

**California Brown Pelican Night Roost Monitoring  
During Maintenance Dredging of  
Marina del Rey Harbor, Los Angeles, California**

**October 14-28 and November 10-14, 1999**



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## Synopsis

Outflow from Ballona Creek and natural deposition of sand from wave action and winter storms have caused the entranceway to Marina del Rey Harbor to become inundated with sand and silts. As a result, access channels to the harbor are, in part, no longer suitable for boat passage and the area had become unsafe for some typical harbor activities. To restore the function of the harbor mouth, the U. S. Army Corps of Engineers (COE) and the County of Los Angeles (County) initiated a sand dredging operation in October 1999 along the breakwater at the harbor mouth.

The rocky breakwater is used as a night roost by federally endangered California brown pelicans (*Pelicanus occidentalis californicus*, pelican). Varanus Biological Services (Varanus) conducted overnight roost monitoring of the pelican colony during maintenance dredging by Manson Construction Company (Manson). Varanus documented pelican behavior for a period of 4 days prior to dredging activity and for 14 days while the dredge worked adjacent to the breakwater. Between 500 and 1,200 pelicans roosted along the east side of the breakwater during the monitoring period. Numbers of pelicans observed at any one time may have varied for several reasons. Our vantagepoint did not allow us to observe pelicans roosting on the windward side of the breakwater. Because of this our total number of pelicans observed during any monitoring period was of less importance than the number of pelicans displaced or the trend in total numbers over the entire monitoring period. We found no significant change in the number of roosting pelicans between the start and end of the monitoring period.

## Introduction

The California brown pelican is listed by both federal and state resource agencies as an endangered species. California brown pelicans inhabit coastal areas of California and the Salton Sea and occasionally northward along the Pacific Coast to southern Canada. They are also found along both coasts of Baja California, Mexico and coastal mainland Mexico. The federal government listed the pelican as endangered in 1970 and by the State of California in 1971. Reasons for the listing include loss of or disturbance to breeding habitat, but especially due to dramatic declines in their population in the 1960's and 70's as a result of DDT contamination (Unitt 1984) as well as PCB's, dieldrin and endrin. Since the reduction in use of these hazardous chemicals, the pelican population has increased. Brown pelicans are now commonly seen in

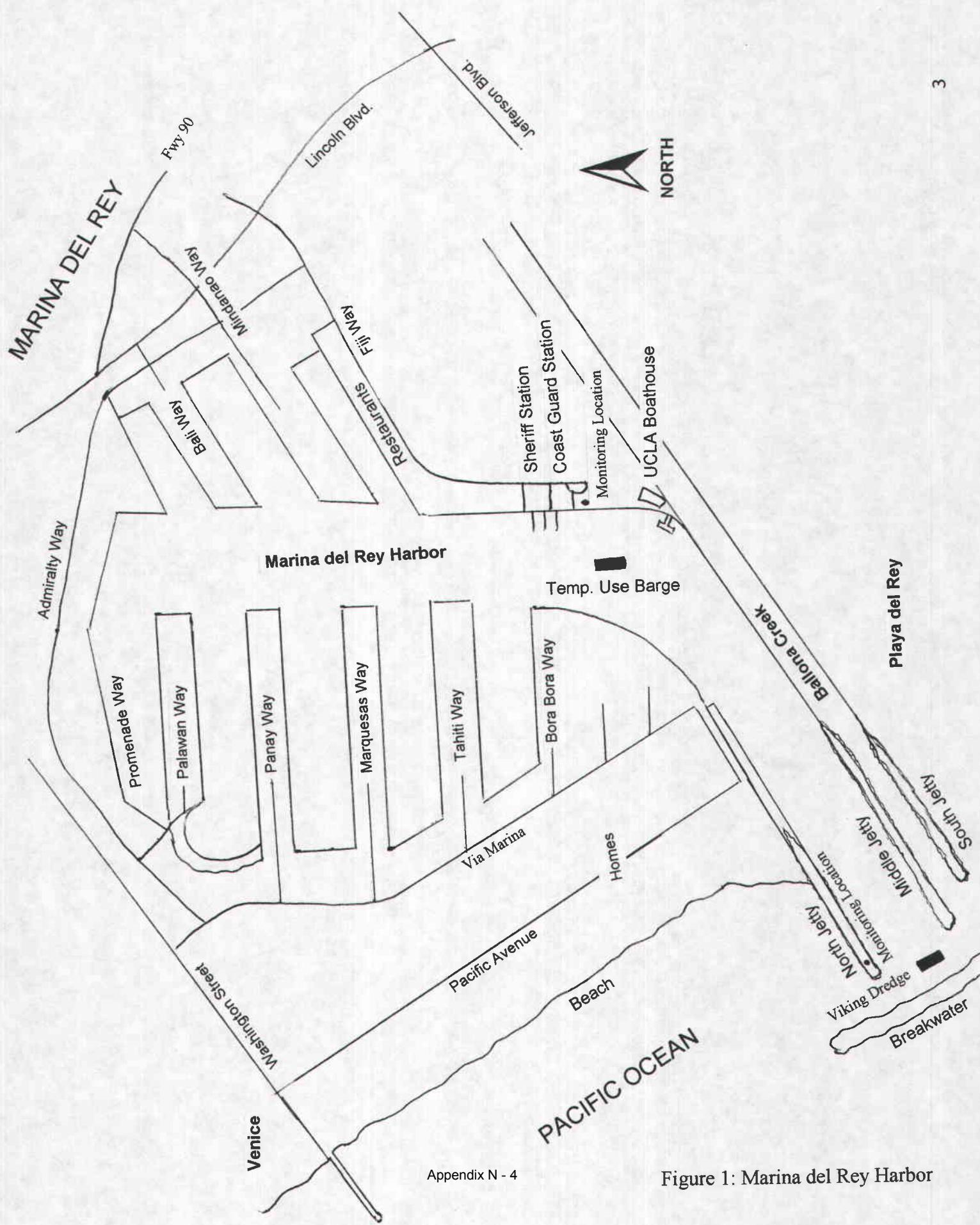
numbers along the California and Baja California coasts and are common in Marina del Rey Harbor (Figure 1). The rocky breakwater at the mouth of the harbor is a well-used pelican night roost (Figures 2-4).

