAETIDAE						
CORYCAEUS	ANGLICUS	1	1		FEMALE	
*						
DECAPODA						
CARIDEA						
*	*	1	3		ZOEA	
(SHRIMP)						
ASCHELMINTHES						
NEMATODA						
*						
*						
*	*	1	7		OTHER	
BRYOZOA(ECTOPROCTA)						
*						
*						
*	*	1	2		CYPHOHAUTES	
CHAETOGNATHA						
*						
*						
*	*	1	2		OTHER	
(ARROW-WORM)						
CHORDATA						
OSTEICHTHYS						
*						
*						
*	*	1	2		EGG	
CHORDATA-UROCHORDATA						
ASCIDIACEA						
*						
*						
*	*	1	4		LARVA	
CNIDARIA (COELENTERATA)						
HYDREZCA						
*						
*						
*	*	1	6		NEDUSAE	

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 7/29/76	STATION: M4	WATER TEMP: 23.7	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 14 REVOLUTIONS:						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-CAPRELLIDAE						
*	*	*	1	1	OTHER	
*	*	*				
CLADOCERA						
*						
EVAONE	NORDMANNI		1	1	OTHER	
*						
PENILIA	AVIROSTRIS		1	1	OTHER	
*						
PODON	POLYPHENOIDES		1	5	OTHER	
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		1	12	MALE	
*						
ACARTIA	TONSA		1	25	FEMALE	
*						
ACARTIA	TCNSA		1	4	IMMATURE	
*						
PARACALANOIDAE						
PARACALANUS	PARVUS		1	1	MALE	
*						
CHORDATA						
OSTEICHTHYS						
*						
*	*	*	1	1	EGG	
*						
CHORDATA-UROCHORDATA						
LARVACEA						
*						
*	APPENDICULARIA	*	1	1	OTHER	
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 7/29/76	STATION: MS	WATER TEMP: 22.1	POP CODE	POP COUNT	SEX	MATURITY
ANIMAL						
ANNELIDA						
POLYCHAETA	*	*	1	1		OTHER
*	*	*				
ARTHROPODA	*					
CRUSTACEA	*					
*	*					
*	*	*	1	21		NAUPLIUS
(COPEPOD)						
AMPHIPODA-GAMMARIDEA	*	*	1	1		OTHER
*	*	*				
CLADOCERA	*					
*	*					
PENILIA		AVIROSTRIS	1	3		OTHER
*						
PODON		POLYPHENOIDES	1	6		OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		CLAUSI	1	3		IMMATURE
*						
ACARTIA		TONSA	2	120		IMMATURE
*						
ACARTIA		TONSA	2	100	FEMALE	
*						
ACARTIA		TONSA	2	104	MALE	
*						
PARACALANIDAE						
PARACALANUS		PARVUS	1	1	MALE	
*						
PONTELLIDAE						
LABIDOCERA		TRISPINOSA	1	4		IMMATURE
*						
COPEPODA-CYCLOPODIA						
CORYCAEIDAE						
CORYCAEUS	*	*	1	1	MALE	
*						
CHAETOGNATHA	*					
*	*					
*	*					
*	*	*	1	1		OTHER
(ANNEL-WORM)						
CHORDATA						
OSTEICHTHYS	*					
*	*					
*	*	*	1	2		LARVA
*	*	*	1	1		EGG
*						
CHORDATA-UROCHORDATA						
ASCIDIACEA	*					
*	*					
*	*	*	2	114		LARVA
LARVACEA	*					
*	*					
APPENDICULARIA	*	*	1	34		OTHER
MOLLUSCA	*					
GASTROPODA	*					
*	*					
*	*	*	1	3		LARVA
PELECYPODA	*					
*	*					
*	*	*	1	1		LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATIONS:	M6	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
DATE:	ALIQUOT:	132 REVOLUTIONS:	400				
ANIMAL							
ARTHROPODA							
CRUSTACEA							
CLADOCERA							
*	PCDON		POLYPHENOIDES	1	1		OTHER
*							
COPEPODA-CALANOIDA							
ACARTIIDAE							
ACARTIA	*		TONSA	1	77	MALE	
ACARTIA	*		TONSA	2	310	FEMALE	
ACARTIA	*		TONSA	1	71		IMMATURE
ASCHELMINTHES							
NEMATODA							
*	*	*	*	1	1		OTHER
*	*	*	*				
CHORDATA-UROCHORDATA							
ASCIDIACEA							
*	*	*	*	1	5		LARVA
*	*	*	*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	METHOD:	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
DATE: 7/29/76	STATION: M7	ALIQUOT: 11 REVOLUTIONS:	218				
<hr/>							
ANIMAL							
ANNELIDA							
POLYCHAETA	*	*	*	1	1		OTHER
ARTHROPODA	*	*	*	1	3		NAUPLIUS
CRUSTACEA	*	*	*	1	6		OTHER
(COPEPOD)	*	*	*	1	94	MALE	
AMPHIPODA-CAPRELLIDEA	*	*	*	1	55	FEMALE	
COPEPODA-CALANOIDA	*	*	*	1	41		IMMATURE
ACARTIIDAE							
ACARTIA	*	TONSA					
ACARTIA	*	TONSA					
ACARTIA	*	TONSA					
COPEPODA-HARPACTICOIDA	*	*	*	1	1		OTHER
DECAPDCA	*	*	*	1	13		ZOEA
BRACHYURA	*	*	*				
THORACICA	*						
(BARNACLE)	*	*		1	5		NAUPLIUS
(BARNACLE)	*	*		1	1		CYPRIS
BRYOZOA(ECTOPROCTA)	*	*	*	1	2		CYPHONAUTES
CHORDATA							
OSTEICHTHYS	*	*	*	1	1		EGG
CHORDATA-UROCHORDATA	*	*	*	2	142		LARVA
ASCIDIACEA	*	*	*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 7/29/76	STATION: MB	VARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 132 REVOLUTIONS:	379					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
*	*	*				
*	*	*	1	2		OTHER
CLADOCERA						
*	*	*				
PODON		POLYPHENOIDES	1	2		OTHER
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		1	92		IMMATURE
*	*					
ACARTIA	TONSA		2	142	MALE	
*	*					
ACARTIA	TONSA		2	230	FEMALE	
*	*					
THORACICA						
*	*	*		1	6	
(BARNACLE)						
CHORDATA-UROCHORDATA						
ASCIDIACEA						
*	*	*		2	7	
*	*	*				
*	*	*				
						LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 7/29/76	STATION: M9	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 164 REVOLUTIONS:	357					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-GAMMARIDEA	*					
	*	*		1	5	OTHER
	*					
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		TONSA		1	91	IMMATURE
	*					
ACARTIA		TONSA		2	173	FEMALE
	*					
ACARTIA		TONSA		2	192	MALE
	*					
PONTELLIDAE						
LAESIOPODIA		TRISPINOSA		1	1	IMMATURE
	*					
COPEPODA-HARPACTICOIDA	*					
	*	*		1	1	OTHER
	*					
DECAPODA						
BRACHYURA						
	*	*		1	3	ZOEA
	*					
CARIDEA	*	*		1	1	ZOEA
	*					
(SHRIMP)						
CHORDATA						
OSTEICHTHYS						
	*					
	*	*		1	3	LARVA
	*					
	*	*		1	1	EGG
CHORDATA-UROCHORDATA						
ASCIIDIACEA	*					
	*					
	*	*		1	16	LARVA
	*					
MOLLUSCA						
GASTROPODA	*					
	*					
	*	*		1	1	LARVA
	*					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 7/29/76 STATION: M10 MARINA DEL REY
ALIQUOT: 132 REVOLUTIONS: 332

POP CODE	POP COUNT	SEX	MATURITY
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ANIMAL					
ANNELIDA					
POLYCHAETA	*				
*	*				
*	*				
ARTHROPODA					
CRUSTACEA					
COPEPODA-CALANOIDA					
ACARTIIDAE					
ACARTIA	TONSA				
*					
ACARTIA	TONSA				
*					
ACARTIA	TONSA				
*					
THORACICA					
*					
*	*				
(BARNACLE)					
CHORDATA-UROCHORDATA					
ASCIDIACEA					
*					
*					
*	*				
			1	1	OTHER
			2	224	MALE
			2	212	FEMALE
			1	66	INMATURE
			1	2	NAUPLIUS
			1	27	LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 7/29/76 STATION: M11 MARINA DEL REY
 ALIQUOT: 18 REVOLUTIONS: 187

POP CODE POP COUNT SEX MATURITY

ANIMAL				
ARTHROPODA				
CRUSTACEA				
CLADOCERA				
*				
EUDINE	NORDMANNI	1	1	OTHER
*				
PODON	POLYPHEMOIDES	1	4	OTHER
*				
COPEPODA-CALANOIDA				
ACARTIINAE				
ACARTIA	TONSA	2	262	FEMALE
*				
ACARTIA	TONSA	2	172	MALE
*				
ACARTIA	TONSA	1	56	IMMATURE
*				
PARACALANOIDAE				
CALOCALANUS	STYLIREMIS	1	1	IMMATURE
*				
PONTELLIOIDAE				
LABIDOCERA	TRISPINOSA	1	3	IMMATURE
*				
COPEPODA-NARVACTICOIDA				
TACHIOIDAE				
EUTERPINA	ACUTIFRONS	1	2	OTHER
*				
DECAPODA				
BRACHYURA				
*	*	1	4	ZOEA
*				
CARIDEA	*	1	1	ZOEA
*				
(SHRIMP)				
CHORDATA-UROCHORDATA				
ASCIDIACEA				
*				
*	*	1	46	LARVA
*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 8/19/76	STATION: M1	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 18 REVOLUTIONS:	512					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
*						
*	*	*				
(COPEPOD)						
CLADOCERA						
*						
EVAONE	NORDMANNE		1	19		NAUPLIUS
*						
PENILIA	AVIROSTRIS		2	271		OTHER
*						
PCDON	POLYPHEMOIDES		1	18		OTHER
*						
COPEPODA-CALANOIDA						
ACARTIICAE						
ACARTIA	CLAUST		1	1	FEMALE	
*						
ACARTIA	TONSA		1	29		IMMATURE
*						
ACARTIA	TONSA		1	24	FEMALE	
*						
ACARTIA	TONSA		1	18	MALE	
*						
PARACALANOIDAE						
PARACALANUS	PARYUS		1	2		IMMATURE
*						
PARACALANUS	PARYUS		1	7	FEMALE	
*						
PARACALANUS	PARYUS		1	5	MALE	
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA		1	4		IMMATURE
*						
PSEUDOCALANOIDAE						
CTENOCALANUS	VANUS		1	1	MALE	
*						
CTENOCALANUS	VANUS		1	1	FEMALE	
*						
CTENOCALANUS	VANUS		1	5		IMMATURE
*						
COPEPODA-CYCLOPOIDA						
CORYCAEAE						
CORYCAEUS	ANGLICUS		1	4		IMMATURE
*						
CORYCAEUS	ANGLICUS		1	3	MALE	
*						
CORYCAEUS	ANGLICUS		1	4	FEMALE	
*						
OITHONIDAE						
OITHONA	SPINIROSTRIS		1	3	FEMALE	
*						
DECAPODA						
BRACHYURA	*			1	3	ZOEA
*						

DATE: 8/19/76		STATIONS: M1	MARINA DEL REY	PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS			
ALIQUOT:	18 REVOLUTIONS:	512		POP CODE	POP COUNT	SEX	MATURITY
*	CARIDEA	*	*				
*	(SHRIMP)	*		1	3		ZOEA
BRYOZOA (ECTOPHYCTA)	*	*					
*		*					
*		*					
CHAETOGNATHA	*	*		1	50		CYPHOHAUTES
*		*					
*		*					
SAGITTA	*	*		1	1		OTHER
CHORDATA	*						
OSTEICHTHYS	*						
*		*					
	*	*		1	2		LARVA
	*	*		1	3		EGG
CHORDATA-UROCHORDATA							
ASCIIDIACEA	*						
*							
LARVACEA	*	*		1	3		LARVA
*							
APPENDICULARIA	*	*		1	32		OTHER
CNIDARIA (COELENTERATA)	*						
HYDROZOA	*						
*		*		1	26		MEDUSAE

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 8/19/76	STATION: M2	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUETS: 14 REVOLUTIONS:	310					
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA						
*	*	*				
*	*	*				
*	*	*				
ARTHROPODA						
CRUSTACEA						
*	*	*				
*	*	*				
*	*	*				
CLADOCERA						
*	*	*				
EVADNE	NORDHANNI		1	6	OTHER	
*	*					
PENILIA	AVIROSTRIS		2	349	OTHER	
*	*					
PCOON	POLYPHEMOIDES		1	1	OTHER	
*	*					
COPEPODA-CALANIDA						
ACARTIICAE						
ACARTIA	CLAUSI		1	1	FEMALE	
*	*					
ACARTIA	CLAUSI		1	1	MALE	
*	*					
ACARTIA	TONSA		1	43	MALE	
*	*					
ACARTIA	TONSA		1	73	FEMALE	
*	*					
ACARTIA	TONSA		1	37	IMMATURE	
*	*					
PARACALANIDAE						
PARACALANUS	PARYUS		1	23	FEMALE	
*	*					
PARACALANUS	PARYUS		1	6	MALE	
*	*					
PARACALANUS	PARYUS		1	6	IMMATURE	
*	*					
PONTELLIDAE						
LABIDOCERA	TRISPINOSA		1	4	IMMATURE	
*	*					
LABIDOCERA	TRISPINOSA		1	3	FEMALE	
*	*					
PSEUDOCALANIDAE						
CLAUSOCALANUS	*		1	4	IMMATURE	
*	*					
CLAUSOCALANUS	*		1	2	FEMALE	
*	*					
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS	ANGLICUS		1	2	MALE	
*	*					
CORYCAEUS	ANGLICUS		1	6	FEMALE	
*	*					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 6/19/76	STATION: M2	PARIMA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	ALIQUOT: 14 REVOLUTIONS:	310				
DITTONIDAE						
CITHONA	*	SIMILIS	1	3	FEMALE	
CITHONA	*	SPINIROSTRIS	1	3	FEMALE	
ONCAEIDAE						
CNCAEA	*	*	1	2		OTHER
COPEPODA-HARPACTICOIDA	*					
*	*	*	1	1		OTHER
DECAPODA						
BRACHYURA	*	*	1	6		ZOEA
THORACICA	*	*	1	5		CYPRIS
(BARNACLE)	*	*	1	66		CYPHOHAUTES
BRYOZOA(ECTOPROCTA)	*	*				
CHAETOGNATHA	*	*	1	1		OTHER
(ARROW-WORM)	*	*	1	1		OTHER
CHORDATA						
OSTEICHTHYS	*	*	1	1		LARVA
*	*	*	1	6		EGG
CHORDATA-UROCHORDATA						
LARVACEA	*	*	1	28		OTHER
APPENDICULARIA	*	*	1	1		
CNIDARIA (COELENTERATA)						
HYDRCOZA	*	*	1	20		MEDUSAE
MOLLUSCA						
GASTROPODA	*	*	1	1		LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	8/1 /76	STATION:	N3	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT:	12 REVOLUTIONS:		268					
<hr/>								
ANIMAL								
ANNELIDA								
POLYCHAETA	*	*	*		1	3		OTHER
ARTHROPODA	*	*	*					
CRUSTACEA	*	*	*					
(COPEPOD)	*	*	*		1	1		NAUPLIUS
CLADOCERA	*							
EYADNE		NGROMANNI			1	5		OTHER
PEMELIA	*	AVIROSTRIS			1	9		OTHER
POODON	*	POLYPHENOIDES			1	1		OTHER
COPEPODA-CALANOIDA								
ACARTIIDAE								
ACARTIA	*	CLAUSI			1	4		IMMATURE
ACARTIA	*	CLAUSI			1	4		FEMALE
ACARTIA	*	CLAUSI			1	4		MALE
ACARTIA	*	TCHSA			1	87		FEMALE
ACARTIA	*	TCHSA			1	89		MALE
ACARTIA	*	TCHSA			1	83		IMMATURE
PARACALANIDAE								
PARACALANUS		PARVUS			1	44		FEMALE
PARACALANUS	*	PARVUS			1	6		IMMATURE
PARACALANUS	*	PARVUS			1	15		MALE
PONTELLIDAE								
LABIDOCERA	*	TRISPINOSA			1	24		IMMATURE
LABIDOCERA	*	TRISPINOSA			1	1		FEMALE
COPEPODA-CYCLOPOIDA								
CORYCAEIDAE								
CORYCAEUS	*	ANGLICUS			1	1		MALE
DITHONIDAE								
DITHONA	*	OCULATA			1	2		FEMALE
DITHONA	*	SIMILIS			1	1		MALE

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 8/19/76	STATION: M3	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 12 REVOLUTIONS:		268				
DITHOMA	SIMILIS	*	1	1	FEMALE	
COPEPODA-HARPACTICOIDA	*	*	1	1	OTHER	
DECAPODA	*	*	1	4	OTHER	
BRACHYURA	*	*	1	2	ZOEA	
CARIDEA	*	*	1	1	ZOEA	
(SHRIMP)	*	*	1	1	ZOEA	
THORACICA	*	*	1	3	CYPRIS	
(BARNACLE)	*	*	1	6	NAUPLIUS	
(BARNACLE)	*	*	1	24	CYPHO NAUTES	
BRYOZOA(ECTOPROCTA)	*	*	1	2	OTHER	
CHAETOGNATHA	*	*	1	6	EGG	
SAGITTA	*	*	1	13	LARVA	
CHORDATA	*	*	1	2	MEDUSAE	
OSTEICHTHYS	*	*	1	1	LARVA	
CHORDATA-UROCHORDATA	*	*	1	3	OTHER	
ASCIIDACEA	*	*	1	6	OTHER	
LARVACEA	*	*	1	1	OTHER	
APPENDICULARIA	*	*	1	1	OTHER	
CHIDARIA (COELENTERATA)	*	*	1	1	OTHER	
HYDROZOA	*	*	1	1	OTHER	
MOLLUSCA	*	*	1	1	OTHER	
GASTROPODA	*	*	1	1	OTHER	
PELECYPODA	*	*	1	1	OTHER	

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	HA	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
8/19/76							
<hr/>							
ALIQUOT:	16 REVOLUTIONS:	308					
<hr/>							
ANIMAL							
ARTHROPODA							
CRUSTACEA							
CLADOCERA	*						
PENELIA	*	AVIROSTRIS		1	1		OTHER
COPEPODA-CALANOIDA	*						
ACARTIIDAE							
ACARTIA	*	TONSA		2	259	FEMALE	
ACARTIA	*	TONSA		2	165	MALE	
ACARTIA	*	TONSA		2	104		IMMATURE
PONTELLIDAE							
LABIDOCERA	*	TRISPINOSA		1	13		IMMATURE
COPEPODA-CYCLOPOIDA	*						
CORYCAEIDAE							
CORYCAEUS	*	ANGLICUS		1	1	MALE	
OITHONIDAE	*						
OITHONA	*	SPINIROSTRIS		1	1	FEMALE	
COPEPODA-HARPACTICOIDA	*						
DECAPODA	*	*		1	1		OTHER
BRACHYURA	*	*		1	1		OTHER
CARIDEA	*	*		1	14		ZOEA
(SHRIMP)							
THORACICA	*	*		1	1		ZCEA
(BARNACLE)	*	*		1	1		CYPRIS
(BARNACLE)	*	*		1	12		NAUPLIUS
BRYOZOA(ECTOPAGCTA)	*						
CHORDATA-URCHCHORDATA	*	*		1	4		CYPHONAUTES
ASCIDIACEA	*						
LARVACEA	*	*		1	7		LARVA
APPENDICULARIA	*	*		1	3		OTHER
MOLLUSCA							
GASTROPODA	*	*		1	2		LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 8/19/76	STATION: M5	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	ALIQUOTS: 132 REVOLUTIONS:	378				
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		CLAUSI	1	1		IMMATURE
*						
ACARTIA		TONSA	1	57		IMMATURE
*						
ACARTIA		TONSA	2	232	FEMALE	
*						
ACARTIA		TONSA	2	118	MALE	
*						
PSEUDOCALANIDAE						
CLAUSOCALANUS	*		1	1	FEMALE	
*						
CLAUSOCALANUS	*		1	2		IMMATURE
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS		ANGLICUS	1	1	FEMALE	
*						
COPEPODA-HARPACTICOIDA						
*			1	3		OTHER
*						
DECAPODA						
BRACHYURA						
*			1	2		ZOEA
*						
THORACICA						
*			1	3		NAUPLIUS
*						
(BARNACLE)						
CHORDATA						
OSTEICHTHYS						
*						
*			1	3		EGG
*						
CHORDATA-UROCHORDATA						
ASCIDIACEA						
*			1	14		LARVA
*						
MOLLUSCA						
PELECYPODA						
*			1	2		LARVA
*						
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 8/19/76 STATION: M6 MARINA DEL REY
ALIQUOT: 116 REVOLUTIONS: 268

POP CODE	POP COUNT	SEX	MATURITY
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ANIMAL					
ARTHROPODA					
CRUSTACEA					
COPEPODA-CALANCIIDA					
ACARTIICAE					
ACARTIA	TONSA	2	110		IMMATURE
*					
ACARTIA	TONSA	2	248	MALE	
*					
ACARTIA	TONSA	2	491	FEMALE	
*					
PONTELLIDAE					
LAGIDOCERA	TRISPINOSA	1	1		IMMATURE
*					
COPEPODA-CYCLOPOIDA					
CORYCAEIDAE					
CORYCAEUS	ANGLICUS	1	1	FEMALE	
*					
COPEPODA-HARPACTICOIDA					
*	*	1	1		OTHER
*	*				
ASCHELMINTHES					
NEMATODA					
*					
*	*	1	12		OTHER
*	*				
CHORDATA-UROCHORDATA					
ASCIDIACEA					
*					
*	*	1	8	LARVA	
*	*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 8/19/76	STATION: M7	LOCATION: MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	ALEGUCH: 132 REVOLUTIONS:	370				
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA	*					
*	*	*		1	3	OTHER
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-GAMMARIDEA	*					
*	*	*		1	1	OTHER
COPEPODA-CALANCIIDA						
ACARTIIDAE						
ACARTIA		TONSA		2	214	MALE
*				2	464	FEMALE
ACARTIA		TONSA		1	47	IMMATURE
*						
PONTELLIDAE						
LABIDOCERA		TRISPINOSA		1	3	IMMATURE
*						
TORTANIDAE						
TORTANUS		DISCAUDATUS		1	1	IMMATURE
*						
DECAPODA						
BRACHYURA						
*	*	*		1	9	ZOEA
CARIDEA	*	*		1	3	ZOEA
*						
(SHRIMP)						
THORACICA	*					
*				1	5	NAUPLIUS
(BARNACLE)	*	*				
CHORDATA						
CESTEICHTHYS	*					
*				1	3	EGG
CHORDATA-LIGUCHORDATA						
ASCIDIACEA	*					
*				1	17	LARVA
CNIDARIA (COELENTERATA)						
HYDROZOA	*					
*	*	*		1	2	OTHER

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 8/19/76	STATION: NO	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 132 REVOLUTIONS:	188					
<hr/>						
ANIMAL						
ANELIDA						
POLYCHAETA	*					
*	*					
*	*	*		1	1	OTHER
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		TONSA				
*			1	78	MALE	
ACARTIA		TONSA		2	607	FEMALE
*						
ACARTIA		TONSA		1	63	IMMATURE
*						
PONTILLIDAE						
LABIDOCERA	*	TRISPINOSA				
*			1	2		IMMATURE
DECAPODA						
BRACHYURA	*	*				
*			1	2		ZOEA
CARIDEA	*	*				
*			1	1		ZOEA
(SHIMP)						
THORACICA	*	*				
*			1	1		OTHER
BRYOZOA(ECTOPRECTA)	*	*				
*			1	1		CYPHONAUTES
*						
CHORDATA						
OSTEICHTHYS	*	*				
*			1	3		LARVA
*						
CHORDATA-UROCHORDATA	*	*				
ASCIIDIACEA	*	*				
*			1	10		LARVA
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS					
DATE: 6/19/76	STATION: NO ALIQUOT: 164 REVOLUTIONS:	MARINA DEL REY 202	POP CODE	POP COUNT	SEX MATURITY
ANIMAL					
ARTHROPODA					
CRUSTACEA					
AMPHIPODA-GAMMARIDEA	*	*			
	*	*			
COPEPODA-CALANOIDA					
ACARTIICAE					
ACARTIA		TCNSA			
*				220	MALE
ACARTIA		TONSA			
*				46	IMMATURE
ACARTIA		TONSA			
*				261	FEMALE
PONTELLIDAE					
LASIOPODERA		TRISPINOSA			
*				1	IMMATURE
COPEPODA-HARPACTICOIDA					
*					
*				1	OTHER
THORACICA					
*					
*				1	NAUPLIUS
(BARNACLE)					
BRYOZOA(ECTOPHYCTA)	*	*			
*					
*				10	CYPHONAUTES
CHORDATA					
OSTEICHTHYS	*	*			
*					
*				1	LARVA
*		*			
*		*		1	EGG
MOLLUSCA					
GASTROPODA	*	*			
*		*			
*		*		1	OTHER

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 8/19/76 STATIONS: M10 MARINA DEL REY
ALTOUCH: 132 REVOLUTIONS: 210

POP CODE	POP COUNT	SEX	MATURITY
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ANIMAL					
ANNELIDA					
POLYCHAETA	*	*			
	*	*			
	*	*			
ARTHROPODA					
CRUSTACEA					
COPEPODA-CALANOIDA					
ACARTIIDAE					
ACARTIA	TONSA			1	1
*					OTHER
ACARTIA	TONSA			45	
*					INNATUR
ACARTIA	TONSA			670	FEMALE
*					
ACARTIA	TONSA			167	MALE
*					
DECAPEDA					
CARIDEA					
*	*				
(SHRIMP)	*			1	2
THORACICA					ZOEA
*					
*	*			1	1
(BARNACLE)	*				NAUPLIUS
BRYOZOA(ECTOPROCTA)					
*					
*					
*					
*					
CHORDATA					
OSTEICHTHYS					
*					
*					
*					
*					
EGG					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 8/19/76	STATION: M11	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALTOUCT: 14 REVOLUTIONS:	150					
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA	*					
*	*					
*	*					
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-GAMMARIDEA	*					
*	*					
*	*					
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA					
*						
ACARTIA	TONSA					
*						
ACARTIA	TONSA					
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA					
*						
COPEPODA-CYCLOPODIA						
CORYCAEIDAE						
CORYCAEUS	ANGLICUS					
*						
CORYCAEUS	ANGLICUS					
*						
CORYCAEUS	ANGLICUS					
*						
COPEPODA-HARPACTICOIDA						
*	*					
*	*					
DECAPEDA						
BRACHYURA						
*	*					
*	*					
THORACICA						
*	*					
(BARNACLE)	*					
CHORDATA						
OSTEICHTHYS						
*						
*						
*						
*						
*						
CHORDATA-UROCHORDATA						
ASCIIDIACEA						
*						
*						
*						
CNIDARIA (COELENTERATA)						
HYDROZOA						
*						
*						
*						
MOLLUSCA						
GASTROPODA						
*						
*						
*						
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	MATERIAL:	POP CODE	POP COUNT	SEX	MATURITY
9/16/76	M1	MARINA DEL REY				
ALIQUOT:	16 REVOLUTIONS:	365				
<hr/>						
ANIMAL						
ANNELICA						
POLYCHAETA						
*	*	*				
*	*	*				
*	*	*				
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-CAPRELLIDEA						
*	*	*				
*	*	*				
*	*	*				
CLADOCERA						
*	EUDINE	NORDMANNI		1	14	OTHER
*	EUDINE	SPINIFERA		1	1	OTHER
*	PENELIA	AVIROSTRIS		2	101	OTHER
*	PCDON	POLYPHENOIDES		1	5	OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA						
*	ACARTIA	CLAUSI		1	1	FEMALE
*	ACARTIA	TONSA		1	27	MALE
*	ACARTIA	TONSA		1	31	FEMALE
*	ACARTIA	TONSA		2	234	IMMATURE
*						
PARACALANOIDAE						
PARACALANUS						
*	PARACALANUS	PARVUS		1	13	FEMALE
*	PARACALANUS	PARVUS		1	6	MALE
*	PARACALANUS	PARVUS		1	27	IMMATURE
*						
PONTELLIDAE						
LABIDOCERA						
*		TRISPINOSA		1	4	IMMATURE
PSEUDOCALANIDAE						
CLAUSOCALANUS						
*		FURCATUS		1	1	FEMALE
COPEPODA-CYCLOPODIDA						
CITHONIIDAE						
CITHONA						
*	CITHONA	*		1	4	OTHER
*	CITHONA	PLUMIFERA		1	1	OTHER
*	CITHONA	SPINIFEROSTRIS		1	2	OTHER
*						
DECAPODA						
ANCHURA						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	REVOLUTIONS:	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
9/16/76	W1	365					ZOEA
ALIQUOT:	18						ZOEA
*	*	*		1	1		OTHER
BRACHYURA	*	*		1	1		OTHER
ISCOPODA	*	*		1	1		OTHER
ASCHELMINTHES	*	*		1	1		OTHER
NEMATOCA	*	*		1	1		OTHER
BRYOZOA (ECTOPROCTA)	*	*		1	9		CYPHOHAUTES
CHAETOGNATHA	*	*		1	3		OTHER
(ANNEL-WORM)	*	*		1	10		OTHER
CHORDATA-LANCEOLATA	*	*		1	8		MEDUSAE
LARVACEA	*	*					
APPENDICULARIA	*	*					
CNIDARIA (COELENTERATA)	*	*					
HYDROIZOA	*	*					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 9/16/76	STATION: M ²	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 15 REVOLUTIONS:	181					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-CAPRELLIDEA						
*	*	*		1	1	OTHER
*	*	*				
CLADOCERA						
*	EUDINE	NORDMANNI		1	28	OTHER
*	EUDINE	SPINIFERA		1	1	OTHER
*	PENILIA	AVIROSTRIS		2	328	OTHER
*	PODON	POLYPHEMOIDES		1	1	OTHER
*						
COPEPODA-CALANOIDA						
ACARTIICAE						
ACARTIA	CLAUSI			1	1	FEMALE
*	CLAUSI			1	1	MALE
*	ACARTIA	TONSA		1	5	MALE
*	ACARTIA	TCNSA		1	20	FEMALE
*	ACARTIA	TCNSA		1	40	IMMATURE
*						
PARACALANIDAE						
PARACALANUS	PARYUS			1	4	IMMATURE
*	PARYUS			1	1	FEMALE
*	PARACALANUS			1	3	MALE
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA			1	1	MALE
*	TRISPINOSA			1	6	IMMATURE
*						
COPEPODA-CYCLOPODIDA						
CORYCAEICAE						
CORYCAEUS	ANGLICUS			1	1	IMMATURE
*						
OITHONIDAE						
CITHONA	PLUMIFERA			1	1	OTHER
*						
DECAPODA						
ANCHURA	*			1	1	ZOEA
*						
BRACHYURA	*			1	1	MEGALOPS
*						
THORACICA						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 9/16/76	STATION: M2	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 18 REVOLUTIONS:	181					
<hr/>						
*	*	*	1	1	CYPRIS	
(BARNACLE)						
BRYOZOA (ECTOPROCTA)						
*	*	*	1	24	CYPHONAUTES	
*	*	*				
CHAETOGNATHA						
*	*	*	1	3	OTHER	
*	*	*				
*	*	*	1	1	LARVA	
(ARROW-WORM)						
CHORDATA=URCHCHORDATA						
ASCIDIACEA						
*	*	*	1	4	OTHER	
*	*	*				
LARVACEA						
*	*	*	1	2	OTHER	
*	*	*				
APPENDICULARIA						
*	*	*	1	5	MEDUSAE	
*	*	*				
THALITACEA						
*	*	*	1	4	OPHIOPLUTEUS	
*	*	*				
DOLICLUM						
*	*	*	1	2	OTHER	
*	*	*				
CNIDARIA (COELENTERATA)						
HYDROZOA						
*	*	*	1	1	OPHIURIDEA	
*	*	*				
ECHINODERMATA						
*	*	*	1	1	OPHIURIDEA	
*	*	*				
OPHIURIDEA						
*	*	*	1	1	OPHIOPLUTEUS	
*	*	*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 9/16/76	STATION: M3	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIOUCT: 18 REVOLUTIONS:	229					
ANIMAL						
ARTHROPODA						
CRUSTACEA						
CLADOCERA	*					
EUDINE	NORDMANNI		1	1		OTHER
*						
PENILIA	AVIROSTRIS		1	2		OTHER
*						
PODON	POLYPHENOIDES		1	2		OTHER
*						
COPEPODA-CALANCIADA						
ACARTIIDAE						
ACARTIA	CLAUSI		1	2	FEMALE	
*						
ACARTIA	TCNSA		2	134	MALE	
*						
ACARTIA	TCNSA		2	110	FEMALE	
*						
ACARTIA	TCNSA		2	318		IMMATURE
*						
PARACALANIDAE						
PARACALAMUS	PARVUS		1	6	MALE	
*						
PARACALANUS	PARVUS		1	13		IMMATURE
*						
PARACALANUS	PARVUS		1	1	FEMALE	
*						
PONTELLIDIADA						
LABIDOCERA	TRISPINOSA		1	1		IMMATURE
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS	ANGLICUS		1	1	FEMALE	
*						
CORYCAEUS	ANGLICUS		1	1		IMMATURE
*						
CORYCAEUS	ANGLICUS		1	1	MALE	
*						
OITHONIDIADA						
OITHONA	SIMILIS		1	1		OTHER
*						
ISOPODA						
*			1	1	OTHER	
*						
*						
THRICACICA						
*						
*						
(BARNACLE)	*		1	2		CYPRI
CHAETOGNATHA	*					
*						
*						
*						
(ARROW-WORM)	*		1	3		OTHER
CHORDATA-UROCHORDATA						
ASCIIDIACEA	*					
*						
*						
*			1	3		LARVA
CNIDARIA (COELENTERATA)						
HYDRCZCA	*					
*						
*						
*			1	4		MEDUSAE

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 9/16/76 STATION: M6 MARINA DEL REY
 ALIQUOT: 132 REVOLUTIONS: 408

POP CODE POP COUNT SEX MATURITY

ANIMAL					
ARTHROPODA					
CRUSTACEA					
CLADOCERA	*				
PEDON		POLYPHENOIDES	1	7	OTHER
*					
COPEPODA-CALANOIDA					
ACARTIIDAE					
ACARTIA		TONSA	2	199	MALE
*					
ACARTIA		TONSA	2	168	FEMALE
*					
ACARTIA		TONSA	1	97	IMMATURE
*					
PARACALANIDAE					
PARACALANUS		PARVUS	1	3	IMMATURE
*					
PARACALANUS	*	PARVUS	1	2	FEMALE
*					
PONTELLIDAE					
LABIDOCERA		TRISPINOSA	1	1	MALE
*					
LABIDOCERA	*	TRISPINOSA	1	2	IMMATURE
*					
COPEPODA-CYCLOPOIDA					
CORYCAEIDAE					
CORYCAEUS	*	ANGLICUS	1	2	IMMATURE
*					
BRYOZOA(ECTOPORECTA)					
*					
*					
*	*	*	1	1	CYPHOHAUTES
CHAETOGNATHA	*				
*					
*					
*	(ARROW-NORN)	*	1	2	OTHER
CHORDATA-UROCHORDATA					
ASCIIDIACEA	*				
*					
*					
*			1	2	LARVA
CNIDARIA (COELENTERATA)					
HYDRCZCA	*				
*					
*		*	1	1	MEDUSAE

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	MS	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
DATE: 9/16/76	STATION: MS		MARINA DEL REY				
ALIQUOTS: 14 REVOLUTIONS:	210						
<hr/>							
ANIMAL							
ARTHROPODA							
CRUSTACEA							
CLADOCERA							
*							
EVADNE			NORDMANNI	1	3		OTHER
*							
PODON			POLYPHEMOIDES	1	16		OTHER
*							
COPEPODA-CALANOIDA							
ACARTIIDAE							
ACARTIA			CLAUSI	1	1		IMMATURE
*							
ACARTIA			CLAUSI	1	2	MALE	
*							
ACARTIA			CLAUSI	1	1	FEMALE	
*							
ACARTIA			TONSA	2	268	MALE	
*							
ACARTIA			TONSA	2	197	FEMALE	
*							
ACARTIA			TONSA	2	257		IMMATURE
*							
PARACALANOIDAE							
PARACALANUS			PARVUS	1	5	FEMALE	
*							
PARACALANUS			PARVUS	1	5		IMMATURE
*							
PARACALANUS			PARVUS	1	1	MALE	
*							
PONTELLIDAE							
LABIDOCERA			TRISPINOSA	1	3		IMMATURE
*							
COPEPODA-CYCLOPODIA							
CORYCAEIDAE							
CORYCAEUS			ANGLICUS	1	1		IMMATURE
*							
CHAETOGNATHA							
*							
*							
*			*		1	2	OTHER
(ANNEL-WORM)							
CHORDATA-UROCHORDATA							
ASCIIDIACEA							
*							
*			*		1	4	LARVA
*							
CNIDARIA [CDELENTERATA]							
HYDRCZCA							
*							
*			*		1	1	MEDUSAE
*							

PLANKTON DATA LISTING + HARBORS ENVIRONMENTAL PROJECTS

DATE: 9/16/76	STATION: M6	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 116 REVOLUTIONS:	294					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUSI	1	1		IMMATURE	
*						
ACARTIA	CLAUSI	1	1		FEMALE	
*						
ACARTIA	TONSA	2	402		IMMATURE	
*						
ACARTIA	TONSA	2	214		MALE	
*						
ACARTIA	TONSA	2	251		FEMALE	
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS	ANGLICUS	1	1		FEMALE	
*						
CHORDATA-UROCHORDATA						
ASCIDIACEA						
*						
*	*	*	1	2		LARVA
*	*	*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 9/16/76	STATIONS: M7	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	ALIQUOT: 132 REVOLUTIONS:	201				
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUSI	1	1	FEMALE		
*						
ACARTIA	CLAUSI	1	1	MALE		
*						
ACARTIA	TONSA	1	73	MALE		
*						
ACARTIA	TONSA	1	95		IMMATURE	
*						
ACARTIA	TONSA	2	281	FEMALE		
*						
COPEPODA-CYCLOPODIA						
CORYCAEIDAE						
CORYCAEUS	ANGLICUS	1	2	FEMALE		
*						
CORYCAEUS	ANGLICUS	1	1		IMMATURE	
*						
CHAETOGNATHA						
*						
*						
*						
(ARROW-WORM)	*	1	1		OTHER	

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 9/16/76 STATION: #8 MARINA DEL REY
 ALIQUOT: 14 REVOLUTIONS: 272

	POP CODE	POP COUNT	SEX	MATURITY
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ANIMAL				
ANNELICA				
POLYCHAETA				
*				
*				
*	*			
ARTHROPODA				
CRUSTACEA				
CLADOCERA				
*				
PODON	POLYPHENOIDES	1	1	OTHER
*				
COPEPODA-CALANOIDA				
ACARTIIDAE				
ACARTIA	CLAUSI	1	1	FEMALE
*				
ACARTIA	TONSA	2	434	FEMALE
*				
ACARTIA	TONSA	1	56	IMMATURE
*				
ACARTIA	TONSA	2	233	MALE
COPEPODA-CYCLOPOIDA				
CORYCAEIDAE				
CORYCAEUS	ANGLICUS	1	2	FEMALE
*				
CORYCAEUS	ANGLICUS	1	6	MALE
CHAETOGNATHA				
*				
*				
*	*			
(ARROW-WORM)	*	1	1	OTHER
CHORDATA-UROCHORDATA				
ASCIDIACEA				
*				
*				
*	*			
*	*	1	12	LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATIONS NO.	STATION	POP CODE	POP COUNT	SEX	MATURITY
9/16/76	18 REVOLUTIONS:	MARINA DEL REY				
		222				
ANIMAL						
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
POODON		POLYPHEMOIDES	1	1		OTHER
*						
COPEPODA-CALANOIDA						
ACARTIICAE						
ACARTIA		TONSA	2	135		IMMATURE
*						
ACARTIA		TONSA	2	124	MALE	
*						
ACARTIA		TONSA	2	205	FEMALE	
*						
COPEPODA-CYCLOPODIA						
CORYCAEIDAE						
CORYCAEUS		ANGLICUS	1	1	MALE	
*						
COPEPODA-HARPACTICOIDA						
*		*	1	2		OTHER
*						
*						
ISOPODA		*	1	1		OTHER
*						
*						
CHORDATA-UROCHORDATA						
ASCIDIACEA						
*						
*		*	1	5		LARVA
*						
CNIDARIA (COELENTERATA)						
HYDRCZEA						
*		*	1	2		MEDUSAE
*						
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 9/16/76	STATION: M10	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 132 REVOLUTIONS:	480					
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ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	194	MALE	
*						
ACARTIA	TONSA		2	209	FEMALE	
*						
ACARTIA	TONSA		2	421		INMATURE
*						
PARACALANIDAE						
PARACALANUS	PARVUS		1	1	FEMALE	
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS	ANGLICUS		1	3	MALE	
*						
CHORDATA-UROCHORDATA						
ASCIDIACEA						
*						
*						
*	*		1	14		LARVA
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 9/16/76 STATION: M11 MARINA DEL REY
ALIQUOT: 14 REVOLUTIONS: 263

POP CODE	POP COUNT	SEX	MATURITY
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ANIMAL					
ANNELICA					
POLYCHAETA	*				
*	*				
ARTHROPODA	*	*			
CRUSTACEA					
AMPHIPODA-GAMMARIDEA	*				
*	*				
CLADOCERA	*	*			
*	*				
PEDON		POLYPHEMOIDES			
*					
COPEPODA-CALANOIDA					
ACARTIIDAE					
ACARTIA		CLAUSTI			
*					
ACARTIA		TONSA			
*					
ACARTIA		TCNSA			
*					
ACARTIA		TONSA			
*					
PARACALANIDAE					
PARACALANUS		PARVUS			
*					
PARACALANUS		PARVUS			
*					
COPEPODA-CYCLOPOIDA					
CORYCAEIDAE					
CORYCAEUS		ANGLICUS			
*					
CORYCAEUS		ANGLICUS			
*					
THORACICA	*				
*	*				
(BARNACLE)	*				
			1	2	OTHER
			1	1	OTHER
			1	45	OTHER
			1	1	MALE
			2	203	INMATURE
			2	164	FEMALE
			2	235	MALE
			1	1	MALE
			1	2	FEMALE
			1	1	INMATURE
			1	2	MALE
			1	1	NAUPLIUS

PLANKTON DATA LISTING + HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76	STATION: M1	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 18 REVOLUTIONS:	380					
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA						
*						
*						
*						
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
EVAONE	NORDMANNI		1	1		OTHER
*						
EVAONE	SPINIFERA		1	3		OTHER
*						
PENITIA	AVIROSTRIS		2	110		OTHER
*						
POON	POLYPHEMOIDES		1	2		OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUSI		1	1	FEMALE	
*						
ACARTIA	TONSA		1	77	MALE	
*						
ACARTIA	TONSA		1	60	FEMALE	
*						
ACARTIA	TONSA		2	172		IMMATURE
*						
CENTROPAGIDAE						
CENTROPAGES	BRADYI		1	1	FEMALE	
*						
PARACALANIDAE						
PARACALANUS	PARVUS		1	56		IMMATURE
*						
PARACALANUS	PARVUS		1	21	MALE	
*						
PARACALANUS	PARVUS		1	32	FEMALE	
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA		1	2		IMMATURE
*						
PSUEDOCALANIDAE						
CLAUSOCALANUS	FURCATUS		1	18	FEMALE	
*						
CLAUSOCALANUS	FURCATUS		1	3		IMMATURE
*						
CLAUSOCALANUS	FURCATUS		1	5	MALE	
*						
COPEPODA-CALIGOIDA						
*						
*						
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS	AMAZONICUS		1	1	FEMALE	

MISSING DATA VALUE IS -1.0

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76	STATION: #2	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALiquot:	18 REVOLUTIONS:	268				
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA	*	*				
*	*	*				
ARTHROPODA	*	*				
CRUSTACEA						
CLADOCERA	*	*				
*	*	*				
EVADNE		NORDMANNI		1	4	OTHER
*	*					
EVADNE		SPINIFERA		1	3	OTHER
*	*					
PENITIA		AVIROSTRIS		1	66	OTHER
*	*					
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		CLAUSI		1	2	FEMALE
*	*					
ACARTIA		TONSA		2	114	MALE
*	*					
ACARTIA		TONSA		1	64	FEMALE
*	*					
ACARTIA		TONSA		2	160	IMMATURE
*	*					
PARACALANIDAE						
PARACALANUS		PARYUS		1	28	FEMALE
*	*					
PARACALANUS		PARYUS		1	20	MALE
*	*					
PARACALANUS		PARYUS		1	66	IMMATURE
*	*					
PONTELLIIDAE						
LABIDOCERA		TRISPINOSA		1	4	IMMATURE
*	*					
PSEUDOCALANIDAE						
CLAUSOCALANUS		FURCATUS		1	23	FEMALE
*	*					
CLAUSOCALANUS		FURCATUS		1	1	IMMATURE
*	*					
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS		ANGLICUS		1	6	FEMALE
*	*					
CORYCAEUS		ANGLICUS		1	10	MALE
*	*					
CORYCAEUS		ANGLICUS		1	14	IMMATURE
*	*					
ASCHELINTHES						
NEMATODA						
*	*	*				
*	*	*				
*	*	*				
*	*	*				
BRYOZOA(ECTOPROCTA)	*	*				
*	*	*				
*	*	*				
*	*	*				
*	*	*				
CHAETOGNATHA	*	*				
*	*	*				
*	*	*				
*	*	*				
(ARROW-WORM)	*	*				
CHORODATA-UROCHORDATA						
LARVACEA	*	*				
*	*	*				
APPENDICULARIA	*	*				
*	*	*				
CNEDARIA (COELENTERATA)						
HYDROZOA	*	*				
*	*	*				
*	*	*				
*	*	*				
*	*	*				
217				1	14	MEDUSAE

MISSING DATA VALUE IS -1.0

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/75	STATION: 43	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 12 REVOLUTIONS:	238					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-GAMMAROIDEA						
*	*	*		1	1	OTHER
*	*	*				
CLADOCERA						
*	EVAONE	NORDMANNI		1	7	OTHER
*	PENILIA	AVEROSTRIS		1	12	OTHER
*	PUDON	POLYPHEMOIDES		1	3	OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUSI			1	2	FEMALE
*						
ACARTIA	CLAUSI			1	1	MALE
*						
ACARTIA	TONSA			2	314	INMATURE
*						
ACARTIA	TONSA			2	133	MALE
*						
ACARTIA	TONSA			1	76	FEMALE
*						
PARACALANOIDAE						
PARACALANUS	PARYUS			1	9	FEMALE
*						
PARACALANUS	PARYUS			1	13	INMATURE
*						
PARACALANUS	PARYUS			1	9	MALE
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA			1	23	INMATURE
*						
PSEUDOCALANOIDAE						
CLAUSOCALANUS	FURCATUS			1	3	FEMALE
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS	ANGLOCUS			1	6	INMATURE
*						
CORYCAEUS	ANGLOCUS			1	7	FEMALE
*						
CORYCAEUS	ANGLOCUS			1	2	MALE
*						
COPEPODA-HARPACTICOIDA						
*	*	*		1	1	OTHER
*						
DECAPODA						
BRACHYURA	*			1	5	ZOEA
*						

MISSING DATA VALUE IS -1.0

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76	STATION: 43	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 12 REVOLUTIONS:	238					
CARIDEA	*	*	1	1		ZOEA
(SHRIMP)						
THORACICA	*	*	1	2		NAUPLIUS
*	*	*	1	1		CYPRISS
(BARNACLE)	*	*				
(BARNACLE)	*	*				
BRYOZOA (ECTOPROCTA)	*	*	1	5		CYPHONAUTES
*	*	*				
CHAETOGNATHA	*	*	1	2		OTHER
*	*	*				
(ANNELID-WORM)	*	*				
CHORDATA						
OSTEICHTHYS	*	*	1	6		LARVA
*	*	*	1	2		EGG
*	*	*				
CHORDATA-UROCHORDATA						
ASCIIDIACEA	*	*	1	2		OTHER
*	*	*				
LARVACEA	*	*	1	1		OTHER
*	*	*				
APPENDICULARIA	*	*	1	1		
*	*	*				
CNIDARIA (COELENTERATA)						
HYDROZOA	*	*	1	1		MEDUSAE
*	*	*				

MISSING DATA VALUE IS -1.0

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76	STATION: 44	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 14 REVOLUTIONS:	262					
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA						
*	*	*				
*	*	*				
*	*	*				
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-GAMMARIDEA						
*	*	*				
*	*	*				
CLADOCERA						
*	*	*				
EVAONE		NORDMANNI		1	27	OTHER
*	*	*				
EVAONE		SPINIFERA		1	1	OTHER
*	*	*				
PENTOLEA		AVIROSTRIS		1	16	OTHER
*	*	*				
PODON		POLYPHEMOIDES		1	8	OTHER
*	*	*				
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		TONSA		2	103	IMMATURE
*	*	*				
ACARTIA		TONSA		1	74	FEMALE
*	*	*				
ACARTIA		TONSA		2	110	MALE
*	*	*				
PARACALANIDAE						
PARACALANUS		PARYVUS		1	2	MALE
*	*	*				
PARACALANUS		PARYVUS		1	1	FEMALE
*	*	*				
PARACALANUS		PARYVUS		1	3	IMMATURE
*	*	*				
COPEPODA-CYCLOPOIDA						
CORYCAETIDAE						
CORYCAEUS		ANGLICUS		1	1	MALE
*	*	*				
CORYCAEUS		ANGLICUS		1	5	IMMATURE
*	*	*				
COPEPODA-HARPACTICOIDA						
*	*	*				
*	*	*		1	2	OTHER
*	*	*				
DECAPODA						
BRACHYURA						
*	*	*		1	4	ZOEA
*	*	*				
THORACICA						
*	*	*				
(BARNACLE)	*	*		1	16	NAUPLIUS

MISSING DATA VALUE IS -1.0

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/75	STATIONS: 44	MARINA CEL. REY	POP CODE	POP COUNT	SEX	MATURITY
ALTIMETER: 14 REVOLUTIONS:	262					
<hr/>						
BRYOZOA (ECTOPROCTA)						
*	*	*				
*	*	*				
*	*	*				
*	*	*				
*	*	*				
*	*	*				
<hr/>						
CHAETOGNATHA						
*	*	*				
*	*	*				
*	*	*				
*	*	*				
*	*	*				
<hr/>						
CHORDATA (ARROW-WORMS)						
*	*	*				
<hr/>						
CHORDATA - OSTEICHTHYS						
*	*	*				
*	*	*				
*	*	*				
*	*	*				
<hr/>						
CHORDATA - UROCHORDATA						
ASCIIDIACEA	*	*				
*	*	*				
*	*	*				
*	*	*				
<hr/>						
LARVACEA						
*	*	*				
*	*	*				
*	*	*				
*	*	*				
<hr/>						
APPENDICULARIA						
*	*	*				
<hr/>						
Cnidaria (COELENTERATA)						
HYDROZOA	*	*				
*	*	*				
*	*	*				
*	*	*				
<hr/>						
MEDUSAE						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/18/76	STATION: 45	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 14 REVOLUTIONS: 222						
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA	*	*	1	3	OTHER	
*	*	*				
*	*	*				
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-GAMMARIDEA	*	*	1	1	OTHER	
*	*	*				
CLADOCERA	*					
EVADE	NORDMANNI	1	1	OTHER		
*						
PENITIA	AVIROSTRIS	1	1	OTHER		
*						
POODON	POLYPHEMOTODES	1	1	OTHER		
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA	1	67	FEMALE		
*						
ACARTIA	TONSA	1	70	MALE		
*						
ACARTIA	TONSA	2	140	IMMATURE		
*						
PARACALANIDAE						
PARACALANUS	PARVUS	1	2	MALE		
*						
PARACALANUS	PARVUS	1	3	IMMATURE		
*						
PARACALANUS	PARVUS	1	1	FEMALE		
*						
PONTELLIDI						
LABIDOCERA	TRISPINOSA	1	12	IMMATURE		
*						
PSEUDOCALANIDAE						
CLausocalanus	FURCATUS	1	1	FEMALE		
*						
TORTANIDAE						
TORTANUS	DISCAUDATUS	1	2	IMMATURE		
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS	ANGLICUS	1	7	MALE		
*						
CORYCAEUS	ANGLICUS	1	13	IMMATURE		
*						
CORYCAEUS	ANGLICUS	1	1	FEMALE		
*						
DECAPODA						
BRACHYURA	*	1	3	ZOEA		
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76	STATION: 45	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
THORACICA						
*	*	*	1	66	NAUPLIUS	
*	(BARNACLE)	*				
BRYOZOA(ECTOPROCTA)	*	*				
*	*	*	1	6	CYPHONIAIES	
CHORDATA						
OSTEICHTHYS	*	*	1	2	EGG	
*	*	*	1	10	LARVA	
CHORDATA-JUROCHORDATA						
ASCIIDACEA	*	*	1	8	LARVA	
*	*	*				
CNIDARIA (COELENTERATA)	*	*				
HYDROZOA	*	*	1	9	MEDUSAE	
*	*	*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76	STATION: 46	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
		322				
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA						
*	*	*		1	1	OTHER
*	*	*				
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*	EVAONE	NORDMANNE		1	1	OTHER
*	*					
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUS I		1	2	MALE	
*						
ACARTIA	TONSA		2	325	MALE	
*						
ACARTIA	TONSA		2	302	FEMALE	
*						
ACARTIA	TONSA		2	251	IMMATURE	
*						
COPEPODA-CYCLOPOIDAE						
CORYCAEIDAE						
CORYCAEUS	ANGLOCUS		1	1	IMMATURE	
*						
CORYCAEUS	ANGLECUS		1	1	MALE	
*						
COPEPODA-HARPACTICOLIDAE						
*	*	*		1	1	OTHER
*	*	*				
BRYOZOA(ECTOPROCTA)						
*	*	*		1	2	CYPHONAUTES
*	*	*				
CHAETOGNATHA						
*	*	*		1	1	OTHER
*	*	*				
(ARROW-NORM)						
CHORDATA-UROCHORDATA						
ASCIIDIACEA						
*	*	*		1	46	LARVA
*	*	*				
CNIDARIA (COELENTERATA)						
HYDROZOA						
*	*	*		1	1	MEDUSAE
*	*	*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76	STATION: 97	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
AUTOGRAPH: 1128 REVOLUTIONS:	525					
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA	*					
*	*	*		1	1	OTHER
*	*	*				
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUST		1	1	MALE	
*						
ACARTIA	TONSA		2	233	MALE	
*						
ACARTIA	TONSA		2	311	FEMALE	
*						
ACARTIA	TONSA		2	333	IMMATURE	
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS	ANGLICUS		1	2	MALE	
*						
THORACICA	-					
*	*	*		1	15	NAUPLIUS
*						
(BARNACLE)						
CHORDATA-UROCHORDATA						
ASCIIDIACEA	*					
*	*	*		1	1	LARVA
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76 STATION: MR MARINA DEL REY
 ALiquOT: 116 REVOLUTIONS: 278

POP CODE	POP COUNT	SEX	MATURITY
----------	-----------	-----	----------

ANIMAL				
ARTHROPODA				
CRUSTACEA				
AMPHIPODA-GAMMARIDEA				
*	*	*		
*	*		1	1
COPEPODA-CALANOIDA				CTHER
ACARTIIDAE				
ACARTIA	TONSA	2	106	IMMATURE
*				
ACARTIA	TONSA	2	178	MALE
*				
ACARTIA	TONSA	2	479	FEMALE
*				
PARACALANIDAE				
PARACALANUS	PARVUS	1	1	FEMALE
*				
PARACALANUS	PARVUS	1	1	IMMATURE
*				
COPEPODA-CYCLOPODIA				
CORYCAEIDAE				
CORYCAEUS	ANGLICUS	1	1	IMMATURE
*				
CORYCAEUS	ANGLICUS	1	1	MALE
*				
THORACICA				
*				
(BARNACLE)	*		1	2
BRYOZOA(ECTOPROCTA)				
*				
*				
*	*		1	1
CHORDATA-UROCHORDATA				CYPHOHAUTES
ASCIDIACEA				
*				
*				
*	*		1	1
LARVA				

MISSING DATA VALUE IS -1.0

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76	STATIONS: M10	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 132 REVOLUTIONS:	225					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	310	MALE	
*						
ACARTIA	TONSA		2	370	FEMALE	
*						
ACARTIA	TONSA		2	126		IMMATURE
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS						
*		ANGLICUS		1	1	FEMALE
<hr/>						
CHORDATA-UROCHORDATA						
ASCIIDIACEA						
*				1	10	LARVA
*						
*	*					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76	STATION: 401	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 16 REVOLUTIONS:	385					
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA	*	*		1	1	OTHER
	*	*				
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	*	TONSA		2	171	MALE
	*					
ACARTIA	*	TONSA		1	72	FEMALE
	*					
ACARTIA	*	TONSA		2	279	IMMATURE
	*					
PARACALANOIDAE						
PARACALANUS	*	PARVUS		1	1	IMMATURE
	*					
PARACALANUS	*	PARVUS		1	1	FEMALE
	*					
PONTELLIDAE						
LABIDOCERA	*	TRISPINOSA		1	4	IMMATURE
	*					
COPEPODA-CYCLOPODIA						
CORYCAEIIDAE						
CORYCAEUS	*	ANGLICUS		1	16	MALE
	*					
CORYCAEUS	*	ANGLICUS		1	3	FEMALE
	*					
CORYCAEUS	*	ANGLICUS		1	5	IMMATURE
	*					
DECAPODA						
BRACHYURA						
	*	*		1	6	ZOEA
	*					
THORACICA	*	*				
	*					
(BARNACLE)	*	*		1	33	NAUPLIUS
	*					
CHORDATA						
OSTEICHTHYS						
	*	*				
	*					
	*			1	3	LARVA
	*					
CHORDATA-UROCHORDATA						
ASCIDIACEA	*	*				
	*					
	*			1	23	LARVA
	*					
CNIDARIA (COELENTERATA)						
HYDROZOA	*	*				
	*					
	*			1	1	MEDUSAE
	*					

PLANKTON DATA LISTING → HARBORS ENVIRONMENTAL PROJECTS

DATE: 11/19/76	STATION: 41	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 132 REVOLUTIONS:	490					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
EVADNE	NORDMANNI	2	129		OTHER	
*						
EVADNE	SPINIFERA	1	1		OTHER	
*						
PELENIA	AVEROSTRIS	1	66		OTHER	
*						
PODON	POLYPHENOIDES	1	31		OTHER	
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA	2	201		IMMATURE	
*						
ACARTIA	TONSA	1	33		MALE	
*						
ACARTIA	TONSA	1	66		FEMALE	
*						
CALANOIDAE						
CALANUS	TENUICORNIS	1	1		FEMALE	
*						
PARACALANOIDAE						
PARACALANUS	PARYUS	1	10		IMMATURE	
*						
PARACALANUS	PARYUS	1	10		FEMALE	
*						
PARACALANUS	PARYUS	1	2		MALE	
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA	1	8		IMMATURE	
*						
PSEUDOCLALANOIDAE						
CLAUSOCALANUS	FURCATUS	1	1		FEMALE	
*						
CLAUSOCALANUS	FURCATUS	1	1		MALE	
*						
CLAUSOCALANUS	LIVIDUS	1	1		FEMALE	
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS	ANGLOCUS	1	1		IMMATURE	
*						
OITHONIIDAE						
DI THOMA	SPINTROSTRIS	1	1		OTHER	
*						
THORACICA						
*						
*	*			7	NAUPLIUS	
(BARNACLE)						
BRYOZOA(ECTOPROCTA)						
*						
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 11/19/76	STATION: 41	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
						CYPHONAUTES
*	*	*	1	2		
CHAETOGNATHA	*	*				
*	*	*				
*	*	*				
(ARROW-WORM)	*	*	1	1		OTHER
CHORDATA-UROCHORDATA	*	*				
ASCIIDIACEA	*	*				
*	*	*	1	2		
LARVACEA	*	*				
*	*	*				
APPENDICULARIA	*	*	1	19		OTHER
THALIACEA	*	*				
*	*	*	1	55		OTHER
DOLIOGLUM	*	*				
CNIDARIA (COELENTERATA)	*	*				
HYDROZOA	*	*	1	13		MEDUSAE
*	*	*				

MISSING DATA VALUE IS -1.0

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 11/19/76 STATION: #2 MARINA DEL REY
 ALIQUOT: 132 REVOLUTIONS: 262 POP CODE POP COUNT SEX MATURITY

ANIMAL					
ANNELIDA					
POLYCHAETA	*				
*	*				
*	*			1	1
ARTHOPODA	*				OTHER
CRUSTACEA					
CLADOCERA	*				
*	EVAONE	NORDMANNI	1	80	OTHER
*	EVAONE	SPINIFERA	1	4	OTHER
*	PENILIA	AVIROSTRIS	1	66	OTHER
*	PODON	POLYPHENOIDES	1	10	OTHER
*					
COPEPODA-CALANOIDA					
ACARTIIDAE					
ACARTIA	CLAUSI		1	4	FEMALE
*					
ACARTIA	TONSA		2	229	INMATURE
*					
ACARTIA	TONSA		1	93	MALE
*			2	119	FEMALE
*					
PARACALANOIDAE					
PARACALANUS	PARVUS		1	2	MALE
*					
PARACALANUS	PARVUS		1	10	INMATURE
*					
PARACALANUS	PARVUS		1	5	FEMALE
*					
PONTELLIDAE					
LABIDOCERA	TRISPINOSA		1	3	INMATURE
*					
PSEUDOCALANOIDAE					
CLAUSOCALANUS	FURCATUS		1	2	FEMALE
*					
CLAUSOCALANUS	FURCATUS		1	1	INMATURE
*					
CLAUSOCALANUS	FURCATUS		1	1	MALE
*					
COPEPODA-CYCLOPODIA					
CORYCAETIDAE					
CORYCAEUS	AMAZONICUS		1	1	MALE
*					
CORYCAEUS	ANGULICUS		1	2	INMATURE
*					
THORACICA					
*				1	6
*					NAUPLIUS
(BARNACLE)	*				

MISSING DATA VALUE IS -1.0

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 11/19/76 STATIONS: 462 MARINA DEL REY
 ALTIMETER: 132 REVOLUTIONS: 262

POP CODE	POP COUNT	SEX	MATURITY
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~~BRYOZOA (ECTOPROCTA)~~

*	*	1	5	CYPHOHAUTES
CHORDATA				
OSTEICHTHYS	*	1	2	EGG
CHORDATA-UROCHORDATA				
LARVACEA	*	1	3	OTHER
APPENDICULARIA	*	1	36	OTHER
THALIACEA	*	1	16	MEDUSAE
DOLIOLUM	*			
CNIDARIA (COELENTERATA)				
HYDROZOA	*			

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 11/19/76 STATION: 43 MARINA DEL REY
 ALIQUOT: 19 REVOLUTIONS: 250 POP CODE POP COUNT SEX Maturity

ANIMAL					
ARTHROPODA					
CRUSTACEA					
CLADOCERA					
*					
EVAONE	NORDMANNI	1	22	COTHER	
*					
EVAONE	SPINIFERA	1	3	COTHER	
*					
PENITIA	AVIROSTRI	1	7	COTHER	
*					
PUDON	POLYPHENICIDES	1	33	COTHER	
*					
COPEPODA-CALANOIDA					
ACARTIIDAE					
ACARTIA	TONSA	1	58	FEMALE	
*					
ACARTIA	TONSA	2	159	IMMATURE	
*					
ACARTIA	TONSA	1	63	MALE	
*					
PARACALANOIDAE					
PARACALANUS	PARVUS	1	8	MALE	
*					
PARACALANUS	PARVUS	1	20	IMMATURE	
*					
PARACALANUS	PARVUS	1	18	FEMALE	
*					
PSEUDOCALANOIDAE					
CLAUSOCALANUS	FARRANI	1	1	FEMALE	
*					
CLAUSOCALANUS	FURCATUS	1	1	FEMALE	
*					
TORTANIIDAE					
TORTANUS	DISCAUDATUS	1	1	MALE	
*					
TORTANUS	DISCAUDATUS	1	1	IMMATURE	
*					
COPEPODA-CYCLOPODIA					
CORYCAEIIDAE					
CORYCAEUS	AMAZONICUS	1	1	MALE	
*					
CORYCAEUS	ANGLICUS	1	1	IMMATURE	
*					
OITHONIIDAE					
OITHONA	OCULATA	1	1	COTHER	
*					
ONCIDIIDAE					
ONCAEA	MEDITERRANEA	1	1	MALE	
*					
DECAPODA					
BRACHYURA	*	1	17	ZOEA	
*					
THORACICA	*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 11/19/76	STATION: 43	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	18 REVOLUTIONS:	250				
*	(BARNACLE)	*	1	2		CYPRIS
*	(BARNACLE)	*	1	1		NAUPLIUS
BRYOZOA(ECTOPROCTA)	*	*				
*	*	*	1	2		CYPHONAUTES
CHAETOGNATHA	*	*				
*	*	*	1	12		OTHER
CHORDATA-JRCHORDATA	(ARROW-WORMS)	*				
LARVACEA	*	*	1	4		OTHER
*	APPENDICULARIA	*	*	1	9	OTHER
THALIACEA	*	*				
*	DOLIOGLUM	*	1	2		MEDUSAE
CNIDARIA (COELENTERATA)	*	*				
HYDROZOA	*	*	1	2		LARVA
MOLLUSCA	*	*				
GASTROPODA	*	*				
*	*	*	1	2		
*	*	*				

PLANKTON DATA LISTING - MARBORS ENVIRONMENTAL PROJECTS

DATE: 11/19/76 STATION: 44 MARINA DEL REY
 ALIQUOT: 132 REVOLUTIONS: 260

	POP CODE	POP COUNT	SEX	MATURITY
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ANIMAL				
ARTHROPODA				
CRUSTACEA				
CLADOCERA				
*				
EVADNE	NORDMANNI	1	3	OTHER
*				
PENITIA	AVIROSTRIS	1	1	OTHER
*				
POODN	POLYPHENOIDES	1	7	OTHER
*				
COPEPODA-CALANOIDA				
ACARTIIDAE				
ACARTIA	CLAUSI	1	1	MALE
*				
ACARTIA	CLAUSI	1	6	FEMALE
*				
ACARTIA	TONSA	2	230	FEMALE
*				
ACARTIA	TONSA	2	174	INMATURE
*				
ACARTIA	TONSA	2	334	MALE
*				
PARACALANIDAE				
PARACALANUS	PARVUS	1	1	INMATURE
*				
PARACALANUS	PARVUS	1	2	FEMALE
*				
TORTANIDAE				
TORTANUS	DISCAUDATUS	1	1	INMATURE
*				
THORACICA				
*				
(BARNACLE)	*	1	2	NAUPLIUS
CHORDATA-UROCHORDATA				
ASCIIDIACEA				
*				
*				
*		1	1	LARVA
*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 11/12/76	STATION: MS	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 115 REVOLUTIONS:	270					
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA						
*	*	*	1	2	OTHER	
*	*	*				
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*	*	*				
EYDNE	NORDMANNI	1	3	COTHER		
*						
PODON	POLYPHEMOIDES	1	33	COTHER		
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUSI	1	1	FEMALE		
*						
ACARTIA	TONSA	2	187	MALE		
*						
ACARTIA	TONSA	2	107	FEMALE		
*						
ACARTIA	TONSA	2	250	IMMATURE		
*						
PARACALANIDAE						
PARACALANUS	PARYUS	1	1	FEMALE		
*						
PARACALANUS	PARYUS	1	1	MALE		
*						
PARACALANUS	PARYUS	1	2	IMMATURE		
*						
TORTANIDAE						
TORTANUS	DISCAUDATUS	1	1	IMMATURE		
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIIDAE						
CORYCAEUS	ANGULICUS	1	1	IMMATURE		
*						
CORYCAEUS	ANGULICUS	1	1	MALE		
*						
THORACICA						
*						
(BARNACLE)	*	1	1	NAUPLIUS		
CHAETOGNATHA						
*						
*						
*	*	1	1	OTHER		
(ARROW-WORM)	*					
CHORDATA						
osteichthys						
*						
*						
*	*	1	1	LARVA		
CHORDATA-UROCHORDATA						
ASCIIDIACEA						
*						
*						
*	*	1	2	LARVA		
Cnidaria (Coelenterata)						
HYDROZOA						
*		1	1	MEDUSAE		
*	*					
*	*					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 11/19/76	STATION: 46	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 116 REVOLUTIONS:	208					
ANIMAL						
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-CAPRELLIDAE						
*	*	*				
*	*	*	1	1		OTHER
CLADOCERA						
*	PENELIA	AVIROSTRIS	1	1		OTHER
*	PODON	POLYPHEMOIDES	1	1		OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUSI	1	3		FEMALE	
*						
ACARTIA	TONSA	2	253		FEMALE	
*						
ACARTIA	TONSA	1	40			IMMATURE
*						
ACARTIA	TONSA	2	137		MALE	
*						
PARACALANIDAE						
PARACALANUS	PARYUS	1	1			IMMATURE
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA	1	1		MALE	
*						
COPEPODA-CYCLOPODIA						
CORYCAEIDAE						
CORYCAEUS	ANGLECUS	1	1			IMMATURE
*						
ISOPODA						
*	*	*	1	1		OTHER
*	*	*				
CHAETOGNATHA						
*	*	*				
*	*	*				
*	(ARROW-WORM)	*	1	1		OTHER
CHORDATA-UROCHORDATA						
ASCIIDIACEA						
*	*	*	1	2		LARVA
*	*	*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 11/19/76	STATION: M7	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 116 REVOLUTIONS:	140					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANEOIDAE						
ACARTIIDAE						
ACARTIA	CLAUSI		1	1	FEMALE	
*						
ACARTIA	TONSA		2	157	MALE	
*						
ACARTIA	TONSA		2	215		IMMATURE
*						
ACARTIA	TONSA		1	54	FEMALE	
*						
TORTANIIDAE						
TORTANUS	DTSCAUDATUS		1	2		IMMATURE
*						
CHORDATA-JUROCHORDATA						
ASCIDIACEA						
*						
*	*					
*	*		1	1		LARVA
*	*					

MISSING DATA VALUE IS -1.0

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 11/19/76	STATION: #8	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 116 REVOLUTIONS:	297					
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA						
*	*	*		1	1	OTHER
*	*	*				
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*	PENELIA	AVIROSTRIS		1	1	OTHER
*	PODON	POLYPHENOIDES		1	2	OTHER
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	153		IMMATURE
*	ACARTIA	TONSA		2	126	MALE
*	ACARTIA	TONSA		2	258	FEMALE
*	PARACALANIDAE					
PARACALANUS	PARVUS		1	1	FEMALE	
CHORDATA-UROCHORDATA						
ASCIIDIACEA						
*	*	*		1	1	LARVA
*	*	*				

MISSING DATA VALUE IS -1.0

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 11/19/76	STATION: NO	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	ALIQUOT: 132 REVOLUTIONS:	234				
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	*	CLAUSI	1	1	MALE	
ACARTIA	*	CLAUSI	1	3	FEMALE	
ACARTIA	*	TONSA	2	194	FEMALE	
ACARTIA	*	TONSA	2	192	MALE	
ACARTIA	*	TONSA	2	177		INNATURE
PARACALANOIDAE						
PARACALANUS	*	PARVUS	1	1	FEMALE	
ISOPODA						
*	*	*	1	1	OTHER	
CHORDATA-UROCHORDATA						
ASCIDIACEA						
*	*	*	1	1	LARVA	

MISSING DATA VALUE IS -1.0

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 11/19/76 STATION: M10 MARINA DEL REY
 ALIQUOT: 1128 REVOLUTIONS: 332

	POP CODE	POP COUNT	SEX	MATURITY
--	-------------	--------------	-----	----------

ANIMAL

ARTHROPODA

CRUSTACEA

CLADOCERA

*

PODON

*

POLYPHEMOIDES

1

2

OTHER

COPEPODA-CALANOIDA

ACARTIIDAE

ACARTIA

TONSA

2

172

INMATURE

ACARTIA

TONSA

2

369

MALE

ACARTIA

TONSA

2

378

FEMALE

*

PARACALANIDAE

PARACALANUS

PARVUS

1

1

FEMALE

A

CHORDATA-UROCHORDATA

ASCIDIACEA

*

*

*

1

3

LARVA

*

*

*

MISSING DATA VALUE IS -1.0

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 11/19/76	STATION: M11	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOTE: 132 REVOLUTIONS:	266					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*	PODON	POLYPHENOIDES	1	1	OTHER	
*	COPEPODA-CALANOIDA					
ACARTIIDAE						
ACARTIA	TONSA	2	161	MALE		
*	ACARTIA	TONSA	1	51	FEMALE	
*	ACARTIA	TONSA	2	292		IMMATURE
*						

PLANKTON DATA LISTING → HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76 STATIONS: M1
ALIDUCT: 164 REVOLUTIONS: 111 MARINA DEL REY