Because the pelican is a listed species, the U. S. Fish and Wildlife Service (FWS) expressed concern that noise and activity associated with the dredging operation may adversely impact pelicans using the breakwater at the entrance to the harbor. Adverse impacts to listed species may constitute "take" (that is, harassment, harm, injury or even death) and thus require consultation or mitigating action. Pelicans do not nest along the breakwater and dredging activity was scheduled to occur outside of the pelican breeding season. However potential impacts included possible injury or death resulting from dredging operations and prospects that night dredging could temporarily displace the roosting pelicans from their safe haven on the breakwater. To document the effects of dredging operations the COE required the presence of a biological monitor from dusk to dawn for a period of 14 nights after dredging commenced. For a period of 4 nights prior to the commencement of dredging the monitor established baseline data by observing pelican activity and movements along the breakwater. The baseline data served as a control to evaluate changes in pelican behavior once dredging began.

### **Site Description**

Marina del Rey Harbor is located in Los Angeles County, California just south of Venice Beach. The harbor services small to medium sized watercraft and serves principally as a recreational harbor. The harbor area is heavily developed and apartment complexes, boardwalk homes, and harbor-side restaurants surround the dock areas. The harbor supports a small Coast Guard Station and Sheriff Station, and is home to the UCLA boathouse (Figure 5).

Two parallel rock jetties angled to the southwest define the harbor channel. At the mouth of the channel is a substantial rock breakwater that separates the harbor from the Pacific Ocean. To the south a third jetty guides the Ballona Creek outflow toward the ocean in the vicinity of the southern end of the breakwater. Ballona Creek is likewise offered protection from the direct onslaught of ocean impacts by the rock breakwater.



Appendix N - 4

Figure 1: Marina del Rey Harbor



Figure 2: South End of Breakwater Pelican Roost from Marina del Rey Harbor



Figure 3: Middle Section of Breakwater Pelican Roost from Marina del Rey Harbor

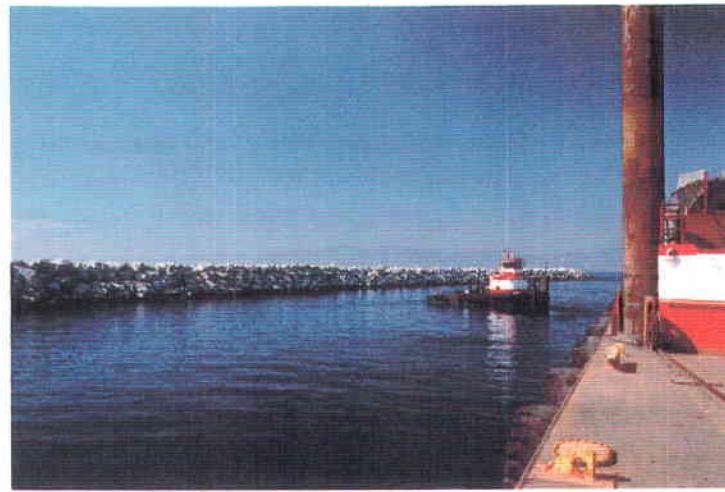


Figure 4: North End of Breakwater Pelican Roost from Marina del Rey Harbor



Figure 5: Sheriff and U.S. Coast Guard Stations with Observation Area Under Trees.  
(Temporary Use Pelican Barge is to Photo Right)