POP CODE POP COUNT SEX MATURITY

ANIMAL				
ARTHROPODA				
CRUSTACEA				
CLADOCERA				
*				
EVADNE	NORDMANNI	1	2	OTHER
*				
EVADNE	SPINIFERA	1	1	OTHER
*				
COPEPODA-CALANOIDA				
ACARTIIDAE				
ACARTIA	TONSA	2	296	IMMATURE
*				
ACARTIA	TONSA	1	86	FEMALE
*				
ACARTIA	TONSA	2	234	MALE
*				
PARACALANOIDAE				
PARACALANUS	PARVUS	1	1	MALE
*				
PARACALANUS	PARVUS	1	10	IMMATURE
*				
PARACALANUS	PARVUS	1	6	FEMALE
*				
PONTELLIDAE				
LABIDOCERA	TRISPINOSA	1	18	IMMATURE
*				
PSEUDOCALANOIDAE				
CLAUSCCALANUS	FURCATUS	1	1	FEMALE
*				
TORTANIIDAE				
TORTANUS	BISCAUDATUS	1	1	MALE
*				
COPEPODA-CYCLOPOIDA				
CORYCAEIIDAE				
CORYCAEUS	ANGLICUS	1	3	MALE
*				
CORYCAEUS	ANGLICUS	1	1	FEMALE
*				
CORYCAEUS	ANGLICUS	1	2	IMMATURE
*				
OITHONIIDAE				
OITHONA	OCULATA	1	4	OTHER
*				
THORACICA				
*				
*	*	1	1	NAUPLIUS
(BARNACLES)				
BRYZOZA(ECTOPROCTA)	*			
*				
*				
*	*	1	4	CYPHONAUTES
CHORDATA				
OSTEICHTHYS				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76 STATION: M1 MARINA DEL REY
 ALIQUOT: 164 REVOLUTIONS: 111

		POP CODE	POP COUNT	SEX	MATURITY
*	*	1	2		EGG
*	*	1	1		LARVA
CHORDATA-UROCHORDATA					
LARVACEA					
*	*	1	39		OTHER
APPENDICULARIA	*				
THALIACEA	*				
DOLIOGLUM	*	1	4		OTHER
CNIDARIA (COELENTERATA)					
HYDROZEA					
*	*	1	15		MEDUSAE
ECHINODERDATA					
OPIURIDEA					
*	*	1	1		OPIUEPLUTEUS

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76	STATION: M2	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 164 REVOLUTIONS	190					
ANIMAL						
ANNELIDA						
POLYCHAETA						
*						
*	*			1	2	OTHER
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
EUDINE	NORDMANNI		1	10		OTHER
*						
EUDINE	SPINIFERA		1	3		OTHER
*						
PENELIA	AVIROSTRIS		1	6		OTHER
*						
PODON	POLYPHEMOIDES		1	2		OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUSI		1	2	FEMALE	
*						
ACARTIA	TONSA		2	200		IMMATURE
*						
ACARTIA	TCNSA		1	76	FEMALE	
*						
ACARTIA	TONSA		2	172	MALE	
*						
PARACALANIDAE						
PARACALANUS	PARVUS		1	3	MALE	
*						
PARACALANUS	PARVUS		1	13	FEMALE	
*						
PARACALANUS	PARVUS		1	16		IMMATURE
*						
PONTELLIDIAE						
LABIDOCERA	TRISPINOSA		1	19		IMMATURE
*						
PSEUDOCALANIDAE						
CLAUSOCALANUS	*		1	1		IMMATURE
*						
CLAUSOCALANUS	FURCATUS		1	5	FEMALE	
*						
TORTANIDAE						
TORTANUS	DISCAUDATUS		1	2	MALE	
*						
TORTANUS	DISCAUDATUS		1	1		IMMATURE
*						
TORTANUS	DISCAUDATUS		1	1	FEMALE	
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS	ANGLICUS		1	5	MALE	
*						
CORYCAEUS	ANGLICUS		1	1		IMMATURE

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76 STATION: M2 MARINA DEL REY
 ALIQUOT: 164 REVOLUTIONS: 190

POP CODE POP COUNT SEX MATURITY

*	CORYCAEUS	ANGLICUS	1	1	FEMALE
*	OITHONIDAE				
OITHONA		OCULATA	1	3	OTHER
*	DECAPODA				
BRACHYURA		*	1	1	ZOEA
*		*	1	3	NAUPLIUS
THORACICA		*			
*	(BARNACLE)				
BRYOZOA(ECTOPROCTA)		*	1	8	CYPHOHAUTES
*		*			
*	*	*	1	32	OTHER
CHORDATA-URCHCRDATA					
LARVACEA					
*	APPENDICULARIA	*	1	19	OTHER
THALIACEA		*			
*	DOLIOUM	*	1	20	MEDUSAE
CNIDARIA (COELENTERATA)					
HYDROZCA		*			
*		*	1	1	LARVA
MOLLUSCA		*			
GASTROPODA		*	1	1	LARVA
*		*			
PELECYPODA		*	1	1	LARVA
*		*			

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76	STATION: M3	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 132 REVOLUTIONS:	100					
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA	*	*				
*	*	*				
*	*	*				
ARTHROPODA						
CRUSTACEA						
CLADOCERA	*	*				
*	*	*				
EVADE	NORDMANNI		1	2		OTHER
*						
EVADE	SPINIFERA		1	4		OTHER
*						
PENILIA	AVIROSTRIS		1	4		OTHER
*						
PCDON	POLYPHEMOIDES		1	2		OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUSI		1	4	MALE	
*						
ACARTIA	TONSA		1	16	FEMALE	
*						
ACARTIA	TONSA		1	45	MALE	
*						
ACARTIA	TONSA		2	131		IMMATURE
*						
PARACALANIDAE						
PARACALANUS	PARVUS		1	10		IMMATURE
*						
PARACALANUS	PARVUS		1	13	FEMALE	
*						
PARACALANUS	PARVUS		1	12	MALE	
*						
PONTELLIDIAE						
LABIOCERA	TRISPINOSA		1	3		IMMATURE
*						
PSEUDOCALANIDAE						
CLAUSOCALANUS	ARCUIORNIS		1	2	FEMALE	
*						
CLAUSOCALANUS	ARCUIORNIS		1	2	MALE	
*						
CLAUSOCALANUS	FURCATUS		1	4	FEMALE	
*						
CLAUSOCALANUS	MASTIGOPHORUS		1	1		IMMATURE
*						
CLAUSOCALANUS	MASTIGOPHORUS		1	1	FEMALE	
*						
TORTANIDAE						
TORTANUS	DISCAUDATUS		1	1	MALE	
*						
DECAPODA						
BRACHYURA	*	*		1	2	ZOEA
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76 STATION: M3
ALIQUOT: 132 REVOLUTIONS:

MARINA DEL REY
100

POP
CODE

**POP
COUNT**

SEX

MATURITY

BRYOZOA (ECTOPROCTA)	*	1	5	CYPHOHAUTES
CHAETOGNATHA	*			
(ARROW-WORM)	*	1	2	OTHER
CHORDATA	*			
OSTEICHTHYS	*			
LARVACEA	*	1	2	EGG
APPENDICULARIA	*	1	31	OTHER
THALIACEA	*			
DOLIOLUM	*	1	17	OTHER
CNIDARIA (COELENTERATA)				
HYDROZOA	*	1	11	MEDUSAE
SIPHONOPHORA	*	1	1	OTHER
MOLLUSCA	*			
PELECYPODA	*			
LARVA	*			

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76	STATION: M4	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 164 REVOLUTIONS:	160					
ANIMAL						
ARTHROPOCA						
CRUSTACEA						
*						
*	*	*	1	1		OTHER
CLADOCERA	*					
*						
EVADNE		NORDMANNI	1	7		OTHER
*						
EVADNE		SPINIFERA	1	1		OTHER
*						
PENILIA		AVIROSTRIS	1	4		OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		CLAUSI	1	1	FEMALE	
*						
ACARTIA		TONSA	2	104	FEMALE	
*						
ACARTIA		TONSA	2	124	MALE	
*						
ACARTIA		TONSA	1	67		INMATURE
*						
PARACALANIDAE						
PARACALANUS		PARVUS	1	7		INMATURE
*						
PARACALANUS		PARVUS	1	7	FEMALE	
*						
PARACALANUS		PARVUS	1	2	MALE	
*						
PONTELLIDI						
LABIDOCERA		TRISPINOSA	1	6		INMATURE
*						
PSEUDOCALANIDAE						
CLAUSOCALANUS		PURCATUS	1	1	FEMALE	
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS		ANGLICUS	1	1		INMATURE
*						
COPEPODA-HARPACTICOIDA						
TACHIOIDI						
EUTERPIA		ACUTIFRONS	1	1		OTHER
*						
THORACICA						
*						
(BARNACLE)	*	*	1	1		NAUPLIUS
BRYOZOA(ECTOPROCTA)	*					
*						
*	*	*	1	1		CYPHOHAUTES
CHORDATA-UROCHORDATA						
LARVACEA	*					
*						
APPENDICULARIA	*	*	1	2		OTHER
*						
THALIACEA	*					
*						
DOLIOLUM	*	*	1	1		OTHER
*						
CNIDARIA (COELENTERATA)						
HYDROZOA	*		1	1		MEDUSAE
*						
*	*	*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76	STATION: MS	WATER TEMP: 17.9	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 1128 REVOLUTIONS:						
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA						
*						
*						
*	*					
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
EVADNE	NORDMANNI					
*						
PEMELIA	AVIROSTRIS					
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TENSA					
*						
ACARTIA	TENSA					
*						
ACARTIA	TENSA					
*						
PARACALANOIDAE						
PARACALANUS	PARVUS					
*						
PARACALANUS	PARVUS					
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA					
*						
LABIDOCERA	TRISPINOSA					
*						
COPEPODA-CYCLOPOOIDA						
DITHONIIDAE						
CITHONA	SIMILIS					
*						
CHORDATA-UROCHERDATA						
LARVACEA						
*						
*						
APPENDICULARIA	*					
*						
THALIACEA						
*						
*						
DOLIDUM	*					
*						
CNIDARIA (COELENTERATA)						
HYDROZOA						
*						
*						
*	*					
1						
2						
MEDUSAE						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76	STATION: 46	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 1256 REVOLUTIONS:	300					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
* EVADNE	NORDMANNI		1	4		OTHER
* PENILIA	AVIROSTRIS		1	4		OTHER
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	131	MALE	
*	TONSA		2	206		INMATURE
ACARTIA	TONSA		2	179	FEMALE	
*						
PARACALANIDAE						
PARACALANUS	PARYUS		1	1	FEMALE	
*	PARYUS		1	2		INMATURE
PARACALANUS	PARYUS		1	2	MALE	
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA		1	5		INMATURE
*						
THORACICA						
*	*		1	1		NAUPLIUS
(BARNACLE)						
CHORDATA-UROCHORDATA						
LARVACEA						
*						
*						
APPENDICULARIA	*		1	1		OTHER
*						
THALIACEA						
*						
*						
OCLICLUM	*		1	1		OTHER
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76 STATION: M7 MARINA DEL REY
 ALIQUOT: 1128 REVOLUTIONS: 110

POP CODE POP COUNT SEX MATURITY

ANIMAL					
ARTHROPODA					
CRUSTACEA					
CLADOCERA					
*					
EUDINE	NORDMANNI	1	1	OTHER	
*					
COPEPODA-CALANOIDA					
ACARTIIDAE					
ACARTIA	TONSA	2	294	MALE	
*					
ACARTIA	TONSA	2	278	INMATURE	
*					
ACARTIA	TONSA	2	167	FEMALE	
*					
PONTELLIDAE					
LABIDOCERA	TRISPINOSA	1	1	INMATURE	
*					
ISOPODAA					
*					
*	*	1	1	OTHER	
CNIDARIA (COELENTERATA)					
HYDROZOA					
*					
*					
*	*	1	2	MECUSAE	

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76	STATION: MB	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
		238				
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
EVADNE		SPINIFERA		1	1	OTHER
*						
PENILTA		AVIROSTRIS		1	2	OTHER
*						
COPEPODA-CALANCIIDA						
ACARTIIDAE						
ACARTIA		TONSA		2	322	MALE
*						
ACARTIA		TONSA		2	121	FEMALE
*						
ACARTIA		TONSA		2	310	IMMATURE
*						
PARACALANIIDAE						
PARACALANUS		PARVUS		1	2	FEMALE
*						
CHORDATA-UROCHERDATA						
THALIACEA						
*						
*						
OCLICOLUM	*	*		1	2	OTHER
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76	STATION: M9	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
		265				
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA						
*						
*	*			1	1	OTHER
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
EVADNE		SPINIFERA		1	1	OTHER
*						
FENILIA		AVIROSTRIS		1	1	OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		TONSA		2	201	MALE
*						
ACARTIA		TONSA		2	214	INMATURE
*						
ACARTIA		TONSA		2	163	FEMALE
*						
DECAPODA						
BRACHYURA						
*	*			1	1	ZOEA
*	*					
ISOPODA						
*	*			1	1	OTHER
*	*					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76 STATION: M10 MARINA DEL REY
 ALIQUOT: 1256 REVOLUTIONS: 332

POP
CODE

POP
COUNT

SEX

MATURITY

ANIMAL					
ARTHROPODA					
CRUSTACEA					
CLADOCERA					
*					
EVADNE	NORDMANNI	1	1		OTHER
*					
PENILIA	AVIROSTRIS	1	1		OTHER
*					
COPEPODA-CALANOIDA					
ACARTIIDAE					
ACARTIA	CLAUSI	1	1	FEMALE	
*					
ACARTIA	TONSA	2	292	FEMALE	
*					
ACARTIA	TONSA	2	290		IMMATURE
*					
ACARTIA	TONSA	2	220	MALE	
*					
PARACALANIDAE					
PARACALANUS	PARYUS	1	1		IMMATURE
*					
PARACALANUS	PARYUS	1	1	FEMALE	
*					
CHORDATA-UROCHORDATA					
THALIACEA					
*					
*					
DOLIOLUM	*	1	1		OTHER
*					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76 STATION: M11 MARINA DEL REY
 ALIQUOT: 1128 REVOLUTIONS: 160

		POP CODE	POP COUNT	SEX	MATURITY
ANIMAL					
ARTHROPODA					
CRUSTACEA					
COPEPODA-CALANOIDA					
ACARTIIDAE					
ACARTIA	TONSA	2	326	MALE	
*					
ACARTIA	TONSA	2	270		INMATURE
*					
ACARTIA	TONSA	2	204	FEMALE	
*					
PARACALANIDAE					
PARACALANUS	PARVUS	1	3		INMATURE
*					
PARACALANUS	PARVUS	1	1	FEMALE	
*					
COPEPODA-HARPACTECOIDA					
TACHICIICAE					
ELTERPINIA	ACUTIFRONS	1	1		OTHER
*					
ISOPODA					
*					
*	*	1	1		OTHER
CHORDATA					
OSTEICHTHYS					
*					
*					
*	*	1	1		LARVA
CNIDARIA (COELENTERATA)					
HYDROZOA					
*					
*					
*	*	1	1		MEDUSAE
*					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 1/20/77	STATION: M1	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 132 REVOLUTIONS		163				
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA						
*						
*	*			1	*	
ARTHROPODA						
CRUSTACEA						
*						
*	*			1	1	NAUPLIUS
(COPEPOD)						
CLADOCERA						
*						
EVADNE		NORDMANNI		1	4	OTHER
*						
EVADNE		SPINIFERA		1	3	OTHER
*						
PENELIA		AVIROSTRIS		1	5	OTHER
*						
COPEPODA-CALANIDA						
ACARTIIDAE						
ACARTIA		CLAUSI		1	1	MALE
*						
ACARTIA		TONSA		2	239	IMMATURE
*						
ACARTIA		TONSA		1	57	MALE
*						
ACARTIA		TONSA		1	46	FEMALE
*						
EUCALANIDAE						
EUCALANUS		GRASSUS		1	1	FEMALE
*						
PARACALANIDAE						
PARACALANUS		PARVUS		1	78	FEMALE
*						
PARACALANUS		PARVUS		1	20	MALE
*						
PARACALANUS		PARVUS		1	70	IMMATURE
*						
PONTELLIDAE						
LABIDOCERA		TRISPINOSA		1	25	IMMATURE
*						
PSEUDOCALANIDAE						
CLAUSOCALANUS		ARCUIORNIS		1	1	MALE
*						
CLAUSOCALANUS		FURCATUS		1	1	MALE
*						
CLAUSOCALANUS		FURCATUS		1	8	FEMALE
*						
TORTANIIDAE						
TORTANUS		DISCAUDATUS		1	1	IMMATURE
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 1/20/77	STATION: M8	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	ALTOUCT: 132 REVOLUTIONS:	163				
CORYCAEUS		ANGLICUS	1	4		IMMATURE
*						
CORYCAEUS		ANGLICUS	1	6	MALE	
*						
DITHONIIDAE						
DITHONA		PLUMIFERA	1	2		OTHER
*						
DITHONA		SIMILIS	1	1		OTHER
*						
COPEPODA-MARPACTICOIDA						
TACHIDIIDAE						
EUTERPINA		ACUTIFRONS	1	2		OTHER
*						
THORACICA						
*						
*	(BARNACLE)	*	1	11		NAUPLIUS
BRYOZOA(ECTOPROCTA)	*					
*						
*		*	1	9		CYPHOHAUTES
CHAETOGNATHA						
*						
*						
*		*	1	6		OTHER
(ARROW-WORM)						
CHORDATA						
OSTEICHTHYS						
*						
*		*	1	1		EGG
*						
CHORDATA-UROCHORDATA						
LARVACEA						
*						
*		*	2	161		OTHER
APPENDICULARIA						
*						
THALIACEA						
*						
*		*	1	12		OTHER
OLCIOLUM						
*						
CNIOARIA (COELENTERATA)						
HYDROZOA						
*						
*		*	1	1		MEDUSAE
SIPHONOPHORA	*					
*						
*		*	1	1		OTHER
ECHINODERMATA						
HOLOTHUROIDEA						
*						
*		*	1	1		AURICULARIA
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	STATION NUMBER:	POP CODE	POP COUNT	SEX	MATURITY
1/20/77	M1	MARINA DEL REY				
<hr/>						
ANIMAL						
ECHINODERMATA						
OPHIURIDEA						
*	*	*	1	3		OPHTCPLUTEUS
*	*	*				
MOLLUSCA						
GASTROPODA						
*	*	*	1	5		LARVA
*	*	*				
PELECYPODA						
*	*	*	1	14		LARVA
*	*	*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 1/20/77	STATION: M2	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALTOUCH: 116 REVOLUTIONS:	137					
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA						
*						
*						
*		*				
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
EVADNE		NORDMANNI				
*						
EVADNE		SPINTIFERA				
*						
PENILIA		AVIROSTRIS				
*						
PODON		POLYPHEMOIDES				
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		TONSA				
*						
ACARTIA		TONSA				
*						
ACARTIA		TONSA				
*						
CANDACIIDAE						
CANDACIA		*				
*						
EUCALANIDAE						
EUCALANUS		CRASSUS				
*						
PARACALANIDAE						
PARACALANUS		PARVUS				
*						
PARACALANUS		PARVUS				
*						
PARACALANUS		PARVUS				
*						
PONTELLICAE						
LABIDOCERA		TRISPINOSA				
*						
PSELLOCALANIDAE						
CLAUSOCALANUS		*				
*						
CLAUSOCALANUS		ARCUTORNIS				
*						
CLAUSOCALANUS		FURCATUS				
*						
CLAUSOCALANUS		FURCATUS				
*						
CLAUSOCALANUS		FURCATUS				
*						
CLAUSOCALANUS		MASTIGOPHORUS				
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	M2	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
		ALIQUOT:	116 REVOLUTIONS:	137			
<hr/>							
COPEPODA-CYCLOCERCIDA							
CORYCAEIDAE							
CORYCAEUS		ANGLICUS		1	1	FEMALE	
*							
CORYCAEUS		ANGLICUS		1	5	MALE	
*							
CORYCAEUS		ANGLICUS		1	6		INMATURE
*							
OITHONIDAE							
OITHONA		PLUMIFERA		1	1		OTHER
*							
OITHONA		SIMILIS		1	3		OTHER
*							
CNCAEIDAE							
CNCAEA		*		1	1		OTHER
*							
DECAPODA							
BRACHYURA							
*		*		1	4		ZOEA
*							
THORACICA							
*		*		1	14		NAUPLIUS
(BARNACLE)							
BRYOZOA(ECTOPROCTA)		*		1	7		CYPHOHAUTES
*							
*		*					
*		*					
CHAETOGNATHA							
*							
*							
*		*		1	5		OTHER
(ARROW-WORM)							
CHORDATA							
OSTEICHTHYS							
*							
*				1	4		EGG
*		*		1	1		LARVA
*		*					
CHORDATA-UROCHORDATA							
LARVACEA							
*							
*							
APPENDICULARIA		*		2	113		OTHER
*							
THALIACEA							
*							
*							
DOLIOGLUM		*		1	15		OTHER
*							
CNIDARIA (COELENTERATA)							
HYDROZOA							
*							
*				1	3		MEDUSAE
*							

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	M2	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
1/20/77							
ALBUDUT:	116 REVOLUTIONS:	137					
<hr/>							
ANIMAL							
CHILODARIA (COELENTERATA)							
HYDROZOA							
SIPHONOCOPHERA							
*	*	*	*	1	10		OTHER
ECHINODERMATA							
ECHINOIDEA							
*	*	*	*	1	1		ECHINOPLOUTEUS
(SEA-URCHINS)							
OPHIUROIDEA							
*	*	*	*	1	5		OPHIOPLOUTEUS
MOLLUSCA							
GASTROPODA							
*	*	*	*	1	2		LARVA
PELECYPODA							
*	*	*	*	1	5		LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 1/20/77	STATION: M3	MARINA DEL REY	POP CODE	POP COUNT	SEX	NATURITY
ALIQUOT: 116 REVOLUTIONS:	150					
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA						
*						
*						
*						
ARTHROPODA						
CRUSTACEA						
*						
*						
*						
CLADOCERA						
*						
EVADNE	NORDMANNI					
*						
EVADNE	SPINIFERA					
*						
PENILIA	AVIROSTRIS					
*						
PODON	POLYPHENOIDES					
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUSI					
*						
ACARTIA	TONSA					
*						
ACARTIA	TONSA					
*						
ACARTIA	TONSA					
*						
PARACALANIDAE						
PARACALANUS	PARVUS					
*						
PARACALANUS	PARVUS					
*						
PARACALANUS	PARVUS					
*						
PONTELLIDI	TRISPINOSA					
LABIDOCERA						
*						
PSEUDOCALANIDAE						
CLAUSOCALANUS	FURCATUS					
*						
CLAUSOCALANUS	FURCATUS					
*						
TORTANIDAE						
TORTANUS	DISCAUDATUS					
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIIDAE						
CORYCAEUS	AMAZONICUS					
*						
CORYCAEUS	ANGLICUS					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 1/20/77	STATION: M3	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	ALIQUOT: 116 REVOLUTIONS:	158				
*	CORYCAEUS	ANGLICUS	1	8		IMMATURE
*	CORYCAEUS	ANGLICUS	1	2	MALE	
*	DITHONIDAE					
DITHONA		PLUMIFERA	1	1		OTHER
*	DITHONA	SIMILIS	1	1		OTHER
*	DECAPDA					
BRACHYURA						
*		*	1	1		ZOEA
*	THORACICA					
*	(BARNACLE)	*	1	13		NAUPLIUS
BRYOZOA(ECTOPROCTA)						
*		*	1	4		CYPHENAUTES
CHAETODGNATHA						
*		*				
*		*	1	5		OTHER
CHORDATA	(ARROW-WORM)	*				
OSTEICHTHYS						
*		*	1	1		LARVA
CHORDATA-UROCHORDATA						
LARVACEA						
*		*				
APPENDICULARIA	*		1	50		OTHER
THALIACEA	*					
*	DOLIOLEM	*	1	4		OTHER
CNIDARIA (COELENTERATA)						
HYDROZOA						
SIPHONOPHORA						
*		*	1	1		OTHER
MOLLUSCA						
GASTROPODA						
*		*	1	4		LARVA
PELECIPODA						
*		*	1	13		LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 8/20/77	STATION: M6	MARINA DEL REY	POP CODE	POP COUNT	SEX	NATURITY
ALIQUOT: 164 REVOLUTIONS:	172					
<hr/>						
ANIMAL						
ANNELICA						
POLYCHAETA	*					
*	*	*				
*	*	*				
ARTHROPODA						
CRUSTACEA	*					
*	*	*				
*	*	*				
(COPEPOD)						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		CLAUSI				
*			1		1	MALE
ACARTIA		CLAUSI				
*			1		1	FEMALE
ACARTIA		TONSA				
*			2		177	INMATURE
ACARTIA		TONSA				
*			2		219	FEMALE
ACARTIA		TONSA				
*			2		164	MALE
PARACALANIDAE						
PARACALANUS		PARVUS				
*			1		19	FEMALE
PARACALANUS		PARVUS				
*			1		13	INMATURE
PARACALANUS		PARVUS				
*			1		2	MALE
PONTELLIDAE						
LABIDOCERA		TRISPINOSA				
*			1		3	INMATURE
COPEPODA-CYCLOPOIDA						
CORYCAEICAE						
CORYCAEUS	*					
*			1		1	INMATURE
CORYCAEUS		ANGLICUS				
*			1		1	MALE
COPEPODA-HARPACTICOIDA						
*						
*	*	*				
*	*	*				
DECAPODA						
BRACHYURA						
*		*				
*		*				
CARIDEA	*	*				
*		*				
(SHRIMP)						
ISOPODA	*	*				
*	*	*				
*	*	*				
				1	2	OTHER

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 1/20/77 STATION: M6 MARINA DEL REY
 ALIQUOT: 164 REVOLUTIONS: 172

		POP CODE	POP COUNT	SEX	MATURITY
THORACICA	*				
	*				
	(BARNACLE)	*			
CHORDATA					
OSTEICHTHYS	*				
	*				
	*				
	*			1	
	*			1	
	*			3	
CHORDATA-UROCHORDATA					
LARVACEA	*				
	*				
	APPENDICULARIA	*			
	*			1	
CNIDARIA (COELENTERATA)					
HYDROZOA	*				
	*				
	*			1	
	*			2	
SIPHONOPHORA	*				
	*				
	*			1	
	*			1	
MOLLUSCA					
GASTROPODA	*				
	*				
	*			1	
	*			1	
PELECYPODA	*				
	*				
	*			1	
	*			10	
	*				LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 1/20/77	STATION: NS	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 164 REVOLUTIONS:	139					
<hr/>						
ANIMAL						
ANELIDA						
POLYCHAETA	*					
*	*	*		1	2	OTHER
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		TONSA		2	343	IMMATURE
*						
ACARTIA		TONSA		2	235	FEMALE
*						
ACARTIA		TONSA		2	257	MALE
*						
PARACALANIDAE						
PARACALANUS		PARVUS		1	10	IMMATURE
*						
PARACALANUS		PARVUS		1	8	FEMALE
*						
PSEUDOCALANIDAE						
CLAUSOCALANUS	*			1	1	FEMALE
*						
COPEPODA-CYCLOPOIODA						
CORYCAEICAE						
CORYCAEUS		ANGLICUS		1	3	MALE
*						
CITHONIIDAE						
CITHONA		PLUMIFERA		1	1	OTHER
*						
CITHONA		SIMILIS		1	1	OTHER
*						
DECAPODA						
BRACHYURA						
*				1	1	ZOEA
*						
THORACICA						
*						
(BARNACLE)						
CHAETOGNATHA	*					
*						
*						
*						
(ANNEL-WORM)	*			1	1	OTHER
CHORDATA-UROCHORDATA						
LARVACEA	*					
*						
*						
APPENDICULARIA	*			1	6	OTHER
*						
THALIACEA	*					
*						
*						
DCLIOLOM	*			1	1	OTHER
*						
MOLLUSCA						
PELECYPODA	*					
*						
*						
*				1	2	LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 1/20/77 STATION: M6 MARINA DEL REY
 ALIGLCT: 132 REVOLUTIONS: 143

POP CODE POP COUNT SEX MATURITY

ANIMAL

ARTHROPODA

CRUSTACEA

*

*

(COPEPOD)

COPEPODA-CALANOIDA

ACARTIIDAE

ACARTIA

TONSA

1

1

NAUPLIUS

ACARTIA

TONSA

2

307

FEMALE

ACARTIA

TONSA

2

262

MALE

ACARTIA

TONSA

2

156

IMMATURE

*

PARACALANOIDAE

PARACALANUS

PARVUS

1

1

FEMALE

*

PARACALANUS

PARVUS

1

1

IMMATURE

*

PONTELLIIDAE

LABIDOCERA

TRISPINOSA

1

1

IMMATURE

*

COPEPODA-CYCLOPOIDA

OITHONIOIDAE

OITHONA

SINILIS

1

1

OTHER

*

CNCAEIIDAE

CNCAEA

*

1

1

OTHER

*

DECAPDCA

BRACHYURA

*

1

2

ZOEA

*

CHORDATA-UROCHORDATA

LARVACEA

*

APPENDICULARIA

*

*

1

6

OTHER

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	REVS:	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
1/20/77							
ALIQUOT:	132	REVOLUTIONS:	143				
<hr/>							
ANIMAL							
ARTHROPODA							
CRUSTACEA							
COPEPODA-CALANOIDA							
ACARTIIDAE							
ACARTIA	TCHSA			2	271	FEMALE	
*							
ACARTIA	TONSA			2	261		IMMATURE
*							
ACARTIA	TCHSA			2	157	MALE	
*							
PARACALANOIDAE							
PARACALANUS	PARVUS			1	2		IMMATURE
*							
PARACALANUS	PARVUS			1	1	FEMALE	
*							
COPEPODA-CYCLOPOIDA							
CITHONIIDAE							
DITHONA	SIMILIS			1	1		OTHER
*							
DECAPODA							
BRACHYURA	*			1	3		ZOEA
*							

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 1/20/77 STATION: NO MARINA DEL REY
 ALIQLCT: 132 REVOLUTIONS: 140

POP CODE	POP COUNT	SEX	MATURITY
----------	-----------	-----	----------

ANIMAL

ARTHROPODA				
CRUSTACEA				
COPEPODA-CALANCIIDA				
ACARTIIDAE				
ACARTIA	TONSA	2	218	MALE
*				
ACARTIA	TONSA	2	297	IMMATURE
*				
ACARTIA	TONSA	2	404	FEMALE
*				
COPEPODA-HARPACTICOIDA				
*				
*	*		1	1
*				OTHER
CHORDATA-URECHORDATA				
LARVACEA				
*				
*				
APPENDICULARIA	*	1	1	OTHER
*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 1/20/77	STATION: M ₉	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 116 REVOLUTIONS:	90					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	203	MALE	
*						
ACARTIA	TONSA		2	235	FEMALE	
*						
ACARTIA	TCNSA		2	288		IMMATURE
*						
PARACALANIDAE						
PARACALANUS	PARVUS		1	1	FEMALE	
*						
DECAPODA						
BRACHYURA						
*	*		1	47		ZOEA
*						
CARIDEA	*		1	1		ZOEA
*						
(SHRIMP)						
THORACICA						
*	*		1	1		CYPRISS
*						
(BARNACLE)						
CNIOARIA (COELENTERATA)						
HYDROZCA	*		1	2		MEDUSAE
*						
*	*					
*	*					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 1/20/77	STATION: N10	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 132 REVOLUTIONS:	124					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-GAMMARIDEA						
*	*	*	1	1	OTHER	
*	*	*				
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	269	FEMALE	
*	*	*				
ACARTIA	TONSA		2	208	INMATURE	
*	*	*				
ACARTIA	TONSA		2	302	MALE	
*	*	*				
PARACALANIDAE						
PARACALANUS						
*	PARVUS		1	1	FEMALE	
COPEPODA-CYCLOPOIDA						
CITHONIIDAE						
OITHONA	SIMILIS		1	1	OTHER	
*	*	*				
COPEPODA-HARPACTICOIDA						
*	*	*	1	2	OTHER	
*	*	*				
DECAPODA						
BRACHYURA						
*	*	*	1	9	ZOEA	
*	*	*				
ISOPPODA						
*	*	*	1	2	OTHER	
*	*	*				
CHORDATA						
CSTEICHTHYS						
*	*	*	1	3	LARVA	
*	*	*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 1/20/77	STATIONS: M81	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 116 REVOLUTIONS:	109					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		1	54	IMMATURE	
*						
ACARTIA	TONSA		1	90	FEMALE	
*						
ACARTIA	TONSA		1	61	MALE	
*						
PARACALANOIDAE						
PARACALANUS						
*	PARYVUS		1	4	FEMALE	
COPEPODA-CYCLOPOIDA						
CORYCAEICAE						
CORYCAEUS						
*	ANGLICUS		1	1	FEMALE	
CHAETOGNATHA						
*						
*						
*	*		1	1	OTHER	
(ARRCH-WORK)						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	MATERIAL:	POP CODE	POP COUNT	SEX	MATURITY
2/17/77	M1	MARINA DEL REY				
ALIQUOT: 164 REVOLUTIONS:		360				
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
*						
*						
*						
(COPEPOD)						
CLADOCERA						
*						
EUDNE	NORDMANNI		1	2		NAUPLIUS
*						
EUDNE	SPINIFERA		1	24		OTHER
*						
PENILIA	AVIROSTRIS		1	8		OTHER
*						
PEDON	POLYPHEMOIDES		1	11		OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		1	22	MALE	
*						
ACARTIA	TONSA		1	14	FEMALE	
*						
ACARTIA	TONSA		1	64		IMMATURE
*						
PARACALANIDAE						
PARACALANUS	PARVUS		1	8	MALE	
*						
PARACALANUS	PARVUS		1	53	FEMALE	
*						
PARACALANUS	PARVUS		1	40		IMMATURE
*						
PONTELLIDAE						
LABIDOCERA	TRISPINDSA		1	8		IMMATURE
*						
PSEUDOCALANTIDAE						
CLAUSOCALANUS	*		1	1		IMMATURE
*						
CLAUSOCALANUS	FURCATUS		1	2	FEMALE	
*						
TEMERIDAE						
TEMORA	*		1	1		OTHER
*						
COPEPODA-CYCLOPODIDA						
CORYCAEIIDAE						
CORYCAEUS	ANGLICUS		1	1	FEMALE	
*						
CORYCAEUS	ANGLICUS		1	10		IMMATURE
*						
CORYCAEUS	ANGLICUS		1	2	MALE	
*						
CORYCAEUS	GIESBRECHTI		1	1	FEMALE	
*						
OITHONIIDAE						
OITHONA	SIMILIS		1	1		OTHER
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77	STATION: M1	MARINA DEL REY 350	POP CODE	POP COUNT	SEX	MATURITY
AUDIOCT: 164 REVOLUTIONS						
COPEPODA-HARPACTICOIDA						
TACHIDICAE						
EUTERPINA		ACUTIFRONS	1	1		OTHER
*						
THORACICA						
*						
(BARNACLE)	*		1	7		NAUPLIUS
(BARNACLES)	*		1	1		CYPRISS
BRYOZOA(ECTOPROCTA)	*					
*						
*						
*	*		1	1		CYPHONAUTES
CHAETOGNATHA	*					
*						
(ARRCH-ECHIN.)	*		1	5		OTHER
CHORDATA						
OSTEICHTHYS	*					
*			1	2		EGG
CHORDATA-UROCHORDATA						
LARVACEA	*					
*						
APPENDICULARIA	*		1	96		OTHER
THALIACEA	*					
*						
DOLIDOLUM	*		1	14		OTHER
CNIDARIA (COELENTERATA)						
HYDROZOA	*					
*						
*	*		1	2		MEDUSAE
SIPHONOPHORA	*					
*	*		1	19		OTHER
ECHINODERMATA						
ECHINOIDEA	*					
*						
(SEA-URCHIN)	*		1	1		ECHINOPLOUTEUS
MOLLUSCA						
PELECYPODA	*					
*			1	1		LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77	STATION: M2	PARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 164 REVOLUTIONS:	283					
ANIMAL						
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
EVAZONE		NORDMANNI	1	46		OTHER
*						
EVAZONE		SPINIFERA	1	6		OTHER
*						
PENILIA		AVIROSTRIS	1	5		OTHER
*						
PODON		POLYPHENOIDES	1	5		OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		TONSA	1	30	MALE	
*						
ACARTIA		TONSA	2	102		IMMATURE
*						
ACARTIA		TONSA	1	16	FEMALE	
*						
PARACALANIDAE						
PARACALANUS		PARVUS	1	5	MALE	
*						
PARACALANUS		PARVUS	1	47		IMMATURE
*						
PARACALANUS		PARVUS	1	50	FEMALE	
*						
PONTELLIDAE						
LABIDOCERA		TRISPINOSA	1	1	FEMALE	
*						
LABIDOCERA		TRISPINOSA	1	11		IMMATURE
*						
PSEUDOCALANIDAE						
CLAUSCCALANUS		FURCATUS	1	1	FEMALE	
*						
CLAUSCCALANUS		FURCATUS	1	1		IMMATURE
*						
CTENOCALANUS		VANUS	1	1	FEMALE	
*						
CTENOCALANUS		VANUS	1	1		IMMATURE
*						
TENORIDAE						
TENORA	*		1	1		OTHER
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIIDAE						
CORYCAEUS		ARAZONICUS	1	3	FEMALE	
*						
CORYCAEUS		ANGLICUS	1	4	MALE	
*						
CORYCAEUS		ANGLICUS	1	1	FEMALE	
*						
CORYCAEUS	*	ANGLICUS	1	4		IMMATURE
*						
OITHONICAE						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77	STATION: M2	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 164 REVOLUTIONS:	283					
CITHONA	PLUMIFERA		1	2		OTHER
*						
COPEPODA-HARPACTICOIDA						
*						
*	*		1	1		OTHER
*						
TACHIDIIDAE						
EUTERPINA	ACUTIFRONS		1	1		OTHER
*						
THORACICA						
*						
*	*		1	4		NAUPLIUS
(BARNACLE)						
*	*		1	1		CYPRISS
(BARNACLE)						
BRYOZOA(ECTOPROCTA)						
*						
*	*		1	8		CYPHOHAUTES
CHAETOGNATHA						
*						
*	*		1	2		OTHER
(ARROW-WORM)						
CHORDATA						
OSTEICHTHYS						
*						
*	*		1	3		EGG
*	*		1	1		LARVA
*	*					
CHORDATA-UROCHORDATA						
LARVACEA						
*						
*	APPENDICULARIA	*	1	78		OTHER
THALIACEA						
*						
*	DOLIOGLUM	*	1	6		OTHER
CNIDARIA (COELENTERATA)						
HYDROZOA						
*						
*	*		1	1		MEDUSAE
SIPHONOPHORA						
*						
*	*		1	12		OTHER
ECHINODERMATA						
HOLCOTHURIOIDEA						
*			1	1		AURICULARIA
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
2/17/77	M2					
ALIOUOT:	164 REVOLUTIONS:	263				
<hr/>						
ANIMAL						
POLLUSCA						
GASTROPODA	*					
	*					
	*				1	
	*				2	
	*					LARVA
PELECYPODA	*					
	*					
	*				1	
	*				4	
	*					LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS					
DATE: 2/17/77	STATION: M3	MARINA DEL REY	POP CODE	POP COUNT	SEX MATURITY
ALIQUOTS: 132 REVOLUTIONS:	151				
ANIMAL					
ARTHROPODA					
CRUSTACEA					
AMPHIPODA-GAMMARIDEA					
*	*	*	1	1	OTHER
*	*	*			
CLADOCERA					
*	*	*			
EVAZONE	NORDMANNI		2	135	OTHER
*	SPINIFERA		1	25	OTHER
EVAZONE					
*	AVIROSTRIS		1	5	OTHER
PENILIA					
*	POLYPHEMOIDES		1	9	OTHER
PODON					
*					
COPEPODA-CALANOIDA					
ACARTIIDAE					
ACARTIA	TONSA		1	16	MALE
*					
ACARTIA	TONSA		1	25	FEMALE
*					
ACARTIA	TONSA		1	40	IMMATURE
*					
CALANIDAE					
CALANUS	*		1	1	IMMATURE
*					
PARACALANIDAE					
PARACALANUS	PARYUS		1	7	MALE
*					
PARACALANUS	PARYUS		1	43	IMMATURE
*					
PARACALANUS	PARYUS		1	61	FEMALE
*					
PONTELLIDAE					
LABIOCERA	TRISPINOSA		1	4	IMMATURE
*					
PSEUDOCALANIDAE					
CLAUSOCALANUS	*		1	1	IMMATURE
*					
CLAUSOCALANUS	FURCATUS		1	1	FEMALE
*					
COPEPODA-CYCLOPOIDA					
CORYCAEIDAE					
CORYCAEUS	AMAZONICUS		1	2	MALE
*					
CORYCAEUS	ANGLICUS		1	3	MALE
*					
CORYCAEUS	ANGLICUS		1	7	IMMATURE
*					
COPEPODA-HARPACTICOIDA					
*	*	*	1	15	OTHER
*	*	*			
DECAPODA					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77	STATION: M3	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOTS: 132	REVOLUTIONS: 151					
BRACHYURA	*	*	1	4		ZOEA
CARIDEA	*		1	1		ZOEA
(SHRIMP)	*					
THORACICA	*					
(BARNACLE)	*		1	2		NAUPLIUS
(BARNACLE)	*		1	1		CYPRISS
BRYOZOA(ECTOPROCTA)	*					
CHAETODGNATHA	*	*	1	14		CYPHOCAUTES
CHORDATA	*					
CHETICHTHYS	*					
(ARROW-WORM)	*		1	2		OTHER
CHORDATA-UROCHORDATA						
LARVACEA	*					
APPENDICULARIA	*		1	69		OTHER
THALIACEA	*					
DOLIOLEM	*		1	6		OTHER
CNIDARIA (COELENTERATA)						
HYDROZOA	*					
SIPHONOPHORA	*	*	1	1		MEDUSAE
MOLLUSCA						
GASTROPODA-OPISTHOBRANCHIA						
PTERICPODA	*		1	1		OTHER
PELECYPODA	*	*	1	5		LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77 STATION: M4	ALIQUOT: 1256 REVOLUTIONS:	MARINA DEL REY 213	POP CODE	POP COUNT	SEX	MATURITY
ANIMAL						
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*	EVDNE	NORDMANNI		1	11	OTHER
*	EVDNE	SPINIFERA		1	2	OTHER
*	PENILIA	AVIROSTRIS		1	1	OTHER
*	PGDON	POLYPHEMOIDES		1	19	OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		TONSA		2	209	FEMALE
*						
ACARTIA		TONSA		2	154	MALE
*						
ACARTIA		TONSA		1	70	INMATURE
*						
PARACALANIDAE						
PARACALANUS		PARYUS		1	3	FEMALE
*						
PARACALANUS		PARYUS		1	3	INMATURE
*						
PARACALANUS		PARYUS		1	2	MALE
*						
DECAPODA						
BRACHYURA						
*		*		1	1	ZOEA
*						
THORACICA						
*		*		1	1	NAUPLIUS
*						
(BARNACLE)						
CHORDATA-UROCHIMERDATA						
LARVACEA						
*						
*	APPENDICULARIA	*		1	1	OTHER
*						
CNEDARIA (COELENTERATA)						
HYDROZOA						
SIPHONOPHORA		*		1	1	OTHER
*						
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77	STATION: M5	WATER TEMP: 19.0	POP CODE	POP COUNT	SEX	MATURITY
ALTIMETER: 1256 REVOLUTIONS:	190					
ANIMAL						
ANNELIDA						
POLYCHAETA						
*	*					
*	*					
*	*					
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
EUDISTOMA						
*						
PODON						
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		TONSA				
*						
ACARTIA		TONSA				
*						
ACARTIA		TONSA				
*						
PARACALANIDAE						
PARACALANUS		PARVUS				
*						
PARACALANUS		PARVUS				
*						
PARACALANUS		PARVUS				
*						
PONTELLIDAE						
LABIDOCERA		TRISPINOSA				
*						
PSEUDOCALANIDAE						
CLAUSICALANUS		FURCATUS				
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIIDAE						
CORYCAEUS		ANGLICUS				
*						
DECAPODA						
BRACHYURA						
*						
*						
THORACICA						
*						
*						
(BARNACLE)						
CHAETOGNATHA						
*						
*						
*						
(ANNEL-WORM)						
CHORDATA-UROCHORDATA						
LARVACEA						
*						
*						
APPENDICULARIA						
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77	STATION: M6	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALTOUCH: 3128 REVOLUTIONS:	103					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
PCDON	POLYPHENOIDES		1	1		OTHER
*						
COPEPODA-CALANIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	120		IMMATURE
*						
ACARTIA	TONSA		2	242	FEMALE	
*						
ACARTIA	TCNSA		2	162	MALE	
*						
PARACALANIDAE						
PARACALANUS	PARYUS		1	2	FEMALE	
*						
THERACICA						
*						
*	*		1	1		NAUPLIUS
(BARNACLE)						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77	STATIONS: #7	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	ALIQUOT: 1512 REVOLUTIONS:	333				
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIICAE						
ACARTIA	TONSA		2	322	MALE	
*						
ACARTIA	TONSA		2	226	FEMALE	
*						
ACARTIA	TONSA		2	352	IMMATURE	
*						
COPEPODA-CYCLOPODIA						
CORYCAEIDAE						
CORYCAEUS	ANGLICUS		1	1	FEMALE	
*						
DECAPODA						
BRACHYURA						
*	*		1	5	ZOEA	
*	*					
CHORDATA-UROCHORDATA						
LARVACEA						
*						
*	*					
APPENDICULARIA	*		1	4	OTHER	
*						
Cnidaria (Coelenterata)						
HYDREZEA						
*						
*	*		1	1	MEDUSAE	
*	*					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77	STATION: M6	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 1128 REVOLUTIONS:	280					
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA	*					
*	*					
*	*					
*	*					
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	133		IMMATURE
*						
ACARTIA	TONSA		2	147	MALE	
*						
ACARTIA	TONSA		2	241	FEMALE	
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
2/17/77	MP					
ALIQUOT:	164 REVOLUTIONS:	193				
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	320	FEMALE	
*						
ACARTIA	TONSA		1	97		IMMATURE
*						
ACARTIA	TONSA		2	202	MALE	
*						
PONTELLIDAE						
LABIDOCERA						
*						
TRISPINOSA			1	2		IMMATURE
COPEPODA-CYCLOPOOIDA						
CORYCAEIDAE						
CORYCAEUS	ANGLICUS		1	1		IMMATURE
*						
DECAPODA						
BRACHYURA						
*	*			1	53	ZOEA
*						
CARIDEA	*			1	3	ZOEA
*						
(SHRIMP)						
CHORDATA						
OSTEICHTHYS						
*						
*						
*	*			1	4	EGG
*						
CNIDARIA (COELENTERATA)						
HYDROZOA						
*						
*						
*	*			1	2	MEDUSAE
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77	STATION: MID	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	ALIQUOT: 1256 REVOLUTIONS:	230				
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANCIIDA						
ACARTIIDAE						
ACARTIA	TNSA	2	394	FEMALE		
*						
ACARTIA	TNSA	1	93	MALE		
*						
ACARTIA	TNSA	2	139		IMMATURE	
*						
COPEPODA-HARPACTICOIDA						
*						
*	*	1	1		OTHER	
*						
TACHIDIIDAE						
EUTERPINA	ACUTIFRONS	1	1		OTHER	
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77 STATION: MII MARINA DEL REY
 ALIQUOT: 164 REVOLUTIONS: 190

POP CODE POP COUNT SEX MATURITY

ANIMAL

<u>ARTHROPODA</u>				
<u>CRUSTACEA</u>				
<u>CLADOCERA</u>				
*				
POODON	POLYPHENOIDES	1	6	OTHER
*				
<u>COPEPODA-CALANOIDA</u>				
<u>ACARTIIDAE</u>				
ACARTIA	TONSA	2	274	FEMALE
*				
ACARTIA	TONSA	2	226	MALE
*				
ACARTIA	TONSA	2	119	IMMATURE
*				
<u>PARACALANOIDAE</u>				
PARACALANUS	PARYUS	1	2	MALE
*				
PARACALANUS	PARYUS	1	1	IMMATURE
*				
<u>COPEPODA-CYCLOPOIDA</u>				
<u>CORYCAEICAE</u>				
CORYCAEUS	ANGLTCUS	1	3	IMMATURE
*				
<u>DECAPODA</u>				
<u>BRACHYURA</u>				
*	*	1	1	ZOEA
*				
CTENOPHORA	*	1	1	OTHER
*				
*				
*				
*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	MI	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
DATE: 3/17/77	STATION: MI		MARINA DEL REY				
ALIQUOTS: 132 REVOLUTIONS:		244					
<hr/>							
ANIMAL							
ARTHROPODA							
CRUSTACEA							
AMPHIPODA-CANNAEIDEA							
*		*					
*		*					
*		*					
CLADOCERA							
*							
PODON		POLYPHENOIDES					
*							
COPEPODA-CALANOIDA							
ACARTIIDAE							
ACARTIA		CLAUSI					
*							
ACARTIA		CLAUSI					
*							
ACARTIA		TONSA					
*							
ACARTIA		TONSA					
*							
ACARTIA		TONSA					
*							
PARACALANIDAE							
PARACALANUS		PARVUS					
*							
PARACALANUS		PARVUS					
*							
PONTELLIDAE							
LABIDOCERA		TRISPINOSA					
*							
TORTANIDAE							
TORTANUS		DISCAUDATUS					
*							
COPEPODA-CYCLOPODIA							
CORYCAEIDAE							
CORYCAEUS		ANGLICUS					
*							
CORYCAEUS		ANGLICUS					
*							
DITHONIDAE							
CITHONA		PLUMIFERA					
*							
DITHONA		SIRILIS					
*							
DECAPODA							
BRACHYURA							
*		*					
*		*					
THORACICA							
*							
*		*					
(BARNACLE)							
*		*					
(BARNACLE)							
BRYOZOA-LECTOPROCTA)							

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77	STATIONS: M1	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 132 REVOLUTIONS:	244					
*	*	*	1	7		CYPHOHAUTES
*	*	*				
CHAETOGNATHA	*	*				
*	*	*				
*	*	*	1	3		OTHER
CHORDATA	(ARRW-WORM)	*				
OSTEICHTHYS	*	*				
*	*	*	1	2		EGG
CHORDATA-UROCHORDATA	LARVACEA	*				
*	*	*				
APPENDICULARIA	*	*	1	5		OTHER
*	*	*				
CNIDARIA (COELENTERATA)	HYDORCEA	*				
*	*	*	1	1		MEDUSAE
MOLLUSCA	GASTROPODA	*				
*	*	*				
PELECYPODA	*	*	1	2		LARVA
*	*	*				
*	*	*	1	5		LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	W2	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
3/17/77	ALIQUOT:	132 REVOLUTIONS:	600				
<hr/>							
ANIMAL							
ANNELIDA							
POLYCHAETA	*	*	*	1	9		OTHER
ARTHROPODA	*	*	*				
CRUSTACEA	*	*	*	1	1		NAUPLIUS
(COPEPOD)	*	*	*				
CLADOCERA	*	*	*				
EVADNE	NORDMANNI			1	2		OTHER
EVADNE	SPINIFERA			1	9		OTHER
EDDON	POLYPHENOIDES			1	9		OTHER
COPEPODA-CALANOIDA							
ACARTIIDAE							
ACARTIA	CLAUSI			1	2		IMMATURE
ACARTIA	*	*	*	2	263		IMMATURE
ACARTIA	TONSA			1	29	FEMALE	
ACARTIA	TONSA			1	37	MALE	
PARACALANIDAE							
PARACALANUS	PARYUS			1	26	FEMALE	
PARACALANUS	PARYUS			1	11		IMMATURE
PONTELLIDAE							
LABIDOCERA	TRISPINOSA			1	29		IMMATURE
COPÉPODA-CYCLOPODIA							
CORYCAEICAE							
CORYCAEUS	ANGLICUS			1	1	FEMALE	
CORYCAEUS	ANGLICUS			1	2		IMMATURE
OITHONIDAE							
OITHONA	SIMILIS			1	1	OTHER	
COPÉPODA-HARPACTICOIDAE							
*	*	*	*	1	1		OTHER
DECAPODA							
BRACHYURA	*	*	*	1	17		ZOEA
*	*	*	*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77	STATION: M2	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	ALIQUOT: 132 REVOLUTIONS:	600				
<hr/>						
THORACICA						
*	*					
*	(BARNACLE)	*	1	8		CYPRIS
*	(BARNACLE)	*	1	5		NAUPLIUS
BRYOZOA (ECTOPHYCTA)						
*	*					
*	*	*	1	3		CYPHONAUTES
CHORDATA						
OSTEICHTHYS						
*	*					
*	*	*	1	2		LARVA
*	*	*	1	1		EGG
Cnidaria (Coelenterata)						
HYDROZOA						
*	*					
*	*	*	1	4		MEDUSAE
ECHINODERMATA						
OPHIUROIDEA						
*	*					
*	*	*	1	1		OPHICLUTEUS
MOLLUSCA						
GASTROPODA						
*	*					
*	*	*	1	1		OTHER
*	*	*	1	2		LARVA
PELECYPODA						
*	*					
*	*	*	1	2		LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
3/17/77	M3					
<hr/>						
ALIOUCT:	18 REVOLUTIONS:	200				
<hr/>						
ANIMAL						
ANNELICA						
POLYCHAETA	*					
*	*					
*	*	*			1	2
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-GAMMARIDEA	*					
*	*	*			1	1
CLADOCERA	*					
*	PODON	POLYPHENOIDES			1	1
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		TONSA			2	185
*						
ACARTIA		TONSA			2	136
*						
ACARTIA		TONSA			2	187
*						
PARACALANIDAE						
PARACALANUS		PARVUS			1	13
*						
PARACALANUS		PARVUS			1	6
*						
PONTELLIDAE						
LABIDOCERA		TRISPINOSA			1	20
*						
LABIDOCERA		TRISPINOSA			1	2
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS		ANGLICUS			1	1
*						
CORYCAEUS		ANGLICUS			1	2
*						
CITHONIDAE						
CITHONA		PLUMIFERA			1	2
*						
DECAPODA						
BRACHYURA						
*		*			1	3
*						
THORACICA						
*		*			1	3
*	(BARNACLE)	*			1	NAUPLIUS
*	(BARNACLE)	*			1	CYPRIS
BRYOZOA(ECTOPROCTA)	*					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77	STATION: M3	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
*	*	*		1	2	CYPHONAUTES
CHAETOGNATHA	*	*				
*	*	*				
(ARROW-WORM)	*	*		1	3	OTHER
MOLLUSCA	*	*				
GASTROPODA	*	*				
*	*	*		1	3	LARVA
*	*	*		1	1	OTHER
PELECYPODA	*	*				
*	*	*		1	5	LARVA
PHORONIDEA	*	*				
*	*	*		1	1	OTHER

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77	STATION: W4	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 164 REVOLUTIONS:	165					
<hr/>						
ANIMAL						
ANELICA						
POLYCHAETA						
*						
*	*			1	2	OTHER
*	*					
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	588	MALE	
*						
ACARTIA	TONSA		2	411	FEMALE	
*						
ACARTIA	TONSA		1	38	IMMATURE	
*						
PARACALANIDAE						
PARACALANUS	PARVUS		1	2	IMMATURE	
*						
PONTELLIOIDAE						
LABIDOCERA	TRISPINOSA		1	2	IMMATURE	
*						
DECAPODA						
BRACHYURA						
*	*		1	1	ZOEA	
*	*					
ISOPODA						
*	*		1	1	OTHER	
*	*					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATIONS:	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
3/17/77	MS					
ALIQUOT:	1256 REVOLUTIONS:	392				
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA	*					
*	*					
*	*					
*	*					
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	341	MALE	
*						
ACARTIA	TONSA		2	258	FEMALE	
*						
ACARTIA	TONSA		1	30	IMMATURE	
*						
PARACALANIDAE						
PARACALANUS	PARVUS		1	2	IMMATURE	
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA		1	2	IMMATURE	
*						
DECAPODA						
BRACHYURA	*					
*	*					
			1	1	ZOEA	

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
3/17/77	M7					
ALIQUOT:	132 REVOLUTIONS:	125				
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	163	FEMALE	
*						
ACARTIA	TONSA		2	574	MALE	
*						
ACARTIA	TONSA		1	21		IMMATURE
*						
ACARTIA	TONSA		2	660	FEMALE	
*						
ACARTIA	TONSA		2	361	MALE	
*						
ACARTIA	TONSA		1	32		IMMATURE
*						
DECAPODA						
BRACHYURA						
*	*		1	1		ZOEA
*	*					
*	*		1	1		ZOEA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77	STATION: MB	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	ALIQUOT: 164 REVOLUTIONS:	303				
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA	2	342	FEMALE		
*						
ACARTIA	TONSA	2	783	MALE		
*						
ACARTIA	TONSA	2	125		INMATURE	
*						
PARACALANOIDAE						
PARACALANUS	PARVUS	1	1		INMATURE	
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA	1	1		INMATURE	
*						
COPEPODA-HARPACTICOIDA						
*	*	1	1		OTHER	
*	*					
CHAETOGNATHA	*					
*						
*						
*	*					
(ARROW-WORM)	*	1	1		OTHER	

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77	STATION: M9	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIOUCT: 116 REVOLUTIONS:	245					
ANIMAL						
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
POODN	POLYPHENOIDES		1	1		OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	132		INMATURE
*						
ACARTIA	TONSA		2	416	FEMALE	
*						
ACARTIA	TONSA		2	674	MALE	
*						
PARACALANIDAE						
PARACALANUS	PARYUS		1	1	FEMALE	
*						
PARACALANUS	PARYUS		1	1		INMATURE
*						
DECAPODA						
BRACHYURA						
*	*		1	2		ZOEA
*						
CARIDEA	*		1	1		ZOEA
*						
(SHRIMP)						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: M10 MARINA DEL REY
 ALIQUOT: 164 REVOLUTIONS: 175

POP CODE	POP COUNT	SEX	MATURITY
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ANIMAL

ARTHROPODA
 CRUSTACEA
 COPEPODA-CALANOIDA
 ACARTIIDAE
 ACARTIA * TONSA 2 280 MALE
 ACARTIA * TONSA 1 74 IMMATURE
 ACARTIA * TONSA 2 289 FEMALE

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77	STATION: M11	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 1256 REVOLUTIONS:	320					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	270	FEMALE	
*						
ACARTIA	TCNSA		2	526	MALE	
*						
ACARTIA	TCNSA		1	75		IMMATURE
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 4/21/77	STATION: 41	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 1256 REVOLUTIONS:	422					
<hr/>						
ANIMAL						
ARTHROPOD						
CRUSTACEA						
CLADOCERA						
*						
PUDON		POLYPHEMOIDES		1	1	OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		CLAUS I		1	4	IMMATURE
*						
ACARTIA		CLAUS I		1	4	MALE
*						
ACARTIA		CLAUS I		1	5	FEMALE
*						
ACARTIA		TONS A		2	111	MALE
*						
ACARTIA		TONS A		2	184	FEMALE
*						
ACARTIA		TONSA		2	680	IMMATURE
*						
PONTELLIDAE						
CALANOCERA						
*		TRISPINDSA		1	5	IMMATURE
COPEPODA-HARPACTICOIDA						
TACHIDIIDAE						
EUTERPINA						
*		ACUTIFRONS		1	1	OTHER
THORACICA						
*						
*		*		1	2	NAUPLIUS
BRYOZOA(ECTOPROCTA)						
*						
*		*		1	1	CYPHONAUTES
CNIDARIA (COELENTERATA)						
HYDROZOA						
*						
*		*		1	12	MEDUSAE
STYLINOPHORA						
*		*		1	1	OTHER
*		*				

PLANKTON DATA LISTING + HARBORS ENVIRONMENTAL PROJECTS

DATE: 4/21/77 STATION: M2 MARINA DEL REY
ALIQUOT: 1024 REVOLUTIONS: 319

POP CODE	POP COUNT	SEX	MATURITY
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ANIMAL				
ANNELIDA				
POLYCHAETA				
*				
*	*		1	1
ARTHROPODA				
CRUSTACEA				
*				
*	*		1	1
(COPEPOD)				
COPEPODA-CALANOIDA				
ACARTIIDAE				
ACARTIA	CLAUSI		1	5
*	CLAUST		1	3
ACARTIA	CLAUSSI		1	1
*				INMATURE
ACARTIA	TONSA		2	411
*	TONSA		1	93
ACARTIA	TONSA		2	187
*				MALE
PONTELLIDAE				
LABIDOCERA	TRISPINOSEA		1	2
*				INMATURE
COPEPODA-CYCLOPOIODA				
OITHONIDAE				
OITHONA	PLUMIFERA		1	1
*				OTHER
THORACICA				
*			1	2
(BARNACLE)				
CHAETOGNATHA				
*				
*				
*	*		1	1
(ARROW-WORM)				
CHIUDARIA (COELENTERATA)				
HYDROZOA				
*				
*				
*	*		1	1
*				MEDUSAE

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 4/21/77	STATION: 43	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 116 REVOLUTIONS:	228					
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA	*					
*	*	*				
*	*	*				
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUSI					
*						
ACARTIA	CLAUSI					
*						
ACARTIA	TONSA					
*						
ACARTIA	TONSA					
*						
ACARTIA	TONSA					
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA					
*						
COPEPODA-CYCLOPODIA						
DITHONIIDAE						
DITHONA	SIMILIS					
*						
DECAPODA						
BRACHYURA						
*	*					
*						
THORACICA						
*	*					
(BARNACLE)	*					
*	*					
(BARNACLE)	*					
CHORDATA						
OSTEICHTHYS						
*						
*	*					
*	*					
CNTIDARIA (COELENTERATA)						
HYDROZOA						
*						
*	*					
*	*					
MOLLUSCA						
PELECYPODA						
*						
*	*					
*	*					
PHORONIDEA						
*	*					
*	*					
*	*					

PLANKTON DATA LISTING - HARBOR'S ENVIRONMENTAL PROJECTS

DATE:	STATION:	REVS:	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
<hr/>							
DATE: 4/21/77	STATION: 44	REVS:	255				
ALIQUOT: 1024	REVOLUTIONS:						
ANIMAL							
ARTHROPODA							
CRUSTACEA							
COPEPODA-CALANOIDA							
ACARTIIDAE							
ACARTIA	CLAUSt			1	1	MALE	
*							
ACARTIA	CLAUSI			1	3	FEMALE	
*							
ACARTIA	CLAUSI			1	3		IMMATURE
*							
ACARTIA	TONSA			2	140	FEMALE	
*							
ACARTIA	TONSA			2	128		IMMATURE
*							
ACARTIA	TONSA			2	483	MALE	
*							
PONTELLIIDAE							
LABIDOCERA	TRISPINOSA			1	1		IMMATURE
*							
TORTANIIDAE							
TORTANUS	DISCAUDATUS			1	2		IMMATURE
*							
DECAPODA							
BRACHYURA							
*				1	1		ZOEA
*							
THORACICA							
*							
*				1	1		NAUPLIUS
(BARNACLE)							
CHILODARIA (COELENTERATA)							
HYDROZOA							
*							
*				1	1		
*							
*							
MEDUSAE							

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/21/77 STATION: 45 MARINA DEL REY
 ALIQUOT: 1024 REVOLUTIONS: 265

POP CODE	POP COUNT	SEX	MATURITY
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ANIMAL				
ARTHROPODA				
CRUSTACEA				
COPEPODA-CALANOIDA				
ACARTIIDAE				
ACARTIA	CLAUSI	1	1	FEMALE
*				
ACARTIA	TONSA	2	156	INMATURE
*				
ACARTIA	TONSA	2	146	FEMALE
*				
ACARTIA	TONSA	2	346	MALE
*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 4/21/77	STATION: MS ALIQUOT: 1256 REVOLUTIONS	MARINA DEL REY 228	POP CODE	POP COUNT	SEX	MATURITY
<u>ANIMAL</u>						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE			2	420	FEMALE	
ACARTIA	TONSA		2	160	MALE	
*						
ACARTIA	TONSA		1	63		IMMATURE
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS					
		POP CODE	POP COUNT	SEX	MATURITY
DATE: 6/21/77	STATION: M7	MARINA DEL REY			
ALIQUOT: 1024 REVOLUTIONS:	300				
ANIMAL					
ARTHROPODA					
CRUSTACEA					
COPEPODA-CALANOIDA					
ACARTIIDAE					
ACARTIA	TONSA	2	476	MALE	
"					
ACARTIA	TONSA	2	163		IMMATURE
"					
ACARTIA	TONSA	1	69	FEMALE	
"					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
9/21/77	ME					
ALIQUOT:	164 REVOLUTIONS:	160				
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPROPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	489	FEMALE	
*						
ACARTIA	TONSA		1	24		IMMATURE
*						
ACARTIA	TONSA		2	141	MALE	
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS						
DATE: 4/21/77	STATION: 49	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALiquOT: 1256 REVOLUTIONS:	143					
<u>ANIMAL</u>						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	TONSA		2	444	FEMALE	
*						
ACARTIA	TONSA		1	30		IMMATURE
*						
ACARTIA	TONSA		2	302	MALE	
*						
COPEPODA-CYCLOPOIDA						
OITHONIDAE						
OITHONA	PLUMIFERA		1	1		OTHER
*						
CHILODARIA (COELENTERATA)						
HYDROZOA						
*						
*	*			1	1	MEDUSAE
*						

PLANKTON DATA LISTING - MARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
8/21/77		150				
ALIQUOT: 1128 REVOLUTIONS:						
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTILOIDAE						
ACARTIA	TONSA		2	520	FEMALE	
*						
ACARTIA	TONSA		1	22		IMMATURE
*						
ACARTIA	TONSA		2	342	MALE	
*						
CNIDARIA (COELENTERATA)						
HYDROZOA						
*						
*	*			1		
*						MEDUSAE
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/21/77 STATION: M11 MARINA DEL REY
 ALIQUOT: 1128 REVOLUTIONS: 145

POP CODE	POP COUNT	SEX	MATURITY
----------	-----------	-----	----------

ANIMAL

ARTHROPODA			
CRUSTACEA			
COPPODA-CALANOIDA			
ACARTIIDAE			
ACARTIA	TONSA	2	MALE
*			
ACARTIA	TONSA	2	FEMALE
*			
ACARTIA	TONSA	1	INMATURE
*			

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 5/19/77	STATION: W1	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 18 REVOLUTIONS:	318					
<hr/>						
ANIMAL						
ANNELIDA						
POLYCHAETA	*	*		1	1	OTHER
	*	*				
ARTHROPODA						
CRUSTACEA	*	*				
	*	*				
(COPEPOD)						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUSI			1	2	IMMATURE
*						
ACARTIA	CLAUSI			1	3	FEMALE
*						
ACARTIA	CLAUST			1	6	MALE
*						
ACARTIA	TONSA			2	114	IMMATURE
*						
ACARTIA	TONSA			2	132	MALE
*						
ACARTIA	TONSA			2	177	FEMALE
*						
CALANIDAE						
CALANUS	HELGOLANDICUS			1	1	IMMATURE
*						
PARACALANOIDAE						
PARACALANUS	PARYUS			1	12	FEMALE
*						
PARACALANUS	PARYUS			1	4	MALE
*						
PARACALANUS	PARYUS			1	23	IMMATURE
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA			1	22	IMMATURE
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS	AMAZONICUS			1	1	FEMALE
*						
CORYCAEUS	ANGLICUS			1	1	IMMATURE
*						
DITHONIIDAE						
DITHONA	SIMILIS			1	2	OTHER
*						
DECAPODA						
BRACHYURA						
*	*			1	1	MEGALOPS
*	*					
THORACICA						
*	*			1	6	NAUPLIUS
*	*					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 5/19/77	STATION: M1	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 18 REVOLUTIONS:	31#					
<hr/>						
(BARNACLE)						
BRYOZOA(ECTOPROCTA)						
*	*	*		1	8	CYPHOHAUTES
*	*	*				
*	*	*				
*	*	*				
<hr/>						
CHAETOGNATHA						
*	*	*				
*	*	*				
*	*	*				
*	*	*				
<hr/>						
(ARROW-WORM)						
CHORDATA						
OSTEICHTHYS						
*	*	*		1	2	OTHER
*	*	*				
*	*	*				
*	*	*				
<hr/>						
CHORDATA-UROCHORDATA						
LARVACEA						
*	*	*				
*	*	*				
*	*	*				
<hr/>						
APPENDICULARIA						
*	*	*		1	9	OTHER
*	*	*				
<hr/>						
THALIACEA						
*	*	*				
*	*	*				
*	*	*				
<hr/>						
DOLIOGLUM						
*	*	*		1	10	OTHER
*	*	*				
<hr/>						
CNIIDARIA (COELENTERATA)						
HYDROZOA						
*	*	*				
*	*	*				
*	*	*		1	13	MEDUSAE
*	*	*				
<hr/>						
SIPHONOPHORA						
*	*	*		1	1	OTHER
*	*	*				
*	*	*				

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 5/19/77	STATION: M2	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 116 REVOLUTIONS:	130					
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUST		1	8	MALE	
*						
ACARTIA	CLAUST		1	2		IMMATURE
*						
ACARTIA	TONSA		2	118	FEMALE	
*						
ACARTIA	TONSA		1	90	MALE	
*						
ACARTIA	TCNSA		2	192		IMMATURE
*						
CALANIDAE						
CALANUS	HELGOLANDICUS		1	1		IMMATURE
*						
PARACALANIDAE						
PARACALANUS	PARYUS		1	2	MALE	
*						
PARACALANUS	PARYUS		1	19		IMMATURE
*						
PARACALANUS	PARYUS		1	7	FEMALE	
*						
PONTELLIDAE						
LABIDOCERA	TRISPINOSA		1	18		IMMATURE
*						
COPEPODA-CYCLOPOIDA						
CORYCAEIDAE						
CORYCAEUS	AMAZONICUS		1	1	MALE	
*						
CORYCAEUS	AMAZONICUS		1	1	FEMALE	
*						
CORYCAEUS	ANGLICUS		1	2		IMMATURE
*						
DITHONIDAE						
DITHONA	SIMILIS		1	1		OTHER
*						
ONCAEIDAE						
ONCAEA	*		1	1		OTHER
*						
DECAPODA						
BRACHYURA	*		1	1		ZOEA
*						
THORACICA	*		1	4		NAUPLIUS
*						
(BARNACLE)	*					
BRYOZOA(ECTOPRECTA)	*		1	3		CYPHOHAUTES
*						
*						
*						
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 5/19/77 STATION: M2 MARINA DEL REY ALIQUOT: 116 REVOLUTIONS: 130	POP CODE	POP COUNT	SEX	MATURITY
CHORDATA OSTEICHTHYS *	*			
*	*	1	2	EGG
CHORDATA-UROCHORDATA LARVACEA	*			
*	*			
APPENDICULARIA	*	1	3	OTHER
THALIACEA	*			
*	*			
DOLIOLOM	*	1	2	OTHER
CNIDARIA (COELENTERATA) HYDRCZCA	*			
*	*	1	9	MEDUSAE
MOLLUSCA PELECYPODA	*			
*	*	1	1	LARVA

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 5/19/77	STATION: M3	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	ALIQUOT: 132 REVOLUTIONS:	220				
ANIMAL						
ANNELIDA						
POLYCHAETA						
*						
*	*	*		1	1	OTHER
*	*					
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
PODON		POLYPHEMOIDES		1	5	OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA		CLAUSI		1	4	FEMALE
*						
ACARTIA		CLAUSI		1	18	MALE
*						
ACARTIA		CLAUSI		1	5	IMMATURE
*						
ACARTIA		TONSA		1	90	FEMALE
*						
ACARTIA		TONSA		2	122	IMMATURE
*						
ACARTIA		TONSA		1	76	MALE
*						
PARACALANIDAE						
PARACALANUS		PARYUS		1	5	IMMATURE
*						
PARACALANUS		PARYUS		1	2	FEMALE
*						
PONTELLIDAE						
LABIDOCERA		TRISPINOSA		1	1	IMMATURE
*						
COPEPODA-CYCLOPOIDA						
CITHONIIDAE						
GITHONA		PLUNIFERA		1	1	IMMATURE
*						
COPEPODA-HARPACTICOIDA						
*				1	1	OTHER
*						
*						
THORACICA						
*					1	1
*						NAUPLIUS
(BARNACLES)						
ASCHELMINTHES						
NEMATODA						
*						
*				1	1	OTHER
*						
BRYOZOA(ECTOPROCTA)						
*						
*				1	2	CYPHONAUTES
*						
CHORDATA-UROCHERDATA						
ASCIDIACEA						
*						
*				1	1	LARVA
*						
LARVACEA						
*						
*				1	1	OTHER
APPENDICULARIA						
*						
CNIDARIA (COELENTERATA)						
HYDROZOA						
*						
*				1	2	MEDUSAE
*						
MOLLUSCA						
GASTROPODA						
*						
*				1	1	LARVA
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 5/15/77	STATION: MS	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 1256 REVOLUTIONS:	221					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
PODON		POLYPHENOCIDES		1	2	OTHER
*						
COPEPODA-CALANCIIDA						
ACARTIIDAE						
ACARTIA		CLAUSI		1	4	FEMALE
*						
ACARTIA		CLAUSI		1	2	IMMATURE
*						
ACARTIA		CLAUSI		1	1	MALE
*						
ACARTIA		TONSA		2	237	FEMALE
*						
ACARTIA		TONSA		2	203	IMMATURE
*						
ACARTIA		TONSA		2	416	MALE
*						
PARACALANIDAE						
PARACALANUS		PARVUS		1	1	MALE
*						
PARACALANUS		PARVUS		1	2	IMMATURE
*						
TORTANIIDAE						
TORTANUS		DISCAUDATUS		1	1	IMMATURE
*						
DECAPODA						
BRACHYURA		*		1	1	ZOEA
*						
*						
CHORDATA-UROCHORDATA						
LARYACEA		*		1	1	OTHER
*						
*						
APPENDICULARIA		*				
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 5/19/77	STATION: M6	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 116 REVOLUTIONS:	275					
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
CLADOCERA						
*						
PODON	POLYPHENOIDES		1	1		OTHER
*						
COPEPODA-CALANOIDA						
ACARTIIDAE						
ACARTIA	CLAUSI		1	2	MALE	
*						
ACARTIA	TONSA		2	112	MALE	
*						
ACARTIA	TONSA		1	97	FEMALE	
*						
ACARTIA	TONSA		1	72		INMATURE
PARACALANIDAE						
PARACALANUS	PARVUS		1	11		INMATURE
*						
PARACALANUS	PARVUS		1	3	MALE	
*						
PARACALANUS	PARVUS		1	4	FEMALE	
*						
PONTELLIDIADAE						
LABIDOCERA	TRISPINOSA		1	2	FEMALE	
*						
COPEPODA-HARPACTICOIDA						
*						
*	*		1	1		OTHER
*						
TACHIDIIDAE						
EUTERPINA	ACUTIFRONS		1	1		OTHER
*						
DECAPODA						
BRACHYURA						
*			1	3		ZOEA
*						
THORACICA						
*			1	1		CYPRIS
*						
(BARNACLE)						
CHAETOGNATHA						
*						
*						
*						
(ARROW-WORM)	*		1	2		OTHER
CHORDATA-UROCHORDATA						
ASCIIDIACEA						
*						
*						
*						
LARVACEA	*		1	1		LARVA
*						
*						
APPENDICULARIA	*		1	3		OTHER
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 5/19/77	STATION: M7	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
		448				
<hr/>						
ANIMAL						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CALANCIIDA						
ACARTIIDAE						
ACARTIA	CLAUSI		1	1	FEMALE	
*						
ACARTIA	CLAUSI		1	2	MALE	
*						
ACARTIA	TONSA		2	131		IMMATURE
*						
ACARTIA	TONSA		2	297	MALE	
*						
ACARTIA	TONSA		2	206	FEMALE	
*						
PARACALANIIDAE						
PARACALANUS	PARVUS		1	1	FEMALE	
*						
PARACALANUS	PARVUS		1	1		IMMATURE
*						
CHORDATA-UROCHORDATA						
LARVACEA						
*						
*						
APPENDICULARIA	*		1	1		OTHER
*						