## Methods

We conducted monitoring at two locales. The focus of our pelican monitoring was the breakwater at the mouth of the harbor in the vicinity of dredging activity. We also monitored activity on a temporary barge that was placed the middle of the harbor offering a potential alternate roost for pelicans displaced from the breakwater (Figure 6).

We monitored the barge from the parking lot of the Coast Guard Station (Figure 7), a distance of approximately 100 meters. We monitored pelican activity along the breakwater from the end of the north jetty and on occasion directly from the Manson dredge, the Viking (Figures 8 – 9). We conducted monitoring activity with the aid of 8 to 10-power field glasses, a 20 to 60-power zoom spotting scope, and Moonlight Model MPN 40Ki “night vision binoculars” with infrared illuminator.

We used field glasses to view pelicans when ambient light was adequate, including at night when light from the dredge illuminated portions of the breakwater. However, since more than half of the breakwater area was without light, night vision binoculars augmented detection of pelicans on and around the breakwater. The night vision binoculars were used regularly (typically on an hourly schedule) throughout the night to check the numbers of pelicans on the breakwater and to scan the waters north of the observation (north) jetty.

Our monitoring activity began with a count of pelicans on the breakwater and the “pelican barge” immediately after sunset. Pelican activity was monitored from sunset until one-half hour after sunrise. We recorded pelican arrival and departure numbers throughout the night. When possible we included the possible or probable causes for each documented movement, the direction pelicans moved and the net increase or decrease in pelican numbers that resulted. We also recorded the direction of departing or arriving pelicans. In the half-hour after sunrise we once again counted the pelicans resting on the breakwater. Depending on the location of the dredge (for example if its location prohibited a wide view of the roosting area), the monitor occasionally took a position on the Viking to observe pelican activity. We used either of two schedules to conduct our monitoring activities. We enacted one shift change at midnight when working with two monitors (that is, when we were not also monitoring the pelican barge in the



Figure 6: Temporary Use Pelican Barge with Dredge and Breakwater Pelican Roost on Distant Horizon



Figure 7: Temporary Use Pelican Barge from U.S. Coast Guard Station Observation Area



Figure 8: Breakwater Pelican Roost with Viking Dredge and North (Observation) Jetty. Photo taken from Marina del Rey Harbor Mouth.



Figure 9: North (Observation) Jetty from Marina del Rey Harbor Channel

harbor). We employed two shift changes when three monitors were present with each monitor assigned two monitoring periods (one at the barge, a second at the breakwater) and a rest period.

#### Monitoring Limitations

Our ability to ascertain exact number of pelicans and causality of departure and arrival events was limited in a number of ways. Arrival and departure times for roosting pelicans vary on a daily basis and depend on several factors including weather conditions (for example, wind speed and direction), distance traveled by pelicans to arrive at their nighttime roost, and daily feeding success. Weather also limited our ability to conduct accurate counts of the colony. For example, in the early mornings after monitoring nights 4, 12 and 13 dense fog made accurate morning counts impossible or difficult at best. By the time the fog had cleared, many of the roosting pelicans had departed for daytime foraging and loafing areas. Our count numbers were always limited by our inability to observe the windward side of the breakwater (Figure 10). We know that potentially significant numbers of pelican roosted out of view of the monitor on a nightly basis. On the 3<sup>rd</sup> night of dredge monitoring at 0414 hours, approximately 1200 pelicans departed the breakwater *en masse*. At midnight, the pelican count on the leeward side of the breakwater totaled 550 pelicans. Between midnight and the mass emigration at 0414 hours there had been no significant influx of pelicans to the breakwater. Therefore we knew that at least 650 pelicans had been roosting on the breakwater out of view of the monitor.