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	NO.	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
5/19/77	18	REVOLUTIONS:	185				
<hr/>							
ANIMAL							
ARTHROPODA							
CRUSTACEA		*					
*		*					
*		*					
(COPEPOD)		*					
CLADOCERA		*					
*		*					
PODON			POLYPHENOIDES				
*							
COPEPODA-CALANOIDA							
ACARTIIDAE							
ACARTIA			TONSA				
*							
ACARTIA			TONSA				
*							
ACARTIA			TONSA				
*							
CALANIDAE							
CALANUS			HELGOLANDICUS				
*							
PARACALANIDAE							
PARACALANUS			PARVUS				
*							
PARACALANUS			PARVUS				
*							
PONTELLIDAE							
LABIDOCERA			TRISPINOSA				
*							
PSEUDOCALANIDAE							
CTENOCALANUS			VANUS				
*							
TORTANIDAE							
TORTANUS			DISCAUDATUS				
*							
COPEPODA-CYCLOPOIDA							
OITHONIDAE							
OITHONA		*					
*		*					
ONCAEIDAE							
ONCAEA		*					
*		*					
COPEPODA-HARPACTICOIDA							
*		*					
*		*					
*		*					
CHORDATA-LRCHORDATA							
ASCIIDIACEA		*					
*		*					
*		*					
LARVACEA		*					
*		*					
APPENDICULARIA		*					
*		*					
CNIDARIA (COELENTERATA)							
HYDRCZCA		*					
*		*					
*		*					
*		*					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 5/19/77 STATION: W9 ALIQUOT: 1128 REVOLUTIONS:	MARINA DEL REY 170	POP CODE	POP COUNT	SEX	MATURITY
ANIMAL					
ARTHROPODA					
CRUSTACEA					
COPEPODA-CALANOIDA					
ACARTIIDAE					
ACARTIA	CLAUSI	1	7	MALE	
*					
ACARTIA	TONSA	2	527	MALE	
*					
ACARTIA	TONSA	2	431	FEMALE	
*					
ACARTIA	TONSA	2	124		IMMATURE
*					
PARACALANIDAE					
PARACALANUS	PARYUS	1	1		IMMATURE
*					
COPEPODA-CYCLOPOIDAE					
CORYCAEIDAE					
CORYCAEUS	ANGLICUS	1	1	MALE	
*					
DECAPODA					
BRACHYURA					
*	*	1	3		ZOEA
*					
CARIDEA					
*	*	1	3		ZOEA
(SHRIMP)					
THORACICA					
*	*	1	1		NAUPLIUS
*					
(BARNACLE)					

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE:	STATION:	MICROSCOPIC	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
5/19/77			242				
ALIQUOT:	116 REVOLUTIONS:						
<hr/>							
ANIMAL							
ARTHROPODA							
CRUSTACEA							
COPEPODA-CALANCIIDA							
ACARTIIDAE							
ACARTIA		CLAUSI		1	1	MALE	
*							
ACARTIA		TONSA		2	574	MALE	
*							
ACARTIA		TONSA		2	387	FEMALE	
*							
ACARTIA		TONSA		2	196		IMMATURE
*							
CALANIOIDAE							
CALANUS		HELGOLANDICUS		1	1		IMMATURE
*							
PARACALANIDAE							
PARACALANUS		PARYCUS		1	4		IMMATURE
*							
COPEPODA-HARPACTICOIDA							
TACHIDIIDAE							
EUTERPINA		ACUTIFRONS		1	2		OTHER
*							
THORACICA							
*							
*		*		1	1		NAUPLIUS
(BARNACLE)							
CHORDATA-UROCHORDATA							
ASCIDIACEA							
*							
*		*		1	2		LARVA
*							
LARVACEA							
*		*					
*		APPENDICULARIA	*	1	7		OTHER
*							

PLANKTON DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 5/19/77	STATION: M11	MARINA DEL REY	POD	POP CODE	POP COUNT	SEX	MATURITY
ALIQUOT: 1256 REVOLUTIONS:	156						
<hr/>							
ANIMAL							
ARTHROPODA							
CRUSTACEA							
CLADOCERA							
* PODON							
* POLYPHENOIDES							
COPEPODA-CALANCIIDA							
ACARTIIDAE							
ACARTIA							
* CLAUSI							
ACARTIA							
* CLAUSI							
ACARTIA							
* TENSA							
ACARTIA							
* TONSA							
ACARTIA							
* TONSA							
THORACICA							
* *							
* *							
(BARNACLE)							
CHORDATA-UROCHORDATA							
LARVACEA							
* *							
APPENDICULARIA							
* *							
<hr/>							

APPENDIX D

BENTHIC SPECIES

Population Code Intervals

0 = many, present, few, etc.
(non-numerical quantity)

1 = 1 - 99

2 = 100 - 999

3 = 1000 - 9999

4 = 10,000 - above

-/= species occurrence not detected

5 = presence of colonial animal
that cannot be counted as individuals

BENTHIC DATA LISTING - HARBCRS ENVIRONMENTAL PROJECTS

DATE: 10/28/76 STATION: M1 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

POP CODE POP COUNT SEX MATURITY

ANIMAL					
ANNELICA					
POLYCHAETA					
*					
AMPHARETIDAE					
AMPHARETE	LABROPS		1	1	
*					
CAPITELLIDAE					
CAPITELLA	CAPITATA		2	298	
*					
CAPITITA	AMBISETA		1	7	
*					
CHAETOPTERIDAE					
EPIOCHAETOPTERUS	COSTARUM		1	1	
*					
CIRRATULIDAE					
CAULLERIELLA	*		1	1	IMMATURE
*					
DORVILLEIDAE					
SCHISTOMERINGS (G.D.-STAURONEREIS, SP.-ARTICULATA, RUDOLPHI)	LENGICCRNIS		1	5	
GLYCERIDAE					
GLYCERA	CAPITATA		1	2	
*					
GONIADIDAE					
GONIADA	BRUNNEA		1	1	
*					
LUMBRINERIDAE					
LUMBRINERIS	*		1	3	
*					
LUMBRINERIS	TETRAURA		1	1	
*					
HALCANIDAE					
AXIODTHELLA	*		1	1	
*					
NEPHTYIDAE					
*	*		1	1	IMMATURE
*					
NEREIDAE	*		1	4	IMMATURE
*					
ONUPHIDAE					
DIOPATRA	*		1	2	IMMATURE
*					
DIOPATRA	SPLENODISSIMA		1	2	
*					
OPHELIIDAE					
ARMANCIA	BIOCULATA		1	20	
*					
POLYOPHTHALMUS	PICTUS		1	2	
*					
PHYLLOCOCIDAE					
ETECNE	DILATAE		1	1	
*					
EUMIDA	BIPOLIATA		1	1	
*					
PHYLLODOCE	*		1	3	
*					
POLYNOIDAE					
HARMOTHOE	PRIOPS		1	1	
*					
SPIONIDAE					
PARAPRIONOSPIO	PINNATA		1	5	
*					
POLYODRA	LIGNI		1	1	
*					
POLYODRA	SOCIALIS		1	1	
*					
PRIONOSPIO	CIRRIFERA		1	1	
*					
PRIONOSPIO	HETEROBANCHIA-NEWPORTENSIS		1	9	
*					
PRIONOSPIO	PYGMAEUS		1	1	
*					
PSEUDOPOLYODRA	PAUCIBRANCHIATA		1	7	
*					
SPIOPHANES	MISSIONENSIS		1	3	
*					

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/28/76 STATION: #1 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

POP CODE POP COUNT SEX Maturity

ARTHROPODA				
CRUSTACEA				
AMPHIPODA-CAPRELLIDEA				
*	*			
*	*			
CUNACEA				
*				
CYUROSTYLIS	PACIFICA			
*				
DECAPODA				
*	*			
*	*			
BRACHYURA-CANCRIDAE				
CANCER	ANTHONYI			
*				
BRACHYURA-GRAPSIDAE				
HEMIGRAPSUS	OREGONENSIS			
*				
ISOPODA-VALVIFERA				
IOCTEIIDAE				
EDOTEA	*			
*				
INSECTA				
*				
CHIRONOMIDAE	*			
*	*			
PYCNOGNIDA				
*				
PALLENIIDAE	*			
*	*			
ASCHELMINTHES				
NEMATODA				
*				
*				
*	*			
*	*			
			3	1200

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/28/76	STATION: M1	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	SAMPLE NUMBER 1 OF 2 SAMPLES	GRAB TYPE: CAMPBELL				
ANIMAL						
MOLLUSCA						
GASTROPODA-OPISTHOBRANCHIA						
CEPHALASPIDEA						
AGLAJIDAE						
AGLAJA	*				1	2
*						
GASTROPODA-PROSOBRANCHIA						
MESOGASTROPODA						
NATICIDAE						
NEVERITA		RECLUSIANA			1	1
*						
NEOGASTROPODA						
COLUMBELLIDAE						
MITRELLA	*				1	1
*						
NASSARIIDAE						
NASSARIUS	*	MENOICUS			1	3
*						
NASSARIUS	*	PERPINGUIS			1	1
*						
OLIVIDAE						
OLIVELLA	*	BAETICA			1	1
*						
PELECYPODA						
*					1	2
*						
*		*				
PTERICIDA						
PECTINIDAE						
LETOPECTEN	LATIAURATUS				1	1
(BROAD-EARED-PECTEN)						
VENEROIDA						
CARDIIDAE						
LAEVICARDIUM	SUBSTRIATUM				1	2
*						
COOPERELLIDAE						
COOPERELLA	SUBDIAPHANA				1	9
*						
CRYCINIDAE						
LASAEA	SUBVIRIDES				1	1
*						
MACTRIDAЕ	*				1	2
*						
SPISULA	*				1	1
*						
SOLECURTIIDAE						
TAGELUS	SUBTERES				1	2
*						
TELLINIDAE						
MACOMA	*				1	1
*						
MACOMA	NASUTA				1	3
(BENT-NOSE-CLAM)						
TELLINA	*				1	6
*						
TELLINA	MODESTA				1	36
*						
VENERIDAЕ						
PROTOTHACA	*				1	3
*						
NEMERTEA						
*						
*						
*						
*		*				
ANNELOIDA						
CLIGOCHAETA						
*						
TUBIFICIDAE						
PELOSCELEX	GABRELLAE				1	31
*						

BENTHIC DATA LISTING - HARBOURS ENVIRONMENTAL PROJECTS

DATE: 10/26/76 STATION: M2 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

POP CODE POP COUNT SEX MATURITY

ANIMAL				
ANNELIDA				
CLIGOCHEATA	*			
	*			
	*			
POLYCHAETA	*	*		
	*			
CAPITELLIDAE				
CAPITELLA	*	CAPITATA	2	513
	*			
CAPITITA	*	AMBISETA	1	30
	*			
NCTOMASTUS	*	TENUIS	1	10
	*			
DORVILLEIDAE				
SCHISTOMERINGOS		LONGICORNIS	1	21
(G.D.-STAURONEREIS, SP.-ARTICULATA, RUODOLPHI)				
LUMBRINERIDAE				
LUMBRINERIS	*		1	22
	*			
NEREIDAE				
NEANTHES		ARENACEODENTATA	1	4
	*			
ONUPHIDAE				
DIDOPATRA	*	SPLENDIOISSIMA	1	1
	*			
OPHELIIDAE				
ARMANDIA	*	BICULATA	1	2
	*			
PHYLLOCOCTIDAE				
EUMIDA	*	BIFOLIATA	1	1
	*			
SPICNIDAE				
PARAPRIONOSPIO	*	PINNATA	1	7
	*			
POLYDORA	*	LIGNE	1	2
	*			
PRIONOSPIO	*	CIRRIFERA	1	22
	*			
PRIONOSPIO	*	HETEROBANCHIA-NEWPORTENSIS	1	12
	*			
PRIONOSPTO	*	PYGNAEUS	1	1
	*			
ARTHROPODA				
CRUSTACEA				
AMPHIPODA-GAMMARIDEA	*			
	*			
	*		1	1
COPEPODA-CYCLOPOIDA	*			
	*			
	*		1	3
CUNACEA	*			

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/28/76 STATION: M2 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

		POP CODE	POP COUNT	SEX	MATURITY
*	DIASTYLOPSIS	TENUIS	1	1	
*	OXYUROSTYLIS	PACIFICA	1	8	
*	DECAPDA BRACHYURA-PINNATHERIDAE	*	1	1	
*	ASCHELINTHES	*	1	25	
NEMATODA	*	*	1	2	IMMATURE
MOLLUSCA	GASTROPODA-PROSHERANCHIA	CARENATA	1	1	
NEOGASTROPODA	*	*	1	2	IMMATURE
COLUMBELLIDAE	*	SUBSTRIATUM	1	3	
MITRELLA	*	PEDROANA	1	1	
NASSARIIDAE	*	SUBTERES	1	2	IMMATURE
NASSARIUS	*	ACOLASTA	1	1	
PELECYPODA	*	NASUTA	1	25	
VENERIDA	*	*	1	2	IMMATURE
CARDIIDAE	*	MODESTA	1	6	
LAEVICARDIUM	*	PROTOTHACA	1	2	IMMATURE
MONTACUTIDAE	*	*	1	22	
NYSELLA	*				
SOLECURTIOAE	*				
TAGELUS	*				
TELLINIDAE	*				
MACOMA	*				
MACOMA	(BENT-NOSE-CLAM)				
TELLINA	*				
TELLINA	*				
VENERIDA	*				
PROTOTHACA	*				
ANNELIDA					
DIGOCHAETA					
TUBIFICIDAE	*				
PELOSCOLEX	*	GABELLAEE	1	22	

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/28/76 STATION: M3 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

		POP CODE	POP COUNT	SEX	MATURITY
<hr/>					
ANIMAL					
ANNELIDA					
CLIGOCHAETA					
*					
*	*			1	20
*					
POLYCHAETA					
*					
CAPITELLIDAE					
CAPITELLA	CAPITATA			1	1
*					
CAPITITA	AMBISETA			1	70
*					
NOTOMASTUS	TENUIS			1	53
*					
CIRRATULIDAE					
CAULLERIELLA	HAPATA			1	3
*					
CIRRATULUS	CIRRATUS			1	9
*					
THARYX	*			1	10
*					
DORVILLEIDAE					
SCHISTOMERINGOS	LONGICORNIS			1	6
(G.D.-STAURONEREIS,SP.-ARTICULATA,RUDOLPHI)					
GLYCERIDAE					
GLYCERA	AMERICANA			1	2
*					
GLYCERA	ROUXII			1	1
*					
HESIONIIDAE					
GYPTIS	BRUNNEA			1	1
*					
LUMERINERIDAE					
LUMEFINERIS	*			1	10
*					
NEREIDAE					
NEANTHES	ARENACEODENTATA			1	3
*					
OPHELIIDAE					
ARMANDIA	BICULATA			1	5
*					
POLYOPHTHALMUS	PICTUS			1	18
*					
OBENIIDAE					
HAPLOSCOLEOPLIOS	ELONGATUS			1	6
*					
PHYLLOCOCIDAE					
ANAITIDES	*			1	1
*					IMMATURE
ETEGNE	*			1	1
*					
EULALIA	*			1	1
*					IMMATURE
POLYNOTIDAE					

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/26/76 STATION: M3 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

		POP CODE	POP COUNT	SEX	MATURITY
*	*	1	1		INMATURE
POYNOIDAE					
HARMOTHOE	HIRSUTA	1	1		
SABELLIDAE					
CHONE	*	1	11		
PCTAMILLA	*	1	3		
SERPULIDAE					
HYDROIDES	PACIFICA	2	333		
SPIONIDAE					
BOCCACCIA	HANATA-(UNCATA)	1	89		
POLYDORA	LIGNI	1	28		
PRIONOSPIO	CIRRIFERA	1	10		
PRIONOSPIO	HETERODRANCHIA-NEWPORTENSIS	1	28		
PSEUDOPOLYDORA	PAUCIBRANCHIATA	1	14		
SPIOPHANES	MISSIONENSIS	1	2		
STREBLOSPIO	BENDICTI	1	1		
SPIORBIDAE					
JANUA (DEXIOSPIRA)	BRASILIENSIS	1	90		
SYLLIDAE					
EXOGONE	*	1	2		
SPHAEROSYLLIS	*	1	1		
TEREBELLIDAE					
PISTA	DISJUNCTA	1	2		
ARTHROPODA					
CRUSTACEA					
AMPHIPODA-CAMMARIDEA					
*	*	1	70		
COPEPODA-CYCLOPODIA	*				
*	*	1	20		
DECAPODA					
*	*	1	2	LARVA	
BRACHYURA-CANCRIIDAE					
CANCER	*	1	3	INMATURE	
BRACHYURA-GRAPSIDAE					
HEMIGRAPSIUS	OREGONENSIS	1	4		
CARIDEA-ALPHEIDAE					
ALPHEUS	EQUIDACTYLUS	1	3		

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/28/76 STATION: M3	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL					
ANIMAL					
ARTHROPODA					
CRUSTACEA					
ISOPODA	*				
*	*				
TANAICACEA	*				
*					
LEPTOCHELIA	*				
*					
THORACICA	*				
*					
BALANUS	PACIFICUS				
*					
BALANUS	TINTINNABULUM-CALIFORNICUS				
*					
BALANUS	TRIGONUS				
*					
PYCNOGONIDA					
*					
EUPENTACTA	*				
*					
BRYOZOA (ECTOPROCTA)					
GYMNOCLAENATA					
CHEILOSTOMATA					
CHEILOPORINIDAE					
WATERSIPORA	ARCUATA				
*					
BICELLERIELLIDAE					
BUGULA	CALIFORNICA				
*					
BUGULA	NERITINA				
*					
CELLEPORIDAE					
CILLEPORA (MOLDOPORELLA) BRUNNEA					
*					
CHEILOPORINIDAE					
CRYPTOSULA	PALLASIANA				
*					
SCHIZOPORELLIDAE					
SCHIZOPORELLA	UNICORNIS				
*					
CTENOSTOMATA					
VESICULARIIDAE					
BOWERBANKIA	GRACILIS				
*					
CHORDATA					
OSTEICHTHYS					
GOBIOSOCIFORMES					
GOBIOSOCIDAE					
GOBIOSOX	RHESSODON				
(CALIFORNIA-CLINGFISH)					
CHORDATA-UROCHORDATA					
ASCIDIACEA					
STOLIDOBANCHIA					
*					
*	*				
BOTRYLLUS	*				
*					
STYELA	CLAVA				
*					
STYELA	PLICATA				
*					
CNIDARIA (COELENTERATA)					
ANTHOZOA					
ACTINIARIA					
*					
ANTHOPLLEURA	*				
*					
					INMATURE

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/26/76 STATION: M3 MARINA DEL REY SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL	POP CODE	POP COUNT	SEX	MATURITY
ECHINODERMATA OPHIUROIDEA *				
*	*		1	3
MOLLUSCA GASTROPODA-PROSOBRANCHIA MESOGASTROPODA				IMMATURE
LAMELLARIIDAE	SHARONAE		1	1
*				
CALYPTRAEIDAE				
CREPIDULA (ONYX-SLIPPER-SHELL)	ONYX		2	663
CREPIDULA	PREFGRANS		1	6
*				
CREPITATELLA (HALF-SLIPPER-SHELL)	LINGULATA		1	91
NEOGASTROPODA				
COLUMBELLIDAE				
MITRELLA	*		1	3
*				
MITRELLA	CARINATA		1	4
*				
PELECYPODA				
*				
*	*		1	2
MYTILICIDA				IMMATURE
MYTILIDAE				
MYTILUS (BAY-MUSSEL)	EDULIS		1	23
PTERICIDA				
OSTREIDAE				
OSTREA	LURIDA		1	2
*				
VENERIDA				
CARDIIDAE				
LAEVICARDIUM	SUBSTRATUM		1	4
*				
MONTACUTILOIDAE				
GLOBITELLA	*		1	8
*				

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/26/76 STATION: M3 MARINA DEL REY SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL	POP CODE	POP COUNT	SEX	MATURITY
ANIMAL				
MOLLUSCA				
PELECYPODA				
VENERIDA				
PETRICOLIDAE				
PETRICOLA	*			
*		1	12	
TELLINIDAE				
LEPORIMETIS	OBEZA			
*		1	1	IMMATURE
VENERIDAE				
PROTOTHACA	*			
*		1	35	IMMATURE
POLYPLOCOPHORA (AMPHINEURA)				
*				
*	*			
*	*	1	2	IMMATURE
NEMERTEA				
*				
*				
*	*			
*	*	1	2	
PROTOZOA				
SARCODINA				
FORAMINIFERA	*			
*	*	1	10	

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/26/76 STATION: M4 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

POP CODE	POP COUNT	SEX	MATURITY
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ANIMAL				
ANNELIDA				
* POLYNOIDA				
MARMOTHOE	(?) SCRYPTORIA	1	3	
* OLIGOCHAETA				
*	*	1	13	
*	*			
POLYCHAETA				
* CAPITELLIDAE				
CAPITELLA	CAPITATA	1	1	
* CAPITITA	AMBISETA	2	386	
* NECTONASTUS	TENUIS	1	66	
* CIRRATULIDAE				
CAULLERIELLA	*	1	1	IMMATURE
* CAULLERIELLA	HANATA	1	1	
* CHAETOZONE	CORONA	1	3	
* THARYX	*	1	11	
* THARYX	NRG-TESSELATA	1	1	
* COSSURIDAE				
COSSURA	CANDIDA	1	3	
* DORVILLEIDAE				
SCHISTOMERINGOS	LONGICORNIS	1	27	
(G.O.-STAURONEREIS, SP.-ARTICULATA, RUDDOLPHI)				
GONIADIDAE				
GLYCINDE	ARMIGERA	1	1	
* GONIADA	BRUNNEA	1	23	
LUXERINERIDAE				
LUMBRINERIS	*	2	246	
* NEREIDAE				
NEANTHES	ARENACEODENTATA	1	1	
* NERETS	LATESCENS	1	1	
* NEREIS	PROCERA	1	2	
ONUPHIDAE				
DIOPATRA	*	1	1	IMMATURE
*				

BENTHIC DATA LISTING - MARBORS ENVIRONMENTAL PROJECTS

DATE: 10/28/76 STATION: M4 MARINA DEL REY

SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

	POP CODE	POP COUNT	SEX	MATURITY
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OPHELIIDAE				
ARMANDIA	BIOCULATA	1	0	
*				
POLYOPHTHALMUS	PICTUS	1	4	
*				
ORBINIICAE				
HAPLOSCOLOPLOS	ELONGATUS	1	84	
*				
PHYLLOCOCIDAE				
PHYLLOCOC	*	1	1	
*				
POLYNOIDAE				
HARMOTHOE	LIBERTI	1	2	
*				
SABELLIDAE				
CHONE	*	1	1	
*				
PETAVILLA	*	1	1	
*				
SERPULIDAE				
HYCROIDES	PACIFICA	1	14	
*				
SPICINICAE				
NERINIDES	ACUTA	1	22	
*				
POLYDRA	LIGNI	1	9	
*				
PRIONOSPIO	CIRRIFERA	1	24	
*				
PRIONOSPIO	HETEROBANCHIA-NEWPORTENSIS	1	67	
*				
PRIONOSPIO	PYGMAEUS	1	33	
*				
PSEUDOPOLYDORA	PAUCIBRANCHIATA	1	17	
*				
SPIOPHANES	MISSIONENSIS	1	12	
*				
STREBLOSPIO	BENEDICTI	1	5	
*				
SYLLIDAE				
SPAEROSYLLIS	*	1	2	
*				
TEREBELLIDAE				
ANAEANA	OCCIDENTALIS	1	53	
*				
ARTHROPODA				
CRUSTACEA				
AMPHIPODA-CAPRELLIOIDEA				
*				
*	*	1	7	
*				
AMPHIPODA-GAMMARIOIDEA				
*				
*	*	1	10	
*				
CUNACEA				
*				
DIASTYLOPSIS	TENUIS	1	4	
*				
OXYUROSTYLIS	PACIFICA	1	25	
*				

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/26/76 STATION: M4 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

POP CODE	POP COUNT	SEX	MATURITY
----------	-----------	-----	----------

ANIMAL		POP CODE	POP COUNT	SEX	MATURITY
ARTHROPODA					
CRUSTACEA					
DECAPODA					
BRACHYURA-GRAPSIDAE					
HEMIGRAPSUS	*			1	1
*					
BRACHYURA-PINNATHERIDAE					
*	*			1	1
*					
CARIDEA-ALPHEIDAE					
ALPHEUS	EQUIDACTYLUS			1	5
*					
MACRURA-CALLIANASSIDAE					
CALLIANASSA	*			1	1
(BURROWING-SHRIMP)					
OSTRACODA					
*					
CYLINDROLEBERIS	*			1	1
*					
PHILOMEDES	*			1	1
*					
PYCHOGONIDA					
*					
*					
ELPENACTA	*			1	1
*					
ASCHELMINTHES					
NEMATODA					
*					
*					
*	*			1	15
*					
BRYOZA (ECTOPROCTA)					
GYMNOLAEMATA					
CTENOSTOMATA					
VESICULARIIDAE					
ZOOBCTRYON	VERTICILLATUM			1	1
*					
CHEILOSTOMATA					
BICELLERIELLIIDAE					
BUGULA	NERITINA			1	4
*					
CHORDATA-UROCHORDATA					
ASCIDIACEA					
STOLICOBRANCHIA					
*					
STYELA	CLAVA			1	2
*					
CNIDARIA (COELENTERATA)					
HYDROZOA					
HYDRCIDA					
PLUMULARIIDAE					
AGLAOPHENIA	NR--PLUNA			1	3

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/28/76	STATION: M4	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
SAMPLE NUMBER 1 OF 2 SAMPLES		GRAB TYPE: CAMPBELL				
<hr/>						
* MOLLUSCA						
PELECYPODIA						
MYTILOIDA						
MYTILIODE						
MOCIOLUS						
*						
VENEROIDA						
COOPERELLIDAE						
COOPERELLA						
SUBDIAPHANA						
1 1						
*						
MONTACUTIDAE						
CROBITELLA						
*						
PETRICOLIDAE						
PETRICOLA						
TELLINIALIS						
1 1						
*						
SEVELIDAE						
CUMINGIA						
CALIFORNICA						
1 1						
*						
THEORA						
LUBRICA						
1 1						
*						
SOLECURTIDAE						
TAGELUS						
SUBTERES						
1 14						
*						
TELLINIDAE						
LEPORIMETIS						
OBESA						
1 26						
*						
MACOMA						
(BENT-NOSE-CLAM)						
NASUTA						
1 1						
TELLINA						
*						
1 6						
VENERIDAE						
PROTOTHACA						
*						
1 15						
INMATURE						
NEMERTEA						
*						
*						
*						
*						
1 5						

BENTHIC DATA LISTING - MARBORS ENVIRONMENTAL PROJECTS

DATE: 10/28/76 STATION: MS MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

POP CODE POP COUNT SEX MATURITY

ANIMAL

POLYCHAETA				
* COSSURIDAE				
COSSURA *	PYGODACTYLATA	1	7	
ANNELOIDA				
POLYCHAETA				
* CAPITELLIDAE				
CAPITITA	AMBISETA	2	357	
* NCTOMASTUS	TENUIS	1	1	
* CIRRATULIDAE				
CHAETODONE	CORONA	1	65	
* THARYX	*	1	2	
* THARYX	NR.-TESSELATA	1	6	
* COSSURIDAE				
COSSURA *	CANDIDA	1	4	
DORVILLEIDAE				
SCHISTOMERINGOS	LONGICORNIS	1	1	
(G.D-STAURONEREIS, SP-Articulata, RUDOLPHI)				
MESIONIDAE				
GYPTIS	BREVIPALPA (ARENTCOLA-GLABRA)	1	3	
* LUMERINERIDAE				
LUMERINERIS *	*	1	67	
NEREIDAE				
*	*	1	1	IMMATURE
ORBINIIDAE				
HAPLOSCOLECLOS *	ELONGATUS	1	9	
POLYNOIDAE				
HARMOTHOE *	*	1	1	
HARMOTHOE *	IMBRICATA	1	1	
SPICNIDAE				
NERINIDES *	ACUTA	1	14	
PRIONOSPID *	CIRRIFERA	1	1	
PRIONOSPID *	HETEROBANCHIA-NEWPORTENSIS	1	14	
PRIONOSPID *	PYGMÆUS	1	1	
PSEUDOPOLYODRA *	PAUCIBRANCHIATA	1	75	

BENTHIC DATA LISTING - HARBCRS ENVIRONMENTAL PROJECTS

DATE: 10/28/76	STATION: 45	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	SAMPLE NUMBER 1 OF 2 SAMPLES	CRAB TYPE: CAMPBELL				
STREBLESPIO		BENEDICTI	1	66		
* TEREBELLIDAE ANAEANA *		OCCIDENTALIS	1	26		
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-GAMMARIDEA						
* * COPEPODA-CYCLOPOIDA		*	1	1		
CLASICIDAE						
CLASICIDUM		VANCOUVERENSE	1	4		
* MOLLUSCA						
GASTROPODA-OPISTHOERANCHIA						
CEPHALASPIDEA						
SCAPHANDRIDAE						
ACTEOCINA		CULCITELLA	1	4		
* PELECYPODA						
* * * MYTILICIDA		*	1	1	IMMATURE	
MYTILIDAE						
MODIOLUS		*	1	1	IMMATURE	
* VENERICIDA						
LUCINIDAE						
PARVILUCINA		*	1	1		
* MONTACUTIDAE						
MYSSELLA		PEDROANA	1	1		
* SOLECURTIIDAE						
TAGELUS		SUBTERES	1	2		
* TELLINIDAE						
MACOMA		*	1	12	IMMATURE	
* TELLINA		*	1	1	IMMATURE	
* VENERIDAE						
CHIONE		UNDATELLA	1	1		
(WAVY-CHIONE)						
PROTOTHACA		*	1	9	IMMATURE	
* NEMERTEA						
* * * * * PHORONIDEA		*	1	1		
PHORONICA						
* * * PHORONOPSIS		*	1	1		
*						

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/28/76 STATION: M6 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

ANIMAL		POP CODE	POP COUNT	SEX	MATURITY
POLYCHAETA					
* COSSURIDAE					
COSSURA	PYGODACTYLATA	1	10		
ANNELEIDA					
OLIGOCHAETA					
*					
*					
*					
POLYCHAETA					
*					
CAPITELLIDAE					
CAPITELLA	CAPITATA	1	2		
*					
CAPITITA	AMBISETA	1	38		
*					
NOTOMASTUS	TENUIS	1	2		
*					
CIRRATULIDAE					
CHAETOZONE	CERONA	1	3		
*					
CIRRATULUS	CIRRATUS	1	2		
*					
CIRRIFORMIA	LUXURIOSA	1	1		
*					
THARYX	*	1	33		
*					
ODORVILLEIDAE					
SCHISTOMERINGOS	LONGICORNIS	1	7		
(G.D.-STAURONEREIS, SP.-ARTICULATA, RUDOLPHI)					
GLYCERIDAE					
GLYCERA	AMERICANA	1	1		
*					
LUMBRINERIOIDAE					
LUMBRINERIS	*	1	68		
*					
NEREIDAE					
HEREIS	PROCERA	1	1		
*					
GRIBINIIDAE					
HAPLOSCOLOPLOS	ELONGATUS	1	45		
*					
SERPULIDAE					
HYDROIDES	PACIFICA	1	7		
*					
SPICNIDAE					
BCCARDIA	HAMATA=(UNCATA)	1	3		
*					
NERINIDES	ACUTA	1	10		
*					
POLYDORA	LIGNI	1	21		
*					

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/28/76 STATION: M6 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

		POP CODE	POP COUNT	SEX	MATURITY
PRIONOSPIO	CIRRIFERA	1	1		
*					
PRIONOSPPIO	HETEROBANCHIA-NEWPORTENSIS	1	57		
*					
PSEUDOPOLYDORA	PAUCIBRANCHIATA	1	29		
*					
STREBLOSPPIO	BENDICTI	1	19		
*					
SYLLIDAE					
TYPOSYLLIS	HYALINA	1	4		
*					
TEREBELLIDAE					
AMAEANA	OCCIDENTALIS	1	2		
*					
ARTHROPODA					
CRUSTACEA					
AMPHIPODA-GAMMARIDEA					
*					
*	*	1	1		
COPEPODA-CYCLOPOIDA					
CLAUSSICAE					
CLAUSICUM	VANCOUVERENSE	1	5		
*					
DECAPODA					
BRACHYURA-GRAPSIDAE					
HEMIGRAPSUS	OREGONENSIS	1	1		
*					
MACRURA-CALLIANASSIDAE					
CALLIANASSA	*	1	1		
(BURROWING-SHRIMP)					
OSTRACODA					
*		1	1		
*	*				
CHORDATA					
STEICHTHYS					
PERCIFORMES					
GOBIIDAE					
CLEVELANDIA	103	1	1		
(ARROW-GOBY)					
ILYPNUS		1	1		
(CHEEKSPCT-GOBY)					
CHORDATA-LACERDATA					
ASCIDIACEA					
STYLIDOBANCHIA					
*					
STYELA	PLICATA	1	1		
*					
CNIDARIA (COELENTERATA)					
ANTHOZOA					
ACTINIARIA					
*					
DIADUMENE	*	1	1		IMMATURE
*					
MOLLUSCA					
GASTROPODA-OPISTHOBRANCHIA					
CEPHALASPIDEA					
SCAPHANDRIDAE					
ACTEOCINA	CULCITELLA	1	2		
*					

MISSING DATA VALUE IS -160

BENTHIC DATA LISTING - HARBOURS ENVIRONMENTAL PROJECTS

DATE: 10/28/76 STATION: M6 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

POP CODE	POP COUNT	SEX	MATURITY
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ANIMAL		POP CODE	POP COUNT	SEX	MATURITY
MOLLUSCA					
GASTROPODA-PROSOBRANCHIA					
MESOGASTROPODA					
CALYPTRAEIDAE					
CREPIDULA	ONYX*	1	4		
(ONYX-SLIPPER-SHELL)					
PELECYPODA					
VENERIDA					
PETRICOLIDAE					
PETRICLIA	*	1	2		
*					
TELLINIDAE					
NACOMA	NASUTA	1	6		
(BENT-NOSE-CLAM)					
VENERIDA					
PROTOTHACA	*	1	28		INMATURE
*					
NEMERTEA					
*		1	3		
*					
*					
*					
*					

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/26/76 STATION: 47 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

		POP CODE	POP COUNT	SEX	MATURITY
ANIMAL					
POLYCHAETA					
* COSSURIDAE	COSURA				
* ANNELIDA	CLIGOCHEAETA	PYGODACTYLATA	2	478	
*					
*	*				
*	*				
POLYCHAETA					
*	CAPITELLIDAE	CAPITELLA	1	25	
*	CAPITELLA	CAPITATA	1	57	
*	CAPITITA	AMBISETA	1	1	
*	NOTOMASTUS	TENUIS	1	1	
*	CHAETOPTERIDAE	*	1	1	IMMATURE
*	CIRRATULIDAE	CHAETOZONE	CORONA	1	1
*	CIRRIFORMIA	LUXURICSA	1	2	
*	THARYX	*	1	18	
*	THARYX	NR-TESSELATA	1	1	
OORVILLEIDAE	SCHISTOSTERINGOS (G.D.-STAURONEREIS, SP.-ARTICULATA, RUDOLPHI)	LENGICORNIS	1	4	
FLAGELLIGERIDAE	*	*	1	1	
*	LUMBRICERIDAE	LUMBRINERIS	*	36	
*	NEPHTYIDAE	NEPHTYS	FERRUGinea	1	2
*	ORBINIIDAE	HAPLOSCOLEOPLCS	ELONGATUS	1	3
*	SPICNIDAE	ECCARCIA	NAMATA=(UNCATA)	1	1
*	NERINICES	*	ACUTA	1	6
POLYDORA	*	LIGNI	1	6	

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/28/76	STATION: M7	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	SAMPLE NUMBER 1 OF 2 SAMPLES	GRAB TYPE: CAMPBELL				
PRIONOSPIO	CIRRIFERA	1	3			
*						
PRIONOSPIO	HETEROPRANCHIA-NEWPORTENSIS	1	1			
*						
PSEUDOPOLYDORA	PAUCIBRANCHIATA	1	5			
*						
SPIOPHANES	MISSIONENSIS	1	1			
*						
STREBLUSPIO	BENEDICTI	2	334			
*						
SYLLIDAE						
EXOGONE	LUCUREI	1	1			
*						
ARTHROPODA						
CRUSTACEA						
COPEPODA-CYCLOPOIDA						
*						
*	*	1	2			
*						
CHORDATA						
OSTEICHTHYS						
PERCIFORMES						
GOBIIDAE						
CLEVELANDIA	ICS	1	3			
(ARROW-GOBY)						
MOLLUSCA						
GASTROPODA-PISTHOBRANCHIA						
CEPHALASPIDEA						
SCAPHANDRIDAE						
ACTEGGINA	HARPA	1	4			
*						
PELECYPODA						
*						
*	*	1	1		IMMATURE	
*						
VENERIDA						
SEMELIDAE						
THEORA	LUBRICA	1	1			
*						
SOLECURTIDAE						
TAGELUS	SUBTERES	1	8			
*						
TELLINICAE						
MACOMA	NASUTA	1	7			
(BENT-NOSE-CLAM)						
VENERIDAE						
PROTOTHACA	*	1	3		IMMATURE	
*						
PROTOTHACA	STAMINEA	1	1			
*						

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/26/76	STATION: M8	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
SAMPLE NUMBER 1 OF 2 SAMPLES	CRAB TYPE: CAMPBELL					
<hr/>						
ANIMAL						
ANNELIDA						
CLIGGCHAETA	*					
*	*					
*	*					
POLYCHAETA	*					
CAPITELLIDAE	CAPITELLA	CAPITATA	1	76		
*	*					
CAPITITA	*	AMBISETA	1	12		
*	*					
CIRRATULIDAE	CIRRATULUS	CIRRATUS	1	5		
*	*					
THARYX	*		1	2		
*	*					
DORVILLEIDAE	SCHISTOMERINGS	LONGICORNIS	1	4		
(G. DA-STAURONEREIS, SP-ARTTICULATA, RUDOLPHI)	LUMBRINERIDAE					
LUMBRINERIS	*		1	13		
*	*					
ORBINEIDAE	HAPLOSCOLOPLOS	ELONGATUS	1	40		
*	*					
SPICNIDAE	ECCARCIA	MAMATA-(UNCATA)	1	11		
*	*					
NERINIDAE	*	ACUTA	1	42		
*	*					
PCLYDORA	*	LIGNI	1	13		
*	*					
PRIONOSPIO	HETEROBANCHIA-NEWPORTENSIS		1	8		
*	*					
PSEUDOPOLYDORA	PAUCIERANCHIATA		1	25		
*	*					
STREBLOSPPIO	BENDICTI		2	138		
*	*					
SYLLIDAE	EXOGONE	LCUREI	1	1		
*	*					
CHORDATA						
OSTEICHTHYS						
PERCIFORMES						
GOTIIDAE						
ILYPNUS	(CHEEKSPCT-GOBY)		1	1		
MOLLUSCA						
GASTROPODA-OPISTHOBRANCHIA						
CEPHALASPIDEA						
SCAPHANDRIDAE						
ACTEOCINA	CULCITELLA		2	134		
*	*					
PELECYPODA						
VENERCIDA						
PETRICOLOIDAE						
PETRICOLA	TELLINIVALIS		1	3		
*	*					
TELLINIDAE						
MACOMA	*		1	1		IMMATURE
*	*					
MACOMA	NASUTA		1	1		
(BENT-NOSE-CLAM)						
VENERIDAE						
PROTOTHACA	*		1	2		IMMATURE
*	*					

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/28/76	STATION: M9	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	SAMPLE NUMBER 1 OF 2 SAMPLES	GRAB TYPE: CAMPBELL				
<hr/>						
ANIMAL						
POLYCHAETA						
* COSSURIDAE						
COSSURA						
* PYGODACTYLATA						
1 54						
* ANELIDA						
OLIGOCHAETA						
* *						
* *						
* *						
* POLYCHAETA						
* CAPITELLIDAE						
CAPITELLA						
* CAPITATA						
1 28						
* CAPITITA						
* AMBISETA						
1 16						
* NCTOMASTUS						
TENUIS						
1 1						
* CHRYSOPETALIDAE						
PALEANCUTUS						
* BELLIS						
1 1						
* CIRRATULIDAE						
* *						
1 3 IMMATURE						
* CHAETOZONE						
CERONA						
1 1						
* THARYX						
* *						
1 79						
* DORVILLEIDAE						
* *						
1 3						
* SCHISTOMERINGS (G.D.-STAURONEREIS, SP.-ARTICULATA, RUDOLPHI)						
LENGICORNIS						
1 1						
GLYCERIDAE						
GLYCERA						
AMERICANA						
1 1						
* LUMBRINERIDAE						
LUMBRINERIS						
* *						
1 5						
* NEPHTYIDAE						
NEPHTYS						
FERRUGINEA						
1 1						
* OPHELIIDAE						
ARMANCIA						
* BICCOLULATA						
1 1						
* OEBINIIDAE						
MAPLESKOLOPOLOS						
ELONGATUS						
1 4						
* SERPULIDAE						
HYDROIDES						
PACIFICA						
1 9						
* SPICNIDAE						
BOCCARCIA						
MANATA*(UNCATA)						
1 2						
* NERINIDAE						
ACUTA						
1 16						
* POLYDORA						
LIGNI						
1 8						
* PRIONOSPIO						
CIRRIFERA						
1 1						
* PRIONOSPIO						
HETEROBANCHIA-NEWPORTENSIS						
1 5						
* PSEUDOPOLYDORA						
PAUCIBRANCHIATA						
1 33						
* STREBLOSPPIO						
BENDICTI						
2 236						
* SYLLIDAE						
TYPOSYLLIS						
HYALINA						
1 45						
*						

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/28/76	STATION: M9	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
SAMPLE NUMBER 1 OF 2 SAMPLES		GRAB TYPE: CAMPBELL				
<hr/>						
ARTHROPODA						
CRUSTACEA						
AMPHIPODA-GAMMARIDEA	*					
*	*	*		1	6	
COPEPODA-CYCLOPODIA	*	*		1	2	
*	*	*		1	2	
ISOPODA	*	*		1	8	
*	*	*		1	8	
TANAIDACEA	*					
*						
ANATANAIS	NORMANI			1	7	
*						
CHIROPTERA						
OSTEICHTHYS						
PERCIFORMES						
Gobiidae						
ILYPNUS				1	1	
(CHEEKSPOT-GOBY)						
MOLLUSCA						
GASTROPODA-OPISTHOBRANCHIA						
CEPHALASPIDEA						
SCAPHANDRIDAE						
ACTEOCINA	CULCITELLA			1	6	
*						
GASTROPODA-PROSOBRANCHIA						
MESOGASTROPODA						
CALYPTRAEIDAE						
CREPIDULA	ONYX			1	6	
(ONYX-SLIPPER-SHELL)						
PELECYPODA						
MYTILICIDA						
MYTILIDAE						
MYTILUS	EDULIS			1	6	
(BAY-MUSSEL)						
VENERICIDA						
PETRICOLIDAE						
PETRICOLA	TELLINIVALS			1	1	
*						
SEMELIIDAE						
THEORA	LUBRICA			1	2	
ANIMAL						
MOLLUSCA						
PELECYPODA						
VENERICIDA						
VENERIDAE						
PROTOTHACA	*			1	10	IMMATURE
*						

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/28/76 STATION: M10 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

POP CODE POP COUNT SEX MATURITY

ANIMAL

POLYCHAETA

*
 COSSURIDAE
 COSSURA *

PYGODACTYLATA

2 112

ANNELIDA

OLIGOCHAETA

*
 *
 *

*

1 23

POLYCHAETA

*
 CAPITELLIDAE
 CAPITELLA *
 CAPITITA *
 NEMERISTES *

CAPITATA

1 38

AMBISETA

1 11

TENUIS

1 1

CIRRATULIDAE

CHAETOZONE

CROWN

1 2

CIRRATULUS

CIRRATUS

1 2

CIRRIFERMIA

LUXURIOSA

1 2

THARYX

*

1 10

DORVILLEIDAE

SCHISTOMERINGOS
 (G.D.-STAUDNEREIS, SP.-ARTICULATA, RUDDOLPHI)

LONGICORNIS

1 17

PUGETTENSIS

1 11

HESIONIDAE

OPHIODROMUS

OPHIODROMUS

1 11

LUMBRINERIDAE

LUMBRINERIS

*

1 2

LUMBRINERIS

ERECTA

1 2

NEPHTYIDAE

NEPHTYS

FERRUGinea

1 1

OBINIIIDAE

MAPLOSCOLEPLOS

ELONGATUS

1 10

SPICNIDAE

NERINIDES

ACUTA

1 10

POLYCORA

LIGHT

1 17

PRIONCPIPO

CIRRIFERA

1 3

PRIONCPIPO

METEROBANCHIA-NEWPORTENSIS

1 6

PSEUDOPOLYCORA

PAUCIBRANCHIATA

1 6

STREBLECPIPO

SENDICTE

2 442

CHORDATA

OSTEICHTHYS

PERCIFORMES

GOBIIDAE

CLEVELANDIA

IOS

1 1

(ARROW-GOBY)

ILYPNUS

*

1 3

(CHEEKSPOT-GOBY)

MOLLUSCA

GASTROPODA-CIPISTHOBRANCHIA

CEPHALASPICEA

SCAPHANDRIDAE

ACTEOCINA

CULCITELLA

1 25

PELECYPODA

VENERICIDA

VENERIDAE

PROTOTHACA

*

1 1

IMMATURE

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/26/76 STATION: #11 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

	POP CODE	POP COUNT	SEX	MATURITY
--	----------	-----------	-----	----------

ANIMAL

POLYCHAETA				
* COSSURIIDAE				
COSSURA *				
	PYGODACTYLATA		1	1
ANNELIDA				
OLIGOCHAETA				
*				
*			1	9
POLYCHAETA				
*				
CAPITELLIDAE				
CAPITITA *	AMBISETA	2	150	
NCTOMASTUS *	TENUIS	1	1	
CIRRATULIDAE				
CHAETODZONE *	CCRONA	1	13	
THARYX *	*	1	3	
LUMBRINERIDAE				
LUMBRINERIS *	*	1	15	
ORBINIIDAE				
HAPLOSCOLEOPLUS *	ELENGATUS	1	24	
SERPULIDAE				
HYDROIDES *	PACIFICA	1	1	
SPIONIDAE				
BCCARCIA *	HANATA-(UNCATA)	1	1	
NERINIDAE				
ACUTA *	ACUTA	1	16	
PCLYDORA				
LIGNI *	LIGNI	1	10	
PRIONOSPIO				
*	CIRRIFERA	1	1	
PRIONOSPIO *	HETEROBANCHIA-NEWPORTENSIS	1	26	
PSEUDOPOLYDORA				
PAUCIBRANCHIATA *	PAUCIBRANCHIATA	2	124	
STREBLOSPPIO *	BENDICTI	2	418	
MOLLUSCA				
GASTROPODA-OPISTHOBRANCHIA				
CEPHALASPICEA				
SCAPHANDRIDAE				
ACTEOCINA *	CULCITELLA	1	91	
PELECYPODA				
VENERICIDA				
SENELIIDAE				
THEORA *	LUBRICA	1	4	
TELLINIDAE				
MACOMA *	*	1	1	IMMATURE
VENERIDAE				
PROTOTHACA *	*	1	1	IMMATURE
NEMERTEA				
*	*	1	1	
*	*			
*	*			

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: MI MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

POP
CODE

POP
COUNT

ANIMAL				
ANNELIDA				
OLIGOCHAETA				
*				
*				
*				
POLYCHAETA				
*				
CAPITELLIDAE				
CAPITELLA	CAPITATA		2	854
*				
CAPITITA	AMBISETA		2	272
*				
NOTOMASTUS	TENUIS		1	2
*				
DORVILLEIDAE				
SCHISTOMERINGOS	LONGICORNIS		1	11
(G.D.-STAURONEREIS, SP.-ARTICULATA, RUDOLPHI)				
GLYCERIDAE				
GLYCERA	CAPITATA		1	11
*				
HESIONIDAE				
OPHIODROMUS	PUGETTENSIS		1	1
*				
LUMBRINERIDAE				
LUMBRINERIS	*		1	2
*				
NEPHTYIDAE				
NEPHTYS	CAECOIDES		1	2
*				
NEPHTYS	CORNUTA-FRANCISCANA		1	2
*				
NEREIDAE				
VEREIS	PROCERA		1	1
*				
PLATYNEREIS	BICANALICULATA		1	5
*				
ONUPHIDAE				
DIOPATRA	ORNATA		1	1
*				
OPHELIIDAE				
ARMANDIA	STOCULATA		1	32
*				
PECTINARIIDAE				
PECTINARIA	CALIFORNENSIS-NEWPORTENSIS		1	5
*				
PHYLLODOCIIDAE				
ETEONE	DILATAE		1	1
*				
EUNIDA	BIFFOLIATA		1	1
*				
PHYLLODOCE	*		1	3
*				
SPIONIDAE				
PARAPRIONOSPIO	PINNATA		1	11

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - MARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: MI MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

		POP CODE	POP COUNT
*	POLYDORA	LIGHT	1 11
*	PRIONOSPTO	CIRRIFERA	1 1
*	PRIONOSPTO	HETERODRANCHIA-NEWPORTENSIS	1 10
*	PRIONOSPTO	PYGMAEUS	1 2
*	SPIOPHANES	MISSIONENSIS	1 12
*	SYLLIDAE		
EXOGONE	GEMMIFERA	1 1	
*	ARTHROPODA		
CRUSTACEA			
AMPHIPODA-GAMMARIDEA			
*			
*		1	13
*	CUMACEA		
*			
*		1	2
*	DIASTYLOPSIS	TENUIS	1 33
*	OXYTROSTYLIS	PACIFICA	1 75
*	DECAPODA		
BRACHYURA-CANCRIDAE			
CANCER	*	1 3	
*			
PYCHOGONIDA			
*			
*	EUPENTACTA	*	1 57
*			
MOLLUSCA			
GASTROPODA-PROSOBRANCHIA			
NEOGASTROPODA			
OLIVIDAE			
OLIVELLA	BAETICA	1 1	
*			
PELECYPODA			
*			
*		1 3	
*	VENEROIDA		
CARDIIDAE			
LAEVICARDIUM	SUBSTRATUM	1 2	
*			
COOPERELLIDAE			
COOPERELLA	SUBDIAPHANA	1 1	
*			
ERYCINIDAE			
LASAEA	SUBVIREDIS	1 1	
*			
LEPTONIIDAE			
LEPTON	MERDEUM	1 1	
*			
MACTRIDAE			
*		1 5	
*			

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: M1 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

ANIMAL		PUP CODE	POP COUNT
MOLLUSCA			
PELECYPODA			
VENEROIDA			
MACTRIDAЕ			
SPISULA	*	1	1
*			
MONTACUTIDAE			
MYSELLA	*	1	2
*			
TELLINIDAE			
MACOMA	*	1	2
*			
MACOMA	NASUTA	1	1
(BENT-NOSE-CLAM)			
TELLINA	*	1	1
*			
TELLINA	MODESTA	1	7
*			
VENERIDAE			
PROTOTHACA	*	1	5
*			
NEMERTEA			
*			
*			
*	*	1	6
*			
ANNELIDA			
OLIGOCHAETA			
*			
TUBIFICIDAE			
PELOSCOLEX	GABRIELAE	2	191
*			

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: #2 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

ANIMAL		POP CODE	POP COUNT
ANNELIDA			
OLIGOCHAETA	*		
*	*		
*	*		
POLYCHAETA	*		
*	*	2	277
CAPITELLIDAE			
CAPITELLA	*		
*	CAPITATA	3	1172
CAPITITA	*		
*	AMBISETA	1	57
NOTOMASTUS	*		
*	TENUIS	1	6
DORVILLEIDAE			
SCHISTOMERINGOS	LONGICORNIS		
(G.O.-STAURONEREIS, SP.-ARTICULATA, RUDOLPHI)		1	3
GLYCERIDAE			
GLYCERA	*		
*	CAPITATA	1	10
GONIADIDAE			
GONIADA	*		
*	BRUNNEA	1	1
LUMBRINERIDAE			
LUMBRINERIS	*		
*		1	3
NEPHTYIDAE			
NEPHTYS	*		
*	CORNUTA-FRANCISCANA	1	2
NEREIDAE			
*	*	1	1
OPHELITIDAE			
ARMANDIA	*		
*	BICOLULATA	1	35
PECTINARIIDAE			
PECTINARIA	*		
*	CALIFORNENSIS-NEWPORTENSIS	1	3
PHYLLOOCIDAE			
EUMIDA	*		
*	BIFOLIATA'	1	2
PHYLLODOCE	*		
*		1	2
POLYNOIDAE			
HARMOTHOE	*		
*	PRIOPS	1	1
SPIONIDAE			
PARAPRIONOSPIO	*		
*	PINNATA	1	6
POLYDORA	*		
*	LIGNI	1	1
PRIONOSPIO	*		
*	CIRRIFERA	1	5
PRIONOSPIO			
	HETERBRANCHIA-NEWPORTENSIS	1	2

MISSING DATA VALUE IS -140

BENTHIC DATA LISTING + HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77	STATION: N2	MARINA DEL REY	POP CODE	POP COUNT
SAMPLE NUMBER 1 OF 2 SAMPLES	GRAB TYPE: CAMPBELL			
PSEUDOPOLYDORA	PAUCIBRANCHIATA	1	3	
*				
SP. IOPHANES	MISSIONENSIS	1	4	
*				
ARTHROPODA				
CRUSTACEA				
AMPHIPODA-CAPRELLIDEA				
*				
*	*		1	3
ANHYDROPODA-GAMMARIDEA				
*				
*	*		1	4
COPEPODA-CALANOIDA				
*				
*	*		1	1
COPEPODA-CYCLOPOIDA				
*				
*	*		1	3
COPEPODA-MARPACTICOIDA				
*				
*	*		1	16
CUMACEA				
*				
OXYUROSTYLIS	PACIFICA	1	63	
*				
DECAPODA				
MACRURA-CALLIANASSIDAE				
CALLIANASSA	*		1	1
(BURROWING-SHRIMP)				
ISOPODA				
*				
*	*		1	2
PYCHOGONIDA				
*				
*	*		1	2
EUPENTACTA	*			
*				
ASCHELMINTHES				
NEMATODA				
*				
*	*		3	4929
*	*			
MOLLUSCA				
GASTROPODA-PROSOPRANCHIA				
NEDGASTROPODA				
NASSARIIDAE				
NASSARIUS	PERPINGUIS	1	1	
*				
PELECYPODA				
*				
*	*		1	9
*	*			

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - MARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: M2 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

		POP CODE	POP COUNT
--	--	----------	-----------

ANIMAL			
MOLLUSCA			
PELECYPODA			
MYTILOIDA			
MYTILIDAE			
MYTILUS	*		
*			
VENEROIDA			
CARDITIDAE			
LAEVICARDIUM	SUBSTRATUM		
*			
COOPERELLIDAE			
COOPERELLA	SUBDIAPHANA		
*			
MACTRIDAE			
*	*		
TRESUS	NUTTALLI		
*			
PETRICOLIDAE			
PETRICOLA	TELLINIVALIS		
*			
SOLECURTIIDAE			
TAGELUS	SUBTERES		
*			
SOLENIDAE			
SOLEN	*		
*			
TELLINIDAE			
MACOMA	*		
*			
MACOMA	NASUTA		
(BENT-NOSE-CLAM)			
TELLINA	*		
*			
TELLINA	MODESTA		
*			
VENERIDAE			
PROTOTHACA	*		
*			
NEMERTEA			
*			
*			
*	*		
*			
ANNELIDA			
OLIGOCHAETA			
*			
TUBIFICIDAE			
PELOSCOLEX	GABRELLAE		
*			

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - MARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: M3 MARINA DEL REY
SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

POP CODE POP COUNT SEX MATURITY

ANIMAL					
ANNELIDA					
OLIGOCHAETA	*				
*	*	*			
*	*	*			
POLYCHAETA	*				
*					
ANPHARETIDAE					
AMPHARETE	*	LABROPS		1	3
*					
CAPITELLIDAE					
CAPITITA	*	AMBISETA		1	74
*					
CERRATULIDAE					
CAULLERIELLA	*	ALATA		1	2
*					
CHAETOZONE	*			1	1
*					
CIRRIFORMIA	*	LUXURIOSA		1	1
*					
THARYX	*			1	2
*					
COSSURIDAE					
COSSURA		CANDICA		1	1
*					
DORYVILLETIDAE					
SCHISTOSTOMERINOS		LONGICORNIS		1	20
(G.O.-STAUDNEREIS, SP.-ARTICULATA, RUDOLPHI)					
GLYCERIDAE					
GLYCERA		CAPITATA		1	19
*					
GLYCERA		ROUXII		1	2
*					
LUMBRINERIDAE					
LUMBRINERIS	*			1	69
*					
NEPHTYIDAE					
NEPHTYS		CAECOIDES		1	1
*					
NEPHTYS		FERRUGinea		1	1
*					
OPHELIIDAE					
ARMANDIA		BIOCULATA		1	1
*					
POLYOPHTHALMUS		PICTUS		1	3
*					
ORBENITIDAE					
HAPLOSCOLEOPLIOS		ELONGATUS		1	25
*					
PARAONIDAE					
PARAONIS		GRACILIS-CCULATA		1	1
*					
PHYLLODOCIDAE					
PHYLLODOCE	*			1	1

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: M3 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

		POP CODE	POP COUNT	SEX	MATURITY
*	POLYNOTIDAE				
*				1	
*	HARMOTHOE	*		1	
*	SABELLIDAE				
CHONE	*			1	3
*	SPIONIDAE				
PARAPRIONOSPIO	PINNATA			1	
*	PRIONOSPIO	CIRRIFERA		1	3
*	PRIONOSPIO	HETEROBANCHIA-NEWPORTENSIS		1	39
*	PRIONOSPIO	PYGMAEUS		1	11
*	SPIOPHANES	MISSIONENSIS		1	10
*	TEREBELLIDAE				
PISTA	FASCIATA			1	
*	ARTHROPODA				
CRUSTACEA					
AMPHIPODA-GAMMARIDEA					
*				1	3
*					
CUMACEA					
*	OXYUROSTYLIS	PACIFICA		1	
*					
ASCHELMINTHES					
NEMATODA					
*				1	95
*					
MOLLUSCA					
GASTROPODA-OPISTHOBRANCHIA					
CEPHALASPIDEA					
SCAPHANDRIDAE					
ACTEOCINA	CULCITELLA			1	4
*					
GASTROPODA-PROSOBRANCHIA					
MESOGASTROPODA					
CALYTRAETIDAE					
CREPIDULA	ONYX			1	3
(ONYX-SLIPPER-SHELL)					
PELECYPODA					
*					
*				1	4
*					IMMATURE
VENEROIDA					
MONTACUTIDAE					
MYSELLA	PEDORDANA			1	4
*					
SOLECURTIIDAE					
TAGELUS	SUBTERES			1	2
*					

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING + HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77	STATION: M3	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
SAMPLE NUMBER 1 OF 2 SAMPLES	GRAE TYPE: CAMPBELL					
<hr/>						
ANIMAL						
MOLLUSCA						
PELECYPODA						
VENEROIDA						
TELLINIDAE						
LEPORINETIS *						
OBESA						
1 7 IMMATURE						
MACOMA *						
1 1 IMMATURE						
TELLINA *						
1 1 IMMATURE						
VENERIDAE						
PROTOTHACA *						
1 1 IMMATURE						
PROTOTHACA *						
STAMINEA						
1 1						
<hr/>						
NEMERTEA						
*						
*						
*						
*						
1 12						
<hr/>						
PHORONIDEA						
PHORONIDA						
*						
*						
PHORONOPSIS *						
1 1						

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: #4 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES CRAB TYPE: CAMPBELL

ANIMAL		POP CODE	POP COUNT
--------	--	----------	-----------

ANNELIDA			
OLIGOCHAETA			
*			
*			
*	*		
POLYCHAETA	*		
*			
AMPHARETIDAE			
AMPHICTEIS	SCAPHOBRANCHIATA	1	1
*			
CAPITELLIDAE			
CAPITITA	AMBISETA	2	352
*			
NOTOMASTUS	TENUIS	1	10
*			
CHAETOPTERIDAE			
SPIOCHAETOPTERUS	COSTARUM	1	2
*			
CIRRATULIDAE			
CHAETOZONE	CORONA	1	16
*			
CHAETOZONE	SETOSA	1	1
*			
THARYX	*	1	23
*			
COSSUPIDAE			
COSSURA	PYGODACTYLATA	1	80
*			
DORVILLEIDAE			
SCHISTOMERICUS	LONGICORNIS	1	49
(G.D.-STAURONEREIS, SP.-ARTICULATA, RUDOLPHI)			
GLYCERIDAE			
GLYCERA	CAPITATA	1	2
*			
GONIADIDAE			
GONTADA	BRUNNEA	1	20
*			
HESIONIIDAE			
GYPTIS	BREVIPALPA (ARENICOLA-GLABRA)	1	3
*			
OPHIODROMUS	PUGETTENSIS	1	1
*			
LUMBRINERIDAE			
LUMBRINERIS	*	2	243
*			
NEPHTYIDAE			
NEPHTYS	CAECOIDES	1	5
*			
NEPHTYS	CORNUTA-FRANCISCANA	1	4
*			
OPHELIIDAE			
ARMANDIA	BIOCULATA	1	2
*			
POLYOPHTHALMUS	PICTUS	1	2

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: M4	MARINA DEL REY SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL	POP CODE	POP COUNT
*			
ORBINIIDAE			
HAPLOSCOLOPLOS	ELONGATUS	1	45
*			
PECTINARTIIDAE			
PECTINARIA	CALIFORNIENSIS-NEWPORTENSIS	1	3
*			
PHYLLODOCIDAE			
ETONE	*	1	3
*			
EJIMIDA	BIFOLIATA	1	4
*			
POLYNOIDAE			
HARMOTHOE	(?) SCREPTORIA	1	9
*			
POLYNOIDAE			
HARMOTHOE	PRIOPS	1	2
*			
SABELLIDAE			
*	*	1	2
*			
SERPULIDAE			
HYDROTDES	PACIFICA	1	1
*			
SPIONIDAE			
NERINIDES	ACUTA	1	5
*			
PARAPRIONOSPID	PINNATA	1	1
*			
PRIONOSPID	CIRRIFERA	1	17
*			
PRIONOSPID	HETERERANCHIA-NEWPORTENSIS	1	91
*			
PRIONOSPID	PYGMAEUS	1	67
*			
PSEUDOPOLYDORA	PAUCIBRANCHIATA	1	3
*			
SPIOPHANES	MISSICRENELIS	1	10
*			
STREBLOSPID	BENEDICTI	1	2
*			
SYLLIDAE			
BRANIA	*	1	3
*			
TEREBELLIDAE			
ANAEANA	OCIDENTALIS	1	21
*			
ARTHROPODA			
CRUSTACEA			
AMPHIPODA-GAMMARIDEA			
*			
*	*	1	2
*			
CUMACEA			
*			
DIASTYLOPSIS	TENUIS	1	1
*			
OXYUROSTYLIS	PACIFICA	1	13
*			
DECAPODA			
BRACHYURA-GRAPSIDAE			
HEMIGRAPSPUS	OREGONENSIS	1	1
*			

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING → HARBORS ENVIRONMENTAL PROJECTS		
DATE: 3/17/77 STATION: M4 SAMPLE NUMBER 1 OF 2 SAMPLES	MARINA DEL REY GRAB TYPE: CAMPBELL	POP CODE POP COUNT
<hr/>		
ANIMAL		
ARTHROPODA		
PYCNODONIA	*	
*		
EUPENTACTA	*	1 1
*		
ASCHELMINTHES		
NEMATODA	*	
*		
*	*	1 12
MOLLUSCA	*	
PELECYPODA		
VENEROIDA		
MONTACUTIDAE		
MYSELLA	*	1 4
*		
NEMERTEA	*	
*	*	1 12
*	*	

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: M6 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

ANIMAL		POP CODE	POP COUNT
ANNELIDA			
Oligochaeta			
*	*		
*	*		
*	*		
POLYCHAETA	*		
*	*	1	11
CAPITELLIDAE			
CAPITITA	AMBISETA	1	40
*			
NOTOMASTUS	TENUIS	1	3
*			
CIRRATULIDAE			
CHAETOZONE	CORONA	1	3
*			
CIRRIFORMIA	LUXURIOSA	1	1
*			
THARYX	*	1	49
*			
COSSURIDAE			
COSSURA	PYGODACTYLATA	1	1
*			
DORVILLEIDAE			
SCHISTOMERINOS	LONGICORNIS	1	35
(G.D.-STAUVOREIS, SP.-ARTICULATA, RUDOLPHI)			
GLYCERIDAE			
GLYCERA	AMERICANA	1	1
*			
LUMBRINERIDAE			
LUMBRINERIS	*	1	69
*			
NERIIDAE			
NEANTHES	ARENACEODENTATA	1	2
*			
ORBINIIDAE			
HAPLOSCOLOPLOS	ELONGATUS	1	69
*			
SPIONIDAE			
BOCCARDIA	HAMATA (UNCATA)	1	4
*			
NERINTIDES	ACUTA	1	9
*			
POLYDORA	LIGNI	1	25
*			
PRIONOSPIO	HETEROBANCHIA-NEPOTENSIS	1	52
*			
PSEUDOPOLYDORA	PAUCIBRANCHIATA	1	58
*			
STREBLOSPID	BENEDICTI	1	22
*			
ARTHROPODA			
CRUSTACEA			
DECAPODA			
MACRURA-CALLIANASSIDAE			

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77	STATION: 46	MARINA DEL REY	POP CODE	POP COUNT
SAMPLE NUMBER 1 OF 2 SAMPLES	GRAB TYPE: CAMPBELL			

UPOGEBIA (NUOOSH R IMP)	*		1	2
MOLLUSCA				
GASTROPODA-OPISTHOBRANCHIA				
CEPHALASPIDEA				
SCAPHANDRIDAE				
ACTEONINA	CULCI TELLA		1	18
*				
PELECYPODA				
VENEROIDA				
PETRICOLIDA				
PETRICOLA	TELLINIVALIS		1	1
*				
TELLINIDAE				
LEPORIMETIS	OBESA		1	1
*				

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: MS MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

POP CODE POP COUNT SEX MATURITY

ANIMAL				
ANNELIDA				
POLYCHAETA				
*				
CAPITELLIDAE				
CAPITITA	AMBISETA		2	267
*				
NOTOMASTUS	TENUIS		1	1
*				
CIRRATULIDAE				
CHAETOZONE	CORONA		1	25
*				
THARYX	*		1	1
*				
COSSURIDAE				
COSSURA	CANDIDA		1	1
*				
LUMBRINERIDAE				
LUMBRINERIS	*		1	73
*				
NERETIDAE				
NEREIS	PROCERA		1	3
*				
DRBINIIDAE				
HAPLOSCOLOPLOS	ELONGATUS		1	15
*				
PARAONIIDAE				
ACESTA	HORIKOSHI		1	1
*				
PILARGEIIDAE				
SIGAMBRA	TENTACULATA		1	1
*				
POLYNOIDA				
HARMOTHOE	(?) SCRIPTORIA		1	3
*				
SPIONIDAE				
NERINTIDES	ACUTA		1	4
*				
POLYDORA	LIGNI		1	1
*				
PRIONOSPID	CIRRIFERA		1	3
*				
PRIONOSPID	HETEROBANCHIA-NEWPORTENSIS		1	6
*				
PRIONOSPID	PYGMÆUS		1	1
*				
PSEUDOPOLYDORA	PAUCIBRANCHIATA		1	96
*				
TEREBELLIDAE				
AMAEANA	OCCIDENTALIS		1	5
*				
ARTHROPODA				
CRUSTACEA				
AMPHIPODA-CAPRELLIDEA	*		1	1
*				
*				

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77	STATION: MS	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
	SAMPLE NUMBER 1 OF 2 SAMPLES	GRAB TYPE: CAMPBELL				
<hr/>						
MYSIDACEA						
*	*	*	1	1		
*	(MYSIDI)					
MOLLUSCA						
GASTROPODA-OPISTHOBRANCHIA						
CEPHALASPIDEA						
SCAPHANDRIDAE						
ACTEOCTINA						
*	CULCITELLA		1	2		
PELECYPODA						
VENEROIDA						
SEMELTIDAE						
THEDRA	LUBRICA		1	1		
*						
SOLEOCURTIDAE						
TAGELUS	SUBSTERES		1	1		
*						
TELLINIDAE						
MACOMA	NASUTA		1	1		
(BENT-NOSE-CLAM)	*		1	1		IMMATURE
TELLINA	*					
*						
NEMERTEA						
*	*	*	1	2		
*	*	*				
*	*	*				

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: 47 MARINA DEL REY
 SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL

		POP CODE	POP COUNT
--	--	-------------	--------------

ANIMAL			
ANNELIDA			
POLYCHAETA			
*			
CAPITELLIDAE			
CAPITITA	AMBISETA	1	22
*			
CIRRATULIDAE			
CHAETOZONE	CORONA	1	3
*			
THARYX	*	1	68
*			
COSSURIDAE			
COSSURA	PYGODACTYLATA	1	4
*			
DORVILLEIDAE			
SCHISTOMERINGS	LONGICORNIS	1	1
(G.D.=STAURONEREITS, SP.=ARTICULATA, RUDOLPHI)			
LUMBRINERIDAE			
LUMBRINERTS	*	1	10
*			
ORBINITIDAE			
HAPLOSCOLOPLOS	ELONGATUS	1	3
*			
SPIONIDAE			
NERINIDES	ACUTA	1	1
*			
POLYDORA	*	1	1
*			
PRIONOSPIO	CIRRIFERA	1	29
*			
PSEUDOPOLYDORA	PAUCIERANCHIATA	1	2
*			
STREBLOSPIO	BENEDICTI	1	16
*			
SYLLIDAE			
BRANIA	*	1	1
*			
TEREBELLIDAE			
STREBLOSOMA	CRASSIERANCHIA	1	1
*			
ARTHROPODA			
CRUSTACEA			
DECAPODA			
MACRURA-CALLIANASSIDAE			
CALLIANASSA	*	1	2
(BURROWING-SHRIMP)			
CHORDATA			
OSTEICHTHYS			
PERCIFORMES			
GOBIIDAE			
ILYPNUS	GILBERTI	1	1
(CHEEKSPOT-GOBY)			
NEMERTEA			
*			
*			
*			
*			

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: MB	MARINA DEL REY	POP CODE	POP COUNT	SEX	MATURITY
SAMPLE NUMBER 1 OF 2 SAMPLES	GRAB TYPE: CAMPBELL				
<hr/>					
ANIMAL					
ANNELIDA					
OLIGOCHAETA	*				
*	*				
*	*				
POLYCHAETA	*				
CAPITELLIDAE					
CAPITELLA	CAPITATA				
*		1	40		
CAPITITA	AMBISETA				
*		1	14		
CIRRATULIDAE					
CIRRIFORMIA	LUXURIOSA				
*		1	3		
THARYX	*				
*		1	8		
COSSURIDAE					
COSSURA	PYGODACTYLATA				
*		1	14		
DORYLLEIDAE					
SCHISTOMERINGOS	LONGICORNIS				
(G.D.-STAURONEREIS+SP.-ARTICULATA,RUDOLPHI)		1	31		
LUMBRINERIDAE					
LUMBRINERIS	*				
*		1	19		
NEREIDAE					
NEREIS	PROCERA				
*		1	1		
ORBINIIDAE					
HAPLOSCOLOPLOS	ELONGATUS				
*		1	28		
SPIONIDAE					
BOCCARDIA	HAMATA(UNCATA)				
*		1	2		
NERINIDES	ACUTA				
*		1	27		
POLYDORA	LIGNI				
*		1	11		
PRIONOSPIS	HETEROBANCHIA-NEWPORTENSIS				
*		1	50		
PSEUDOPOLYDORA	PAUCIBRANCHATA				
*		1	38		
STREBLOSPIS	BENEDICTI				
*		1	25		
SYLLIDAE					
EXOGONE	VERUGERA				
*		1	41		
ARTHROPODA					
CRUSTACEA					
AMPHIPODA-GAMMARIDEA					
*					
*	*				
*	*	1	2		

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: #8 MARINA EEL REY	SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL	POP CODE	POP COUNT	SEX	MATURITY
<hr/>					
TANAIDACEA					
* LEPTOCHELIA 6					
* CHORDATA					
OSTEICHTHYS					
PERCIFORMES					
GOBIIDAE					
CLEVELANDIA 105					
(ARROW-GOBY)					
ILYPNUS GILBERTI					
(CHEEK SPOT-GOBY)					
<hr/>					
MOLLUSCA					
GASTROPODA-OPISTHOBRANCHIA					
CEPHALASPIDEA					
SCAPHANDRIDAE					
ACTEUCINA CULCITELLA					
* PELECYPODA					
VENEROIDA					
VENERIDAE					
CHIONE *					
* PROTOTHACA *					
* IMMATURE					

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - MARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: M10 MARINA DEL REY SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL	POP CODE	POP COUNT
<hr/>		
ANIMAL		
ANNELIDA		
OLIGOCHAETA		
*		
*		
*		
*		
POLYCHAETA	*	
*		
CAPITELLIDAE		
CAPITELLA	CAPITATA	1 91
*		
CAPITITA	AMBISETA	1 4
*		
CIRRATULIDAE		
CHAETZONE	CORONA	1 1
*		
CIRRATULUS	CIRRATUS	1 1
*		
THARYX	*	1 5
*		
COSSURIDAE		
COSSURA	PYGODACTYLATA	1 13
*		
DORYTILEIDAE		
SCHISTOMERINGS	LONGICORNIS	1 30
(G.D.-STAUDONEREIS, SP.-ARTICULATA, RUDOLPHI)		
LUMBRINERIDAE		
LUMBRINERIS	*	1 2
*		
ORBINIIDAE		
HAPLOSCOLEOPIOS	ELONGATUS	1 13
*		
NAIHERIS	DENDRITICA	1 1
*		
SPIONIDAE		
NERINIDES	ACUTA	1 5
*		
PRIONOSPIO	CIRRIFERA	1 3
*		
PRIONOSPIO	HETEROBANCHIA-NEWPORTENSIS	1 10
*		
SPIOPHANES	MISSICENESIS	1 1
*		
STREBLOSPIO	BENEDICTI	2 255
*		
SYLLIDAE		
BRANIA	*	1 1
*		
ARTHROPODA		
CRUSTACEA		
AMPHIPODA-CAPRELLIDEA	*	
*		
*		
COPEPODA-CYCLOPODIA	*	1 3

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: 410 MARINA DEL REY SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL	POP CODE	POP COUNT
*	1	16
*	1	1
DECAPODA BRACHYURA-PINNOTHERIDAE		
*	1	6
MACRURA-CALLIANASSIDAE UPOGEBIA (MUDSHRIMP)		
CHORDATA OSTEICHTHYS PERCIFORMES GOBIIDAE CLEVELANDIA (ARROW-GOBY)	105	1
MOLLUSCA GASTROPODA-OPISTHOBRANCHIA CEPHALASPIDEA SCAPHANDRIDAE ACTEOCITNA	CULCITELLA	1
*		

MISSING DATA VALUE IS -1.0

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77 STATION: M11 MARINA DEL REY SAMPLE NUMBER 1 OF 2 SAMPLES GRAB TYPE: CAMPBELL	POP CODE	POP COUNT
<hr/>		
ANIMAL		
ANNELIDA		
OLIGOCHAETA		
*		
*		
*		
POLYCHAETA	*	
*		
CAPITELLIDAE		
CAPITELLA	CAPITATA	1 5
*		
CAPITITA	AMBISETA	1 73
*		
CIRRATULIDAE	*	
*	*	
CHAETOZONE	CORONA	1 3
*		
THARYX	*	1 6
*		
COSSURIDAE		
COSSURA	PYGODACTYLATA	1 5
*		
DORVILLEIDAE		
SCHISTOSTOMERINOS (G.D.-STAURONEREIS, SP.-ARTICULATA, RUOELPHI)	LONGICORNIS	1 2
LUMBRINERTIDAE		
LUMBRINERIS	*	1 21
*		
LUMBRINERIS	ERECTA	1 1
*		
ORBINIIDAE		
HAPLOSCOLEOPLOS	ELONGATUS	1 12
*		
PHYLLODOCIDAE		
ANAITIDES	*	1 1
*		
PILARGIIDAE		
STIGAMORA	TENTACULATA	1 1
*		
SPIONIDAE		
NERINIDES	ACUTA	1 11
*		
POLYDORA	LIGNE	1 9
*		
PRIONOSPIS	CIRRIFERA	1 1
*		
PRIONOSPIS	METERCBRANCHIA-NEWPORTENSIS	1 14
*		
PSEUDOPOLYDORA	PAUCIBRANCHIATA	1 34
*		
STREBLOSPIS	BENDICTI	2 128
*		
TEREBELLIDA		
ANAEANA	OCCIDENTALIS	1 1

BENTHIC DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 3/17/77	STATION: M11	MARINA DEL REY	POP CODE	POP COUNT
SAMPLE NUMBER 1 OF 2 SAMPLES	GRAB TYPE: CAMPBELL			
<hr/>				
ARTHROPODA				
CRUSTACEA				
CUNACEA	*			
*	*		1	1
*	*			
DECAPODA				
MACRURA-CALLIANASSIDAE				
CALLIANASSA	*		1	2
(BURROWING-SHRIMP)				
MYSIIDAEA	*			
*	*		1	12
(MYSIDS)				
MOLLUSCA				
GASTROPODA-OPISTHOBRANCHIA				
CEPHALASPIDEA				
SCAPHANDRIDAE				
ACTEONINA	CULCITELLA		1	2
*				

APPENDIX E

SETTLING AND FOULING SPECIES

Population Code Intervals

0 = many, present, few, etc.
(non-numerical quantity)

1 = 1 - 99

2 = 100 - 999

3 = 1000 - 9999

4 = 10,000 - above

-/= species occurrence not detected

5 = presence of colonial animal
that cannot be counted as individuals

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76 STATIONS: 43 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATIO- COUNT
ANIMAL					
ANNELIDA					
POLYCHAETA					
* OPHELIIDAE					
POLYOPHTHALMUS	PICTUS		2	-1.000	128
* SERPULIDAE					
HYDROIDES	PACIFICA		2	-1.000	320
* SPIONIDAE					
POLYODORA	SOCIALIS		1	-1.000	32
ARTHROPODA					
CRUSTACEA					
AMPHIPODA-CAPRELLIDEA					
CAPRELLIDAE					
CAPRELLA	*		1	+1.000	32
* CAPRELLA	CALIFORNICA		1	-1.000	64
* CAPRELLA	EQUATORIA		2	-1.000	288
AMPHIPODA-GAMMARIDEA					
COROPHIDIAE					
COROPHIUM	ACHERUSICUM		2	-1.000	160
* GAMMARIDAE					
ELASMOPOUS	RAPAX		1	-1.000	32
* ISCHYROCECIDAE					
JASSA	FALCATA		2	-1.000	256
BRYOZOA (ECTOPROCTA)					
GYMNOLAEMATA					
CHEILOSTOMATA					
BICELLARIELLIDAE					
BUGULA	CALIFORNICA		5	0.320	-1
* CHORDATA-UROCHORDATA					
ASCIDIACEA					
APLOUSOBRANCHIA					
* DIPLOSOMA	MACDONALDI		5	0.320	-1
PHLEBOBRANCHIA					
* CIONA	INTESTINALIS		2	-1.000	416
STOLIOBRANCHIA					
* BOTRYLLUS	*		5	1.600	-1
Cnidaria (Coelenterata)					
HYDROZOA					
HYDROIDA					
CAMPANULARIIDAE					
OBELIA	*		5	0.320	-1
MOLLUSCA					
PELECYPODA					
MYTILOIDAE					
MYTILIDAE					
MYTILUS	EDULIS		1	-1.000	64
(RAY-MUSSEL)					

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - MARBORS ENVIRONMENTAL PROJECTS

DATE: 10/16/76 STATION: M4 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL					
ANNELIDA					
POLYCHAETA	*				
CAPITELLIDAE					
CAPITELLA		CAPETATA	1	-1.000	16
OPHELLIIDAE	*				
POLYOPHTHALMUS	*	PICTUS	1	-1.000	64
SERPULIDAE					
HYDROIDES	*	PACIFICA	2	-1.000	192
SPIONIDAE	*				
POLYDORA	*	LIGNE	1	-1.000	16*
SPIRORBIDAE	*	*	1	-1.000	16
SYLLIDAE	*				
EXOGONE	*	LOUREI	1	-1.000	16
ARTHROPODA					
CRUSTACEA	*				
*	*				
*	*	*	1	-1.000	32
(COPEPODS)					
AMPHIPODA-CAPRELLIDAE					
CAPRELLIDAE					
CAPRELLA	*		1	-1.000	80
CAPRELLA	*	EQUILIBRA	1	-1.000	32
AMPHIPODA-GAMMARIDEA					
COROPHIIDAE					
COROPHİUM	*	ACHERUSICUM	1	-1.000	32
ERICTHONTUS	*	BRASILIENSIS	2	-1.000	176
GAMMARIDAE					
ELASMOPOUS	*	RAPAX	1	-1.000	16
ISCHYROCERIDAE					
JASSA	*	FALCATA	1	-1.000	16
BRYOZOA(ECTOPROCTA)					
GYMNOLAEMATA					
CHEILOSTOMATA					
BICELLERELLIDAE					
BIGULIA	*	NERITINA	5	0.160	-1
CHORDATA-URICHORDATA					
ASCIDIACEA					
APLOUSOBRANCHIA					

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76	STATION: M4	MARINA DEL REY	POPULATION CODE	WEIGHT	POPULATION COUNT
*	DIPLOPODA	MACDONALD	5	0.160	-1
*	PHLEBOBRANCHIA				
*	CIONA	INTESTINALIS	2	-1.000	608
*	STOLIOPHORANCHIA				
*	BOTRYLLUS	*	5	0.640	-1
CNIDARIA (COELENTERATA)					
HYDROZOA					
HYDROIDA					
CAMPANULARIIDAE					
OBELIA	*		5	0.160	-1
*	PLUMULARIIDAE				
AGLAOPHENIA	*		5	0.320	-1
*	TUBULARIIDAE				
TUBULARIA	*		5	0.960	-1
*	MOLLUSCA				
GASTROPODA-OPISTHOBRACHIA					
NUDIBRANCHIA					
*	*	*	1	-1.000	16
*	PLATYHELMINTHES				
TURBELLARIA					
POLYCLADIDA	*		1	-1.000	16
*	(POLYCLAD-FLATWORMS)	*			

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS				
DATE: 10/14/76 STATION: 46	MARINA DEL REY	POPULATION CODE	WEIGHT	POPULATION COUNT
<hr/>				
ANIMAL				
ANNELIDA				
POLYCHAETA				
*				
OPHELIIDAE				
POLYOPHTHALMUS	PICTUS	1	-1.000	16
*				
SERPULIDAE				
HYDROIDES	PACIFICA	1	-1.000	32
*				
SPIONIDAE				
POLYDORA	LIGNI	1	-1.000	16
*				
SPIRORBIDAE				
*	*	1	-1.000	48
*				
SYLVIIDAE	*	1	-1.000	48
*				
ARTHROPODA				
CRUSTACEA				
AMPHIPODA-GAMMARIDEA				
GAMMARIDAE				
ELASMOPODUS	RAPAX	1	-1.000	32
*				
CHORDATA-UROCHORDATA				
ASCIDIACEA				
PHLEBOBRANCHIA				
*				
CEONA	INTESTINALIS	2	-1.000	320
*				
STOLCIDOBRANCHIA				
*				
BOTRYLLUS	*	5	0.400	-1
*				

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76	STATION: #7	MARINA DEL REY	POPULATION CODE	WEIGHT	POPULATION COUNT
<hr/>					
ANIMAL					
ANNELIDA					
POLYCHAETA					
*					
CAPITELLIDAE		CAPITELLA			
CAPITELLA			1	-1.000	32
*					
DORYTTELIDAE		OPHRYOTROCHA			
OPHRYOTROCHA			1	-1.000	32
*					
SERPULIDAE		HYDROIDES			
HYDROIDES			1	-1.000	64
*					
SPIONIDAE					
*		*	1	-1.000	32
*					
POLYDORA		LIGNI			
*			2	-1.000	320
POLYDORA					
*		LIMICOLA			
			1	-1.000	64
ARTHROPODA					
CRUSTACEA					
*					
*		*	1	-1.000	64
*					
(COPEPOD)					
AMPHIPODA-GAMMARIDEA					
STROMATIIDAE					
ERICTHONIUS		BRASILIENSIS			
*			1	-1.000	32
GAMMARIDAE					
ELASMOPUS		RAPAX			
*			1	-1.000	32
CHORDATA-UROCHORDATA					
ASCIDIACEA					
PHLEBOBRANCHIA					
*					
CIONA		INTESTINALIS			
*			3	-1.000	1568
STOLIDOBRANCHIA					
*		*			
BOTRYLLUS			5	0.320	-1
*					
MOLLUSCA					
PELECYPODA					
MYOIDA					
Hiatellidae					
Hiatella		ARCTICA			
*			1	-1.000	32

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76 STATION: NO MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
<hr/>					
ANIMAL					
ANNELIDA					
POLYCHAETA					
*					
OPHELIIDAE					
POLYOPHTHALMUS	PICTUS		1	-1.000	1
*					
SERPULIDAE					
HYDROCOIDES	PACIFICA		1	-1.000	10
*					
SPIONIDAE					
POLYODORA	LIGNI		1	-1.000	10
*					
SPIRORBIDAE					
*	*		1	-1.000	1
*					
SYLLIDAE					
EUSYLLIS	ASSIMILIS		1	-1.000	1
*					
ARTHROPODA					
CRUSTACEA					
*					
*	*		1	-1.000	11
(COPEPOD)	*				
AMPHIPODA-GAMMARIDEA					
AMPITHOIDAE					
AMPITHOE	PLUMULOSA		1	-1.000	1
*					
COROPHIIDAE					
COPROPHUM	ACHERUSICUM		1	-1.000	10
*					
ERICTHONTUS	BRASILIENSIS		1	-1.000	5
*					
GAMMARIDAE					
ELASMOPODUS	RAPAX		1	-1.000	64
*					
STENOTHOTIDAE					
STENOTHOE	VALIDA		1	-1.000	1
*					
ISOPODA					
SPHAEROMATIDAE					
PARACERCEDES	SCULPTA		2	-1.000	406
*					
CHORDATA-JUCHORDATA					
ASCIDIACEA					
PHLEBOBRANCHIA					
*					
CLONA	INTESTINALIS		2	-1.000	382
*					
MOLLUSCA					
PELECYPODA					
*					
*	*		1	-1.000	1
*	*				
PLATYHELMINTHES					
TURBELLARIA					
POLYCLADIDA					
*					
*	*		1	-1.000	7
(POLYCLAD-FLATWORMS)	*				

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/16/76 STATION: 49 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL					
ANNELIDA					
POLYCHAETA					
*					
CAPITELLIDAE		CAPITATA	1	-1.000	1
CAPITELLA					
*					
DORVILLETIDAE		PUERILIS	1	-1.000	2
OPHYROTROCHA					
*					
OPHELIDIADAE		BIOCULATA	1	-1.000	1
ARMANDIA					
*					
SERPULIDAE		PACIFICA	1	-1.000	18
HYDROIDES					
*					
SPIONIDAE		LIGNI	2	-1.000	220
POLYDORA					
*					
SPIRORBIDAE		*	1	-1.000	20
*					
SYLLEIDAE		*	1	-1.000	2
*					
ARTHROPODA					
CRUSTACEA					
*					
*		*	1	-1.000	5
(COPEPOD)					
ANOPHIPODA-GAMMARIDEA					
C. MELIDA		ACHERUSICUM	1	-1.000	10
CONCHOPHUM					
*					
GAMMARIDAE		RAPAX	1	-1.000	42
ELASMOPOUS					
*					
ISOPODA					
SPHAEROMATIDAE		SCULPTA	1	-1.000	80
PARACERCEIS					
*					
THORACICA					
*		AMPHITRITE	1	-1.000	1
BALANUS					
*					
ASCHELINTHES					
NEMATODA					
*					
*		*	1	-1.000	2
*					
BRYOZOA(ECTOPROCTA)					
GYMNOLAEMATA					
CHEILOSTOMATA					
MEMBRANIPORIDAE		MEMBRANACEA	5	0.010	-1
MEMBRANIPORA					
*					

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 10/14/76 STATION: MEL MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
<hr/>					
ANIMAL					
ANNELIDA					
POLYCHAETA					
*					
DORVILLEIDAE					
OPHYROTROCHA	PUERILIS		1	-1.000	2
*					
OPHELIIDAE					
POLYOPHTHALMUS	PICTUS		1	-1.000	2
*					
SERPULOIDAE					
HYDROIDES	PACIFICA		1	-1.000	72
*					
SPIONIDAE					
POLYODRA	*		1	-1.000	6
*					
POLYDORA	LIGNI		1	-1.000	26
*					
SPIRORBIDAE	*		1	-1.000	16
*					
SYLLIDAE	*		1	-1.000	2
*					
ARTHROPODA					
CRUSTACEA					
AMPHIPODA-GAMMARIDEA					
COROPHIIDAE					
COROPHUM	ACHERUSTICUM		1	-1.000	22
*					
ERICTHONIUS	BRASILIENSIS		1	-1.000	2
*					
GAMMARIDAE					
ELASMOPUS	RAPAX		1	-1.000	84
*					
ISOPODA					
SPAEROMATIDAE					
PARACEPCEIS	SCULPTA		2	-1.000	150
*					
ASCHELYNTHES					
NEMATODA					
*					
*					
*	*		1	-1.000	2
BRYOZOA(ECTOPROCTA)					
GYMNOLAENATA					
CHEILOSTOMATA					
MEMBRANIPORIDAE					
MEMBRANIPORA	MEMBRANACEA		5	0.020	-1
*					
CNIDARIA(COELENTERATA)					
ANTHOZOA					
*					
*	*		1	-1.000	2
*					

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76 STATION: 41 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
<hr/>					
ANIMAL					
ANNELIDA					
POLYCHAETA					
*					
NEREIDAE					
PLATYNEREIS	BICANALICULATA		1	-1.000	50
*					
OPHELIIDAE					
POLYOPHTHALMUS	PICTUS		2	-1.000	216
*					
PHYLLOPODIDAE					
SUMIDA	SANGUINEA		1	-1.000	8
*					
SERPULIDAE					
HYDROIDES	PACIFICA		1	-1.000	4
*					
SPIONIDAE					
POLYDORA	LIGNI		1	-1.000	8
*					
SYLLIDAE					
AUTOLYTUS	*		1	-1.000	4
*					
ARTHROPODA					
CRUSTACEA					
*					
*	*		2	-1.000	480
(COPEPOD)					
AMPHIPODA-GAMMARIDEA					
*					
*	*		2	-1.000	100
COROPHITOAE					
COROPHIOUM	ACHERUSICUM		1	-1.000	12
*					
ERICTHONIUS	BRASILIENSIS		1	-1.000	24
*					
ESCHYROKERIDAE					
JASSA	FALCATA		2	-1.000	272
*					
TANAIDACEA					
*					
ANATANATIS	NORMANI		1	-1.000	4
*					
THORACICA					
*					
BALANUS	AMPHITRITE		1	-1.000	4
*					
PYCGOGONIDAE					
*					
*	*		1	-1.000	4
(SEA-SPIDER)					
ASCHELMINTHES					
NEMATODA					

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76 STATION: 41 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
*	*	*	1	-1.000	68
BRYOZOA (ECTOPROCTA)					
GYMNOGLAHTA					
CHEILOSTOMATA					
MEMBRANIPORIDAE					
MEMBRANIPORA	MEMBRANACEA		5	0.040	-1
CNIDARIA (COELENTERATA)					
HYDROZOA					
HYDROIDA					
CAMPANULARIIDAE					
OBELIA	*		5	1.680	-1
MOLLUSCA					
GASTROPODA-OPISTHOBRACHIA					
NUDEBRANCHIA					
*	*		1	-1.000	60
GASTROPODA-PROSOBRANCHIA					
ARCHAEOGASTROPODA					
ACMAEIDAE					
*	*		1	-1.000	4
(LIMPETS)					
PELECYPODA					
*	*		2	-1.000	184
*	*				
MYOIDA					
Hiatellidae					
HIATELLA	ARCTICA		1	-1.000	24
*					
MYTILOIDA					
MYTILIDAE					
MYTILUS	EDULIS		3	-1.000	1656
(BAY-MUSSEL)					
PTEROIODA					
PECTINIDAE					
-EPTOPECTEN	LATI'AURATUS		1	-1.000	56
(BROAD-EARED-PECTEN)					
PROTOZOA					
SARCODINA					
FORAMINIFERA					
*	*		1	-1.000	4
(FORAMS)					
PLANT					
PHAEOPHYCOPHYTA					
PHAEOPHYCEAE					
ECTOCARPALES					
*					
ECTOCARPUS	*		5	0.200	-1
	*				

MISSING DATA VALUE IS -1.0

		SETTLING RACK DATA LISTING	MARINAS ENVIRONMENTAL PROJECTS		
DATE:	STATION:	MARINA DEL REY	POPULATION CODE	WEIGHT	POPULATION COUNT
<hr/>					
ANIMAL					
ANNELIDA					
POLYCHAETA	*				
NEREIDAE					
POLYNEREIS		BICANALICULATA	1	-1.000	4
*					
OPHELIIDAE					
POLYOPHTHALMUS		PECTUS	1	-1.000	16
*					
SERPULIDAE					
EUPOMATUS		GRACILIS	1	-1.000	12
*					
SPIONIDAE					
POLYDORA		LIGNE	1	-1.000	60
*					
ARTHROPODA					
CRUSTACEA	*				
*					
*		*	1	-1.000	20
(COPROPODA)					
AMPHIPODA-GAMMARIDEA	*				
*					
*		*	2	-1.000	324
COROPHIDIAE					
COROPHIDIUM		ACHERUSICUM	1	-1.000	56
*					
ERICTHONIUS		BRASILIENSIS	2	-1.000	584
*					
GAMMARIDAE					
ELASMOPOUS		RAPAX	2	-1.000	204
*					
ISCHYROCERIDAE					
JASSA		FALCATA	1	-1.000	28
*					
STENOTHOIDAE					
STENOTHOE		VALIDA	1	-1.000	68
*					
DECAPODA					
CARIDEA	*		1	-1.000	4
*					
(SHRIMP)					
ISOPODA					
SPHAERONATIDAE					
PARACERCEPS		SCULPTA	2	-1.000	120
*					
THORACICA	*				
*					
BALANUS		AMPHITRITE	1	-1.000	4
*					
CHORDATA-UROCHORDATA					
ASCIDIACEA					
PHLEBOBRANCHIA					

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS
 DATE: 12/16/76 STATION: N3 MARINA DEL REY

		POPULATION CONE	WEIGHT	POPULATION COUNT
*	CIONA	1	-1.000	24
*	Cnidaria (Coelenterata)			
HYDROZOA				
HYDROIDA				
*				
*		5	0.400	-1
*	CAMPANULARIIDAE			
OBELIA	*	5	0.040	-1
*				
MOLLUSCA				
PELEGYPODA				
*				
*		1	-1.000	12
*				
PLATYHELMINTHES				
TURBELLARIA				
POLYCLADIDA				
*				
*	(POLYCLAD=FLATWORMS)	1	-1.000	8
PLANT				
CHLOROPHYCOPHYTA				
CHLOROPHYCEAE				
ULVALES				
*				
ENTEROMORPHA	*	5	0.040	-1
*				
ULVA	*	5	0.040	-1
*				

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76 STATION: 44

MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL					
ANNELIDA					
POLYCHAETA					
*					
CAPITELLIDAE					
CAPITELLA		CAPITATA	1	-1.000	24
*					
OPHELIIDAE					
POLYOPHTHALMUS		PICTUS	1	-1.000	32
*					
SPIONIDAE					
POLYODRA		LIGNE	1	-1.000	64
*					
SPIRORBIDAE					
*		*	1	-1.000	16
*					
SYLIDAE		*	1	-1.000	32
*					
*					
ARTHROPODA					
CRUSTACEA					
*					
*					
*		*	1	-1.000	24
(COPEPOD)					
AMPHIPODA-CAPRELLIDEA					
CAPRELLIDAE					
CAPRELLA		CALIFORNICA	1	-1.000	24
*					
CAPRELLA		EQUILIBRA	1	-1.000	24
*					
AMPHIPOD-GAMMARIDEA					
COROPHIIDAE					
COROPHION		ACHERUSICUM	2	-1.000	104
*					
ERICTHONIUS		BRASILIENSIS	2	-1.000	224
*					
GAMMARIDAE					
ELASMOPODUS		RAPAX	1	-1.000	48
*					
ISCHYROCERIDAE					
JASSA		FALCATA	2	-1.000	104
*					
STENOTHOIDAE					
STENOTHOE		VALIDA	1	-1.000	48
*					
ISOPODA					
SPHAEROMATTOIDAE					
PARACERCEIS		SCULPTA	1	-1.000	24
*					
CHORDATA-UROCHORDATA					
ASCIDIACEA					
APLODUSOBRANCHIA					
*					
DIPLOSOMA		MACDONALDI	5	0.000	-1

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS
 DATE: 12/16/76 STATION: 44 MARINA DEL REY

		POPULATION CODE	WEIGHT	POPULATION COUNT
*	PHLEBOBRANCHIA			
*	CIONA	INTESTINALIS	2	-1.000
*	STOLOIDBRANCHIA			
*	BOTRYLLUS	*	5	0.060
*	CHILOARTICIA (COELENTERATA)			
HYDROZOA				
HYDROIDEA				
PLUMULARIIDAE				
AGLAOPHENIA	*	5	0.060	-1
MOLLUSCA				
GASTROPODA-OPISTHOBRACHIA				
NUDIBRANCHIA	*		1	-1.000
*	*	*	1	24
PELECYPODA	*			
*	*	*	1	-1.000
*	*	*	1	16
MYTILOIDA				
MYTILIIDAE				
MYTILUS	(SAY-MUSSEL)	EDULIS	1	-1.000
				8

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/15/76 STATION: 46

MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
<hr/>					
ANIMAL					
ANNELIDA					
POLYCHAETA					
*	CAPITELLIDAE	CAPITELLA		-1.000	2
*	SPIONIDAE	LIGNT		-1.000	5
*	POLYDORA				
*	SPIRORBIDAE	*		-1.000	23
*	SYLLIDAE	*		-1.000	5
*		*			
ARTHROPODA					
CRUSTACEA					
*		*		-1.000	139
*		*			
(COPEPOD)					
AMPHIPODA-CAPPELLIDEA					
CAPPELLIDAE					
CAPRELLA	CALIFORNICA			-1.000	2
*					
AMPHIPODA-GAMMARIDEA					
COROPHIIDAE					
ERICTHONIUS	BRASILIENSIS			-1.000	2
*					
GAMMARIDAE					
ELASMOPUS	RAPAX			-1.000	3
*					
ISOPODA					
MUNNIDAE					
MUNNA	*			-1.000	3
*					
SPHAEROMATIDAE					
PARACERCIS	SCULPTA			-1.000	58
*					
MYSIDACEA					
*		*		-1.000	1
*		*			
(MYSIDI)					
TANATIDAE					
*	AYATANAIS	NORMANI		-1.000	1
*					
ASCHELMINTHES					
NEMATODA					
*					
*		*		-1.000	3
*		*			
CHORDATA-UROCHORDATA					

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/15/76 STATION: 46 MARINA DEL REY

		POPULATION CODE	WEIGHT	POPULATION COUNT
ASCIIDIACEA				
APLOUSOBRANCHIA				
*				
DIPLOSOMA	MACODNALDI	5	0.010	-1
*				
PHLEGBRANCHIA				
*				
CIONA	INTESTINALIS	2	-1.000	102
*				
STOLIDOBRANCHIA				
*				
BOTRYLLUS	*	5	0.010	-1
*				
PLANT				
*				
*				
*				
*				
[ALGAE]	*	5	0.100	-1

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76 STATION: 47 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATI COUN
ANIMAL					
ANNELIDA					
POLYCHAETA					
*	CAPITELLIDAE	CAPITELLA	CAPITATA	1	-1.000
*	NEREIDAE	PLATYNEREIS	BICANALICULATA	1	-1.000
*	OPHELIIDAE	POLYOPHTHALMUS	PICTUS	1	-1.000
*	SERPULIDAE	HYDROIDES	PACIFICA	1	-1.000
*	SPIONIDAE	POLYODORA	LIGNI	1	-1.000
*	SPIRORBIDAE	*	*	1	-1.000
*	SYLLIDAE	*	*	1	-1.000
*	ARTHROPODA				
CRUSTACEA					
*	(COPEPOD)	*	*	1	-1.000
AMPHIPODA-CAPRELLIDEA					
CAPRELLIDAE	CAPRELLA	EQUILIBRA	EQUILIBRA	1	-1.000
*	AMPHIPODA-GAMMARIDEA				
COROPHIIDAE	COROPHİUM	ACHERUSİCUM	1	-1.000	
*	ERICTHONIUS	BRASILIENSIS	1	-1.000	
GAMMARIDAE	ELASMOPUS	RAPAX	1	-1.000	
*	ISCHYROCERTIDAE	JASSA	FALCATA	1	-1.000
*	ISOPODA				
SPHAEROMATIDAE	PARACERCEIS	SCULPTA	1	-1.000	
*	THORACICA				
*	(BARNACLE)	*	*	1	-1.000
BRYOZOA(ECTOPROCTA)					
GYMNOLAEMATA					
CHEILOSTOMATA					
MEMBRANIPORTIDAE	MEMBRANIPORA	MEMBRANACEA	5	0.010	-1
*	CHORDATA-UROCHORDATA				
ASCIIDIACEA					
PHLEBOBRANCHIA	*				
CIONA	*	INTESTINALIS	1	-1.000	
STOLIOBRANCHIA	*				
BOTRYLLUS	*	*	5	0.010	-1

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS
 DATE: 12/16/76 STATION: NO MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
<hr/>					
ANIMAL					
ANNELIDA					
POLYCHAETA					
*					
CAPITELLIDAE					
CAPITELLA					
*					
NERETIDAE					
PLATYNERETS					
*					
OPHELIIDAE					
POLYOPHTHALMUS					
*					
SPIONIDAE					
POLYDORA					
*					
SPIRORBIDAE					
*					
*					
ARTHROPODA					
CRUSTACEA					
*					
*					
*					
(COPEPOD)					
AMPHIPODA-GAMMARIDEA					
COROPHITIDAE					
COROPHIUM					
*					
GAMMARIDAE					
ELASMODOPSIS					
*					
ESCHYROKERIDAE					
JASSA					
*					
ISOPODA					
SPHAERONATIDAE					
PARACERCERIS					
*					
CHORDATA-UROCHORDATA					
ASCIDIACEA					
PHLEBOBRANCHIA					
*					
CIONA					
*					
PLATYHELMINTHES					
TURBELLARIA					
POLYCLADIDA					
*					
*					
(POLYCLAD-FLATWORMS)					

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 12/16/76 STATION: M11 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL					
ANNELIDA					
POLYCHAETA					
*					
CAPITELLIDAE					
CAPITELLA		CAPETATA	I	-1.000	2
*					
SPIRONIDAE					
POLYDORA		LIGNI	I	-1.000	5
*					
SPIRORRIDAE					
*		*	I	-1.000	12
*					
ARTHROPODA					
CRUSTACEA					
*					
*		*	I	-1.000	14
(COPEPOD)					
AMPHIPODA-CAPRELLIDEA					
CAPRELLIDAE					
CAPRELLA		CALIFORNICA	I	-1.000	2
*					
CAPRELLA		EQUILIBRA	I	-1.000	2
*					
AMPHIPODA-GAMMARIDEA					
COROPHIIDAE					
COROPHUM		ACHERUSICUM	I	-1.000	15
*					
ERICTHONIUS		BRASILIENSIS	I	-1.000	2
*					
GAMMARIDAE					
ELASMOPUS		RAPAX	I	-1.000	21
*					
ISOPODA					
SPHAEROMATIDAE					
PARACERCEIS		SCULPTA	I	-1.000	56
*					
ASCHELMINTHES					
NEMATODA					
*					
*		*	I	-1.000	4
*					
CHORDATA-UROCHORDATA					
ASCIDIACEA					
PHLEBOBRANCHIA					
*					
CEDYA		INTESTINALIS	I	-1.000	1
*					

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS
 DATE: 2/17/77 STATION: M1 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL					
ANNELIDA					
POLYCHAETA	*				
CHRYSOPELIDAE					
PALEANOTUS		BELLIS	1	-1.000	2
*					
NEREIDAE					
PLATYNEREIS		BICANALICULATA	1	-1.000	93
*					
OPHELIIDAE					
POLYOPHTHALMUS		PICTUS	2	-1.000	538
*					
PHYLLOCOCIDAE					
EULALIA	*		1	-1.000	3
*					
EUMIDA	*	SANGUINEA	1	-1.000	5
*					
POLYNOIDAE					
HALOSYDRA		BREVISETOSA	1	-1.000	8
*					
SABELLARIIDAE					
SABELLARIA		ALCOCKI	1	-1.000	3
*					
SERPULIDAE					
HYDROIDES		PACIFICA	1	-1.000	8
*					
SPIONIDAE					
POLYODRA	*	LIGNI	1	-1.000	7
*					
SYLLIDAE					
AUTOLYTUS	*		1	-1.000	1
*					
ARTHROPODA					
CRUSTACEA					
*					
*					
*		*	2	-1.000	304
(COPROPOD)					
AMPHIPODA-CAPRELLIDEA					
CAPRELLIDAE					
CAPRELLA		CALIFORNICA	1	-1.000	4
*					
CAPRELLA	*	EQUILIBRA	1	-1.000	1
*					
AMPHIPODA-GAMMARIDEA					
COROPHIIDAE					
COROPHUM	*	ACHERUSICUM	1	-1.000	2
*					
ISCHYROCERIDAE					
JASSA	*	FALCATA	3	-1.000	4445
*					
POOCERIDAE					
POOCERUS	*	BRASILIENSIS	1	-1.000	12
*					

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77 STATION: M1 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
STENOTHIDAE					
STENOTHOE	*				
TANAIDACEA	*				
ANATANAIIS	*	NORMANI			
THORACICA	*				
CHTHALALUS	*	*			
PYCNOGENIDA	*				
*	*	*			
*	(SEA-SPIDER)	*			
ASCHELMINTHES					
NEMATODA	*				
*	*	*			
*	*	*			
BRYOZOA(ECTOPROCTA)					
GYMNOLAEMATA					
CHEILOSTOMATA	*				
*	*	*			
MEMBRANIPORIDA	*				
MEMBRANIPORA	*	MEMBRANACEA			
MEMBRANIPORA	*	MEMBRANACEA			
POLLUSCA					
GASTROPODA					
GASTROPODA-CRISTHOBRACHIA					
CEPHALASPICEA					
ATYIDAE					
HAWINGEA	*				
GASTROPODA-OPISTHOBRACHIA					
NUDIBRANCHIA	*				
*	*	*			
PELECYPODA	*				
*	*				
*	*	*			
MYCIDA					
HIATELLIDAE					
HIATELLA	*	ARCTICA			
MYTILICIDA					
MYTILIDAE					
MYTILUS	(RAY-MUSSEL)	EDULIS			

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77 STATION: M1 MARINA DEL REY

POPULATION CODE	WEIGHT	POPULATION COUNT
--------------------	--------	---------------------

~~ANIMAL~~

MOLLUSCA
 PELECYPODA
 PTERICIDA
 PECTINIDAE
 LEPTOPECTEN LATIAURATUS
 (BROAD-EARED-PECTEN)

1	-1.000	44
---	--------	----

PLATYHELMINTHES
 TURBELLARIA
 POLYCLADIDA
 *

1	-1.000	3
---	--------	---

(POLYCLAD=FLATWORMS) *

PROTOZOA
 SARCODINA
 FORAMINIFERA
 *

1	-1.000	12
---	--------	----

PLANT

*

*

*

*

*

*

(ALGAE) *

5	0.230	-1
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MISSING DATA VALUE IS -3.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77 STATION: M3

MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT	
ANIMAL						
ANNELICA						
POLYCHAETA						
*	CAPITELLIDAE	CAPITELLA	CAPITATA	1	-1.000	4
*	CHAETOPTERIDAE	CHAETOPTERUS	VARIOPEDATUS	1	-1.000	1
*	NEPIDIADAE	PLATYNEREIS	BICANALICULATA	1	-1.000	7
*	OPHELIIDAE	POLYOPHTHALMUS	PICTUS	1	-1.000	78
*	POLYNOIDAE	*	*	1	-1.000	5
SABELLARIIDAE	SABELLARIA	ALCOCKI	1	-1.000	1	
*	SERPULIDAE	HYCROIDES	PACIFICA	1	-1.000	4
SPIONIDAE	POLYDORA	LIGNI	1	-1.000	26	
*	POLYDORA	SOCIALIS	1	-1.000	2	
SPIRORBIDAE	*	*	1	-1.000	1	
*	SYLLIDAE	BRANIA	*	1	-1.000	2
*	EXOGONE	LOUREI	1	-1.000	2	
ARTHROPODA						
CRUSTACEA						
*	*	*	1	-1.000	43	
*	(COPEPOD)	*				
AMPHIFOA-CAPRELLIOEA	CAPRELLIDAE	CAPRELLA	EQUILIBRA	1	-1.000	1
*	CAPRELLA	VERRUCOSA	1	-1.000	1	
AMPHIFOA-CAMMARIDEA	COROPHIIDAE	COROPHUM	ACHERUSICUM	1	-1.000	26
COROPHIIDAE	*	ERICTHONIUS	BRASILIENSIS	1	-1.000	61

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS
 DATE: 2/17/77 STATION: N3 MARINA DEL REY

		POPULATION CODE	WEIGHT	POPULATION COUNT
*				
GAMMARIDAE				
ELASMOPUS	RAPAX	1	-1.000	29
*				
ISCHYROceridae				
JASSA	FALCATA	2	-1.000	102
*				
STENOTHOIDAE				
STENOTHOE	VALIDA	1	-1.000	15
*				
DECAPODA				
*				
(CRAB)	*	1	-1.000	2
ISOPODCA				
*				
*	*	1	-1.000	1
SPHAEROMATIDAe				
PARACERCETIS	SCULPTA	1	-1.000	19
*				
TANAICACEA				
*				
ANATANARIS	NORMANI	1	-1.000	2
*				
ASCHELMINTHES				
NEMATODA				
*				
*	*	1	-1.000	4
BRYOZOA (ECTOPROCTA)				
GYMNOLAENATA				
CHEILOSTOMATA				
BICELLERIELLIDAE				
BUGULA	NERITINA	5	0.020	-1
*				
NEMERANIPORIDAE				
MEMBRANIPORA	MEMBRANACEA	5	0.010	-1
*				
CHORDATA-UROCHERDATA				
ASCIDIACEA				
STOLIDOBRANCHIA				
*				
BCTTRYLLUS	*	5	0.010	-1
*				
CNIDARIA (COELENTERATA)				
HYDROZCA				
HYDRCIDA				
CAMPANULARIIDAE				
OBELIA	*	5	0.010	-1
*				
PLUMULARIIDAE				
AGLAOPHENIA	*	5	0.010	-1
*				
TUBULARIIDAE				
TUBULARIA	*	5	0.150	-1
*				
MOLLUSCA				
GASTROPODA				
*				
*	*	1	-1.000	2
*	*			

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77 STATION: M3 MARINA DEL REY

		POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL				
MOLLUSCA				
GASTROPODA-OPISTHOBRACHIA				
NUDIBRANCHIA	*			
*				
*	*			
PELECYPODA	*			
*				
*	*			
*	*			
MYTILOIDA				
MYTILIDAE				
MYTILUS				
(BAY-MUSSEL)		EDULIS		
PLATYHELMINTHES				
TURBELLARIA				
POLYCLADIDA	*			
*	*			
(POLYCLAD-FLATWORMS)	*			
PLANT				
RHODOPHYCOPHYTA				
FLORIDECPHYCEAE				
CERANIALES	*			
*				
POLYSIPHONIA	*			
*				
		5	0.010	-1

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS
 DATE: 2/17/77 STATIONS: M4 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL					
ANNELIDA					
POLYCHAETA					
*					
CAPITELLIDAE					
CAPITELLA		CAPITATA	1	-1.000	3
*					
NEREIDAE					
PLATYNEREIS		BICANALICULATA	1	-1.000	1
*					
OPHELIIDAE					
POLYOPHTHALMUS		PECTUS	1	-1.000	13
*					
PHYLLOCOCCIDAE					
EULALIA	*		1	-1.000	1
*					
SERPUOLIDAE					
HYDROIDES		PACIFICA	1	-1.000	2
*					
SPIONIDAE					
POLYDORA		LIGNI	1	-1.000	15
*					
SPIFORBIDAE					
*		*	1	-1.000	13
*					
SYLLIDAE	*	*	1	-1.000	19
*					
ARTHROPODA					
CRUSTACEA					
*					
*					
(COPEPOD)	*		1	-1.000	28
AMPHIPODA-CAPRELLIDEA					
CAPRELLIDAE					
CAPRELLA		CALIFORNICA	1	-1.000	1
*					
CAPRELLA	*	EQUILIBRA	1	-1.000	2
AMPHIPODA-GAMMARIDEA					
CORCOPHIIDAE					
CORCOPHIUM	*	ACHERUSICUM	1	-1.000	6
*					
GAMMARIDAE					
ELASMOPOUS		RAPAX	1	-1.000	13
*					
ISCHYROCERIDAE					
JASSA	*	FALCATA	1	-1.000	3
*					
STENOTHOIDAE					
STENOTHOE	*	VALIDA	1	-1.000	42
*					
DECAPODA					
BRACHYURA-CANCRIDAE					

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS
 DATE: 2/17/77 STATION: M4 MARINA DEL REY

		POPULATION CODE	WEIGHT	POPULATION COUNT
CANCER	*	1	-1.000	1
ISCOPDA				
MUNIDAE				
MUNNA	*	1	-1.000	1
SPHAEROMATIDAE				
PARACERCEIS	SCULPTA	1	-1.000	1
BRYOZOA(ECTOPHYCTA)				
GYMNOLAEMATA				
CHEILOSTOMATA				
EICELLERIELLIDAE				
BUGULA	CALIFORNICA	5	0.010	-1
CHORDATA-UROCHORDATA				
ASCIDIACEA				
PHLEBOBRANCHIA	*			
CIONA	INTESTINALIS	1	-1.000	4
CNIOARIA (COELENTERATA)				
HYDROZOA				
HYDROIDA				
CAMPANULARIIDAE				
OBELIA	*	5	0.010	-1
PLUMULARIIDAE				
AGLAOPHENIA	*	5	0.010	-1
TUBULARIIDAE				
TUBULARIA	*	5	1.970	>1
MOLLUSCA				
GASTROPODA-OPISTHOBRACHIA				
NUDIBRANCHIA	*			
*	*	1	-1.000	8
PELECYPODA	*			
*	*	1	-1.000	4
MYTILICIDA				
MYTILIIDAE				
MYTILUS	(BAY-MUSSEL)	EDULIS	-1.000	11
PLATYHELMINTHES				
TURBELLARIA				
POLYCLADIDA	*	1	-1.000	1
*	(POLYCLAD=FLATWORMS)			

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS
 DATE: 2/17/77 STATION: M7 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL					
ANNELICA					
POLYCHAETA					
* OPHELIIDAE					
POLYOPHTHALMUS	PICTUS		1	-1.000	2
* SPIONIDAE					
POLYDORA	LIGNI		1	-1.000	2
* SPIRORBIDAE					
* SYLLIDAE	*		1	-1.000	20
* *	*		1	-1.000	9
ARTHROPODA					
CRUSTACEA					
*					
*					
(COPEPOD)	*		1	-1.000	13
AMPHIPODA-CAPRELLIDEA					
CAPRELLIDAE					
CAPRELLA	EQUILIBRA		1	-1.000	1
*					
AMPHIPODA-GAMMARIDEA					
COROPHIIDAE					
COROPHIOUM	ACMERUSICUM		1	-1.000	1
*					
GAMMARIDAE					
ELASMOPUS	RAPAX		1	-1.000	2
*					
ISOPODA					
LIMNICRIDAE					
LIMNORIA	TRIPUNCTATA		1	-1.000	1
*					
SPHAEROMATIDAE					
PARACERCEIS	SCULPTA		1	-1.000	2
*					
ASCHELINTHES					
NEMATOCA					
*					
*					
*	*		1	-1.000	3
BRYOZOA(ECTOPROCTA)					
GYMNOLAEMATA					
CHEILOSTOMATA					
BICELLERIELLIDAE					
BUGULA	NERITINA		5	0.010	-1
*					
CNIDARIA (COELENTERATA)					
HYDROZOA					
HYDRCIDA					
CAMPANULARIIDAE					
DEELIA	*		5	0.010	-1
*					
TUBULARIIDAE					
TUBULARIA	*		5	0.010	-1
*					
PLANT					
PHAEOPHYCOPHYTA					
PHAEOPHYCEAE					
ECTOCARPales					
*					
ECTOCARPUS	*		5	0.010	-1
*					
RHOOPHYCOPHYTA					
FLORIDEOPHYCEAE					
CERANIALES					
*					
POLYSTIPHONIA	*		5	0.010	-1
*					

MISSING DATA VALUE IS -1+0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77 STATION: MB

MARINA DEL REY

		POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL				
ANNELIDA				
POLYCHAETA				
* CIRRATULIDAE	*			
THARYX	*	1	-1.000	1
* SPIRCREIDAE	*	1	-1.000	3
*				
ARTHROPODA				
CRUSTACEA				
*				
*	*	2	-1.000	116
(COPEPOD)				
AMPHIPODA-CAPRELLIDEA				
CAPRELLIDAE				
CAPRELLA	CALIFORNICA	1	-1.000	1
*				
AMPHIPODA-GAMMARIDEA				
CORCOPHITIDAE				
CORCOPHUM	ACHERUSICUM	3	-1.000	1098
*				
GAMMARIDAE				
ELASMOPOUS	RAPAX	1	-1.000	3
*				
ISCHYROCERIDAE				
JASSA	FALCATA	1	-1.000	1
*				
ISOPCCA				
LIMNORIDAE				
LIMNORIA	TRIPUNCTATA	1	-1.000	2
*				
SPHAEROMATICA				
PARACERCEIS	SCULPTA	2	-1.000	129
*				
TANAICACEA				
*				
ANATANAIIS	NORMANI	1	-1.000	5
*				
ASCHELINTHES				
NEMATODA				
*				
*	*	1	-1.000	1
*				
CHORDATA-UROCHORDATA				
ASCIIDIACEA				
PHLEBOBRANCHIA				
*				
CIONA	INTESTINALIS	1	-1.000	4
*				
MOLLUSCA				
PELECYPODA				

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS
 DATE: 2/17/77 STATIONS: MB MARINA DEL REY

		POPULATION CODE	WEIGHT	POPULATION COUNT
MYTICIDA				
MYTILIDAE				
MYTILUS	EDULIS	1	-1.000	1
(BAY-MUSSEL)				
PLATYHELMINTHES				
TURBELLARIA				
POLYCLADIDA				
*				
*	*	1	-1.000	1
(POLYCLAD-FLATWORMS)				
PROTOZOA				
SARCODINA				
FORAMINIFERA				
*				
*	*	1	-1.000	1
(FORAMS)				
PLANT				
*				
*				
*				
*	*	5	0.010	-1
(ALGAE)				
CHLOROPHYCOPHYTA				
CHLOROPHYCEAE				
ULVALES				
*				
ENTEROMORPHA	*	5	-1.000	-1
*				
PHAEOPHYCOPHYTA				
PHAEOPHYCEAE				
ECTOCARPales				
*				
ECTOCARPUS	*	5	-1.000	-1
*				
RHODOPHYCOPHYTA				
FLORIDEOPHYCEAE				
CERANIALES				
*				
POLYSIPHONIA	*	5	-1.000	-1
*				

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 2/17/77 STATION: M9 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL					
ANNELICA					
POLYCHAETA					
*					
NEREIDAE					
PLATYNEREIS		BICANALICULATA	1	-1.000	1
*					
OPHELIIDAE					
POLYOPHTHALMUS		PICTUS	1	-1.000	1
*					
POLYNOIDAE					
*		*	1	-1.000	2
*					
SPIROBIDAE					
*		*	1	-1.000	13
*					
SYLIDAE		*	1	-1.000	1
*					
*					
ARTHROPODA					
CRUSTACEA					
AMPHIPODA-GAMMARIDEA					
COCOPHIDIAE					
CORDOPHUM		ACHERUSICUM	1	-1.000	5
*					
GAMMARIDAE					
ELASMOPUS		RAPAX	1	-1.000	9
*					
ISCHYRCERIDAE					
JASSA		FALCATA	1	-1.000	3
*					
ISOPODA					
SPHAERONOTIDAE					
PARACERCEIS		SCULPTA	1	-1.000	16
*					
BRYOZOA(ECTOPROCTA)					
GYMNOCLAEMATA					
CHEILOSTOMATA					
MEMBRANIPORIDAE					
MEMBRANIPORA		MEMBRANACEA	5	0.010	-1
*					
CHORDATA-UROCHORDATA					
ASCIDIACEA					
PHLEBOBRANCHIA					
*					
CIONA		INTESTINALIS	1	-1.000	12
*					
MOLLUSCA					
PELECYPODA					
MYTILICIDA					
MYTILIDAE					
MYTILUS		ECULIS	1	-1.000	1
(BAY-MUSSEL)					

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS
 DATE: 2/17/77 STATION: M11 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL					
ANNELIDA					
POLYCHAETA					
* CAPITELLIDAE	CAPITELLA	CAPITATA	1	-1.000	1
SERPULIDAE	HYPDROIDES	PACIFICA	1	-1.000	1
SPICINICAE	POLYODORA	LIGNI	1	-1.000	2
SPIRCRIBIDAE	*	*	1	-1.000	10
SYLLIDAE	*	*	1	-1.000	2
ARTHROPODA					
CRUSTACEA					
AMPHIPODA-GAMMARIDEA					
COROPHTIDAE	COROPHIMUM	ACHERUSICUM	1	-1.000	74
GAMMARIDAE	ELASMOFRUS	RAPAX	1	-1.000	3
ESCHYROCERIDAE	JASSA	FALCATA	1	-1.000	1
ISOPODA	LIMNORIDAE	TRIPUNCTATA	1	-1.000	1
LIMNORIA	SPHAEROMATIDAE	SCULPTA	1	-1.000	16
PARACERCETS	*				
TANATACEAE	*				
ANATANAIIS	*	NORMANI	1	-1.000	1
CHORDATA-UROCHORDATA					
ASCIDIACEA					
PHLEBOBRANCHIA	*				
CIONA		INTESTINALIS	1	-1.000	2
MOLLUSCA	*				
PELECYPODA					
MYTILOIDA					
MYTILIIDAE	MYTILUS	EDULIS	1	-1.000	1
(BAY-MUSSEL)					

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 4/21/77 STATIONS: ME

MARINA DEL REY

		POPULATION CODE	WEIGHT	POPULATION COUNT
<hr/>				
ANIMAL				
ANNELIDA				
POLYCHAETA				
*				
HESIONIDAE				
OPHIOCHOMUS	ELGETTENSIS	1	-1.000	4
*				
NERIIDAE				
PLATYNEREIS	BICANALICULATA	1	-1.000	4
*				
POLYNOIDAE				
HALOXYONA	BREVISETCOSA	1	-1.000	8
*				
SABELLARIIDAE				
SABELLARIA	*	1	-1.000	4
*				
SERPULOIDAE				
HYDROIDES	PACIFICA	1	-1.000	16
*				
SPIONIDAE				
POLYCHA	LEIGNE	1	-1.000	4
*				
POLYDORA	LIMICOLA	1	-1.000	4
*				
POLYDORA	SOCIALIS	1	-1.000	4
*				
SPIROREIDAE				
*	*	1	-1.000	4
*				
ARTHROPODA				
CRUSTACEA	*	2	-1.000	124
*				
*	*			
(COPEPOD)				
AMPHIPODA-CAPRELLIDEA	*	1	-1.000	36
*	*			
*	*			
CAPRELLIDAE				
CAPRELLA	VERrucosa	1	-1.000	44
*				
AMPHIPODA-GAMMARIDEA				
COROPHIIDAE				
COROPHium	ACHERUSTICUM	1	-1.000	8
*				
ESCHYROCERIDAE				
JASSA	FALCATA	3	-1.000	6328
*				
PODOCERIDAE				
PODOCERUS	CRESTATUS	1	-1.000	16
*				
THORACICA				
*	*	1	-1.000	8
CHTHAMALUS	*			

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS
 DATE: 4/21/77 STATION: MI MARINA DEL REY

		POPULATION CODE	WEIGHT	POPULATION COUNT
ASCHELMINTHES				
NEMATODA	*			
	*			
ECHINODERMATA	*			
ECHINOIDEA	*			
	*			
	*			
(SEA-URCHIN)	*			
MOLLUSCA				
GASTROPODA	*			
	*			
	*			
PELECYPODA	*			
	*			
	*			
MYOIDA				
Hiatellidae				
HIATELLA		ARCTICA		
	*			
PTEROIOIDA				
PECTINIDAE				
LEPTOPECTEN		LATIPLATES		
(BROAD-EARED-PECTEN)				
PLATYHELMINTHES				
TURBELLARIA				
POLYCLADIDA				
	*			
	*			
(POLYCLAD-FLATWORMS)	*			
PROTOZOA				
SARCODINA				
FORAMINIFERA				
	*			
	*			
(FORAMS)	*			
PLANT				
	*			
	*			
	*			
(ALGAE)	*			
		5	0.360	-1

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 4/21/77 STATION: #3 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL					
ANNELOIDA					
POLYCHAETA					
*					
CHRYSPETALIDAE					
PALEANOTUS	BELL IS		1	-1.000	1
*					
NEREIDAE					
PLATYNEREIS	BICANALICULATA		1	-1.000	6
*					
OPHELIIDAE					
POLYPHTHALMUS	PECTUS		1	-1.000	8
*					
PHYLLOCOCCIDAE					
EULALIA	*		1	-1.000	2
*					
POLYNCIDAE					
*	*		1	-1.000	2
*					
HALOSYDNA	BREVISSETCSA		1	-1.000	3
*					
SABELLARIIDAE					
SABELLARIA	*		1	-1.000	1
*					
SERPULIDAE					
HYDROIDES	PACIFICA		1	-1.000	10
*					
SPIUNIDAE					
POLYDORA	LEMICOLA		1	-1.000	16
*					
SPIRORBIDAE					
*	*		1	-1.000	4
*					
SYLLIDAE					
EXOGONE	*		1	-1.000	5
*					
ARTHROPODA					
CRUSTACEA					
*					
*					
*	*		1	-1.000	21
AMPHIPODA					
CAPRELLIDAE					
CAPRELLA	CALIFORNICA		1	-1.000	18
*					
AMPHIPODA-GAMMARIDEA					
COROPHIIDAE					
COROPHIUM	ACHERUSICUM		1	-1.000	50
*					
ERICTHONIUS	ERASILIENSIS		1	-1.000	73
*					
GAMMARIDAE					
ELASMOPOUS	RAPAX		1	-1.000	12
*					

SETTLING RACK DATA LISTING ~ MARINAS ENVIRONMENTAL PROJECTS
 DATE: 4/21/77 STATION: 43 MARINA DEL REY

		POPULATION CODE	WEIGHT	POPULATION COUNT
ISOCHTHONIIDAE				
JASSA *	FALCATA	2	-1.000	279
PODOCERIDAE				
PODOCERUS *	CRISTATUS	1	-1.000	47
STENOPODIDIADAE				
STENOPODCE *	VALIDA	1	-1.000	6
ISOPODA				
MUNICIDAE				
MUNNA *	*	1	-1.000	2
SPHAEROMATIDIADAE				
PARACERCETIS *	SCULPTA	1	-1.000	1
TANAIDACEA *				
ANATANAIIS *	NORMANI	1	-1.000	2
THORACICA *				
CHTHAMALUS *	*	1	-1.000	2
ASCHELMINTHES				
NEMATODA *				
*	*	1	-1.000	2
BRYOZOA (ECTOPROCTA)				
GYMNOLAEMATA				
CHEILOSTOMATA				
SICELLERIELLIDAE				
BUGULA *	NERITINA	5	0.010	-1
CNIDARIA (COELENTERATA)				
HYDROZOA				
HYDROIDA				
PLUMULARIIDAE				
AGLAOPHENIA *	*	5	0.060	-1
MOLLUSCA				
GASTROPODA *				
*				
*	*	1	-1.000	8
GASTROPODA-OPISTHOBRANCHIA				
CEPHALASPIDEA				
ATYIDAE				
HARMONIA *	*	1	-1.000	1
GASTROPODA-OPISTHOBRANCHIA				
NUDIBRANCHIA *				
*	*	1	-1.000	5
PELECYPODA *				
*				
*	*	1	-1.000	87
MYOIDA				
MIATELLIDAE				
MIATELLA *	ARCTICA	1	-1.000	1
MYTILIDAE				
MYTILUS (BAY-MUSSEL)	EDULIS	2	-1.000	189
PLATYHELMINTHES				
TURBELLARIA				
POLYCLADIDA *				
*	*	1	-1.000	1
PLANT (POLYCLAD=FLATWORMS)				
CHLOROPHYCOPHYTA				
CHLOROPHYCEAE				
ULVALES *	*	5	0.010	-1
ULVA *	*			

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 4/21/77 STATION: M4

MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL					
ANNELIDA					
POLYCHAETA					
*					
CTENODRILIDAE					
CTENODRILUS	SERRATUS		1	-1.000	2
*					
NEREIDAE					
PLATYNEREIS	BICANALICULATA		1	-1.000	5
*					
OPHELIIDAE					
ARMANDIA	BILOCULATA		1	-1.000	1
*					
POLYOPHTHALMUS	PICTUS		1	-1.000	1
*					
PHYLLOCOCIDAE					
EULALIA	*		1	-1.000	1
*					
POLYNOIDAE					
*	*		1	-1.000	1
SERPULIDAE					
HYDROIDES	PACIFICA		1	-1.000	32
*					
SPIONIDAE					
POLYODRA	*		1	-1.000	21
*					
SPIROREIDAE					
*	*		2	-1.000	205
*					
SYLLIDAE					
EXOGONE	*		1	-1.000	13
*					
ARTHROPODA					
CRUSTACEA					
*					
*					
(COPEPOD)	*		1	-1.000	26
AMPHIPODA-CAPRELLIDEA					
*					
*					
CAPRELLIDAE	*		1	-1.000	10
CAPRELLA	CALIFORNICA		1	-1.000	34
*					
AMPHIPODA-GAMMARIDEA					
CURCOPHIDIAE					
CURCOPHIUM	ACHERUSICUM		1	-1.000	24
*					
ERICTHOKIUS	ERASIELIENSIS		2	-1.000	190
*					
GAMMARIDAE					
ELASMOPLUS	RAPAX		1	-1.000	25
*					

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBOR'S ENVIRONMENTAL PROJECTS

DATE: 6/21/77 STATION: M4

MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ISAEIDAE					
CAMAROPSIS	THOMPSONI		1	-1.000	10
*					
ISCHYROCERIDAE					
JASSA	FALCATA		2	-1.000	264
*					
POUJCIIDAE					
POOCERUS	CRISTATUS		1	-1.000	65
*					
STENOTHOICIDAE					
STENOTHOE	VALIDA		1	-1.000	1
*					
ESPODA					
Sphaeromatidae					
PARACERCIS	SCULPTA		1	-1.000	3
*					
TANATIDAE					
*					
ANATANAIIS	NERVATA		1	-1.000	1
*					
THURECTICA					
*					
CHTHAMALUS	*		1	-1.000	1
*					
BRYOZOA (ECTOPROCTA)					
SYNNULAEATA					
CHEILOSTOMATA					
*					
*	*		5	0.010	-1
*					
SICELLERIELLIDAE					
BUGULA	NERITINA		5	0.010	-1
*					
CHORDATA-UROCHORDATA					
ASCOVIACEA					
PHLEBOBRANCHIA					
*					
CEDRA	INTESTINALIS		1	-1.000	12
*					
STOL (DOBRANCHIA)					
*					
BOTRYLLUS	*		5	0.040	-1
*					
CILIARIA (CCELENTERATA)					
HYDROZOA					
HYDROIDA					
CAMPANULARIIDAE					
OBELIA	*		5	0.010	-1
*					
PLUMULARIIDAE					
AQUAPHENTA	*		5	0.010	-1
*					
MOLLUSCA					
GASTROPODA					
*					
*	*		1	-1.000	2
*					
PELECYPODA					
*					
*	*		1	-1.000	61
MYIDAE	*				
Hiatellidae					
HIATELLA	ARCTICA		1	-1.000	1
*					
MYTILOIDAE					
MYTILIDAE					
MYTILUS	EDULIS		2	-1.000	203
(BAY-MUSSEL)					
PROTOZOA					
SARCODINA					
FORAMINIFERA					
*					
*	*		1	-1.000	5
(FORAMS)					

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 4/21/77 STATION: M6 MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
<hr/>					
ANIMAL					
ANNELIDA					
POLYCHAETA					
*	CAPITELLIDAE	CAPITATA	1	-1.000	4
	CAPITELLA	*			
*	CIRRATULIDAE				
	CAULLERIELLA	HAMATA	1	-1.000	4
*	CHAETOCONE				
*	CORONOIDAE	CORONA	1	-1.000	4
*	CTENODORILIDAE				
	CTENODORILUS	SERRATUS	1	-1.000	76
*	DORVILLIACEAE				
	SCHISTOSTOMERINGS	LENGICCRIS	1	-1.000	4
(G.O.-STAURUNEREIS, SP-Articulata, Rudolph)					
SPIONIDAE					
POLYOPHA	*		1	-1.000	60
*	PRIONOSPIC	*	1	-1.000	3
*	SPIROREIOIDAE				
*	*	*	1	-1.000	29
*	SYLLIDAE	*	1	-1.000	25
*	*	*			
ARTHROPODA					
CRUSTACEA					
*					
*		*	1	-1.000	4
(COPEPOD)					
AMPHIPODA-CARRELL IDEA					
*		*	1	-1.000	4
*		*			
AMPHIPODA-GAMMARIDEA					
CYRPHIIDAE					
CYRPHIUM	ACHERUSICUM		1	-1.000	1
*					
ESUPODA					
MUNNIDAE					
MUNNA	*		1	-1.000	3
*					
SPHAEROMATIDAE					
PARACERCEIS	SCULPTA		1	-1.000	4
*					
TANATIDACEA					
*	ANATANASIS	NORMANI	1	-1.000	1
*					

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS
 DATE: 4/21/77 STATION: #6 MARINA DEL REY

		POPULATION CODE	WEIGHT	POPULATION COUNT
CHORDATA-UROCHORDATA				
ASCIDIACEA				
PHLEBOBRANCHIA				
*				
CLIONA	INTESTINALIS	1	-1.000	8
*				
MOLLUSCA				
GASTROPODA				
*				
*	*	1	-1.000	1
GASTROPODA-OPISTHOBRACHIA				
CEPHALASPIDEA				
ACTEONIDAE				
RECTAXIS	PUNCTOCELATUS	1	-1.000	1
*				
ATYIDAE				
HANINGEA	*	1	-1.000	1
*				
GASTROPODA-OPISTHOBRACHIA				
NUDIBRANCHIA				
*				
*	*	1	-1.000	1
PELECYPODA				
MYTILOIDA				
MYTILIIDAE				
MYTILUS (BAY-MUSSEL)	EQUULIS	1	-1.000	15
NE MERTEA				
*				
*				
*	*	1	-1.000	1
PLATYHELMINTHES				
TURBELLARIA				
POLYCLADIDA				
*				
*	*	1	-1.000	1
(POLYCLAD-FLATWORMS)				
PROTOZOA				
SARCODINA				
FORAMINIFERA				
*				
*	*	1	-1.000	16
(FORAMS)				

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 4/21/77 STATION: N7

MANINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL					
ANNELIDA					
POLYCHAETA					
*	CAPITELLIDAE	CAPITELLA			
	CAPITELLA	CAPITELLA	1	-1.000	1
*					
CTENODRILIDAE	CTENODRILUS	SERRATUS	1	-1.000	5
*					
NEREIDAE	PLATYNEREIS	BICANALICULATA	1	-1.000	3
*					
SERPULIDAE	HYDROIOIDES	PACIFICA	2	-1.000	160
*					
SPIONIDAE	POLYDORA	LIGNI	1	-1.000	19
*					
SPIROREIDAE	*	*	2	-1.000	286
*					
SYLLIDAE	*	*	1	-1.000	17
*					
ARTHROPODA					
CRUSTACEA					
*					
*		*	1	-1.000	4
(COPEPOD)					
AMPHIPODA-CAPRELLIDEA	CAPHELLIDAE	CALIFORNICA	1	-1.000	1
	CAPRELLA				
*					
AMPHIPODA-GAMMARIDEA	GAMMARIDAE				
	CYRPHIDIUM	ACHERUSICUM	1	-1.000	10
*					
ERICHTHONIUS	ERICHTHONIUS	BRASILIENSIS	1	-1.000	1
*					
GAMMARIDAE	ELASMOPUS	RAPAX	1	-1.000	9
*					
ISCHYROCERIDAE	JASSA	FALCATA	1	-1.000	3
*					
ISOPODA	SPHAEROMATIDAE				
	PARACERCEIS	SCULPTA	1	-1.000	3
*					
THORACICA	*	*	1	-1.000	1
*					
CITHARALUS	*	*	1	-1.000	1
*					
COLEOPTERA-CRUSTACEA					

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS
 DATE: 4/21/77 STATION: V7 MAHINA DEL REY

		POPULATION CODE	WEIGHT	POPULATION COUNT
BRYOZOA (CYTOPROCTA)	*			
GYMNOLAEMATA	*			
CHEILOSTOMATA	*			
CHORDATA-UROCHORDATA	*	5	0.010	-1
ASCIDIACEA				
APLIDIOBRANCHIA	*			
DIPLOSOAMA	MAGDONALDI	5	0.010	-1
PHLEBOBRANCHIA	*			
CLIONA	INTESTINALIS	1	-1.000	23
STOLDOBRANCHIA	*			
BOTRYLLUS	*	5	0.120	-1
MOLLUSCA	*			
GASTROPODA-OPISTHOBRACHIA	*			
NUDIBRANCHIA	*			
PELECYPODA	*	1	-1.000	1
MYTILOIDAE	*			
MYTILUS	*	1	-1.000	62
(BAY-MUSSEL)	EDULIS	1	-1.000	5

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 4/21/77 STATION: 49 MARTINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL					
ANNELIDA					
POLYCHAETA					
* CAPITELLIDAE					
CAPITELLA	CAPITATA		1	-1.000	1
* CTENGORILIIDAE					
CTENODRILUS	SERRATUS		1	-1.000	1
* DORVILLIIDAE					
DPHYROTROCHA	PUERILIS		1	-1.000	1
* NEREIDAE					
PLATYNEREIS	BICANALICULATA		1	-1.000	1
* OPHELIIDAE					
POLYOPHTHALMUS	PICTUS		1	-1.000	1
SERPULIDAE					
HYDROIDES	PACIFICA		1	-1.000	59
* SPIONIDAE					
POLYDORA	LIGNE		1	-1.000	19
SPIROBIDAE					
*	*		2	-1.000	306
SYLLIDAE	*		1	-1.000	18
*	*				
ARTHROPODA					
CRUSTACEA					
*					
*	*		1	-1.000	11
(COPEPOD)	*				
AMPHIPODA-CAPRELLIDEA					
CAPRELLIDAE					
CAPRELLA	CALIFORNICA		1	-1.000	3
*					
AMPHIPODA-GAMMARIDEA					
CORUPHIDIAE					
CORUPHUM	ACHERUSICUM		1	-1.000	31
*					
GAMMAROIDAE					
ELASMOPOUS	RAPAX		1	-1.000	4
*					
ISOPODA					
SPHAEROMATIDIAD					
PARACERCEIS	SCULPTA		1	-1.000	5
*					
THORACICA					
*	*		1	-1.000	3
CHTHAMALUS	*				

MISSING DATA VALUE IS -1.0

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 4/21/77 STATION: 49 MARINA DEL REY

		POPULATION CODE	WEIGHT	POPULATION COUNT
ASCHELMINTHES				
NEMATODA				
*				
*				
*				
BRYOZOA(ECTOPROCTA)				
GYMNULAEARTA				
CHEILOSTOMATA				
BICELLERIELLIDAE				
BUGULA	NERITINA	5	0.010	-1
*				
CHORDATA-UROCHORDATA				
ASCIDIACEA				
PHLEBOBRANCHIA				
*				
CIONA	INTESTINALIS	1	-1.000	91
*				
STOLIDOBRANCHIA				
*				
BOTRYLLUS	*	5	0.020	-1
*				
CNIDAREA (COELENTERATA)				
HYDROZOA				
HYDROIDA				
CAMPANULARIACE				
OBELIA	*	5	0.010	-1
*				
ECHINODERMATA				
ECHINOIDEA				
*				
*				
*	*	1	-1.000	1
(SEA-URCHIN)				
MOLLUSCA				
GASTROPODA-PROSOBRANCHIA				
MESOGASTROPODA				
CALYPTRAEIDAE				
CREPIDULA	*	1	-1.000	63
*				
PELECYPODA				
MYTILOIDA				
MYTILLIDAE				
MYTILUS	EDULIS	1	-1.000	4
(BAY-MUSSEL)				
PHORONIDEA				
*				
*				
*				
*	*	1	-1.000	1
PLATYHELMINTHES				
TURBELLARIA				
POLYCLADIDA				
*				
*	*	1	-1.000	1
(POLYCLAD-PLATWORMS)				
PROTOZOA				
SARCOZOINA				
FORAMINIFERA				
*				
*	*	1	-1.000	1
(FORAMS)				
PLANT				
CHLOROPHYCOPHYTA				
CHLOROPHYCEAE				
ULVALES				
*				
ENTEROMORPHA	*	5	0.010	-1
*				

SETTLING RACK DATA LISTING → HARBORS ENVIRONMENTAL PROJECTS

DATE: 4/21/77 STATION: VII MARINA DEL REY

			POPULATION CODE	WEIGHT	POPULATION COUNT
ANIMAL					
ANNELIDA					
POLYCHAETA					
*					
CAPITELLIDAE					
CAPITELLA	CAPITATA		1	-1.000	1
*					
CHYSOPETALIDAE					
PALEANTUS	BELL IS		1	-1.000	2
*					
CIRRATULIDAE					
CHAETOZONE	CORDINA		1	-1.000	3
*					
COSSURIDAE					
COSSURA	CANDICA		1	-1.000	5
*					
CTENODRILIDAE					
CTENODRILUS	SERRATUS		1	-1.000	10
*					
HESIONIDAE					
GYPTIS	BREVIFALPA (ARENICOLA-GLABRA)		1	-1.000	2
*					
NEREIDAE					
PLATYNEREIS	BICANALICULATA		1	-1.000	1
*					
OPHELIIDAE					
ARMANDIA	BICULATA		1	-1.000	1
*					
PECTINARIIDAE					
PECTINARIA	*		1	-1.000	1
*					
PHYLLOPODIDAE					
EULALIA	*		1	-1.000	1
*					
SERPUOLIDAE					
HYDROIDES	PACIFICA		1	-1.000	5
*					
SPIONIDAE					
POLYDORA	LIGNI		1	-1.000	24
*					
PRIONOSPIC	*		1	-1.000	3
*					
SPIROBIDAE	*		2	-1.000	145
*					
SYLLIDAE					
EUSYLLIS	*		1	-1.000	1
*					
EXOGONE	*		1	-1.000	15
*					
ARTHROPODA					
CRUSTACEA	*				
*					
*					
INSECTA	*		1	-1.000	6

SETTLING RACK DATA LISTING - HARBORS ENVIRONMENTAL PROJECTS

DATE: 4/21/77 STATION: VII MARINA DEL REY

	POPULATION CODE	WEIGHT	POPULATION COUNT
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ICOPHOPOD			
AMPHIPODA-GAMMARIDEA			
CORIOPHIIDAE			
CYRTOPHIUM	ACHERUSIFLM	1	-1.000
*			62
GAMMARIDAE			
ELASMOPODUS	RAPAX	1	-1.000
*			1
DECAPODA			
BRACHYURA			
*	*	1	-1.000
*			1
ISOPODA			
SPHAEROMATICA			
PARACERCELS	SCULPTA	1	-1.000
*			23
TANALIDAEA			
*			
ANATANAIS	NORMANI	1	-1.000
*			2
THORACICA			
*			
CHTHANALUS	*	1	-1.000
*			1
ASCHELINTHES			
NEMATODA			
*			
*	*	1	-1.000
*			39
*			
BRYOZOA(ECTOPROCTA)			
GYMNOLAEMATA			
CHEILOSTOMATA			
MEMBRANIPORIDA			
MEMBRANIPORA	MEMBRANACEA	6	0.010
*			-1
CHORDATA-UROCHORDATA			
ASCIDIACEA			
PHLEBOBRANCHIA			
*			
CIONA	INTESTINALIS	1	-1.000
*			9
STYLIDOBRANCHIA			
*			
BOTRYLLUS	*	6	0.010
*			+1
MOLLUSCA			
PELECYPODA			
MYTILOIDA			
MYTILIIDAE			
MYTILUS	EDULIS	1	-1.000
(BAY-MUSSEL)			1
PLATYHELMINTHES			
TURBELLARIA			
POLYCLADIDA			
*			
*	*	1	-1.000
(POLYCLAD-FLATWORMS)			5
PROTOZOA			
SARCOZINA			
FORAMINIFERA			
*			
*	*	1	-1.000
(FORAMS)			29