#### Control Monitoring

We conducted four nights of pelican monitoring prior to commencement of dredging activities. Methods used during these initial four nights were the same as those employed on subsequent dredging nights. We used the initial four nights of monitoring to obtain baseline information (that is, we established a set of control observations) for later comparison with the data collected during dredging activity. Baseline monitoring occurred from 1800 hours 14 through 0700 hours on 18 October.

#### Dredge Monitoring

Dredge monitoring began the first night the Viking arrived in Marina del Rey, on 18 October (Figure 11). We monitored for 10 consecutive nights until dredging temporarily stopped on the

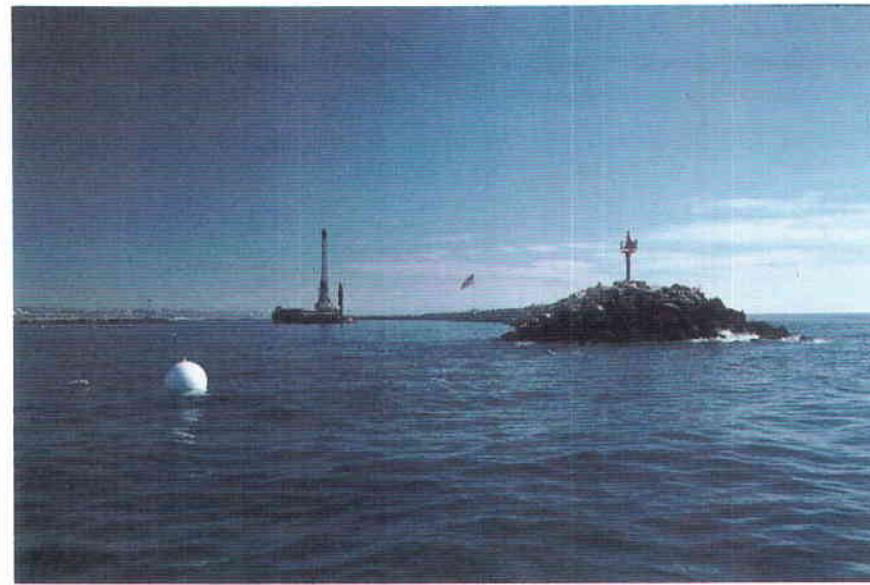


Figure 10: Middle Jetty with Dredge in Marina del Rey Harbor Mouth and the North End of the Pelican Roost Breakwater. Open Ocean to Photo Right.

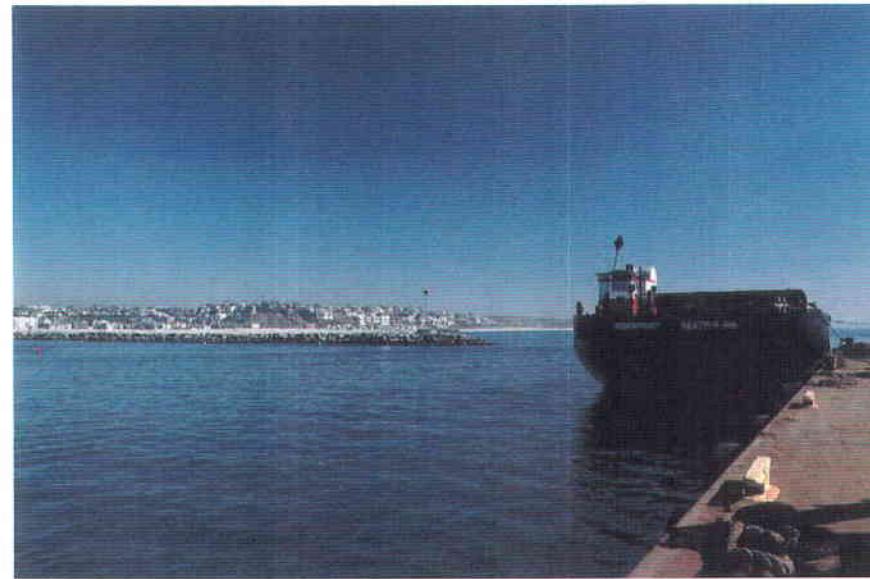


Figure 11: Middle Jetty with Haul Barge in Marina del Rey Harbor Mouth. View to the South taken from Viking Dredge.

night of 27 October (morning of 28 October). After dredging recommenced on 10 November we continued our monitoring activity through the morning of 14 November, resulting in a total of 14 nights of monitoring.

## Results

### Control Monitoring

The pelican barge was brought to Marina del Rey Harbor on the same day dredging operations commenced (18 October). We therefore did not monitor the temporary barge during the four-day control period.

We conducted four nights of monitoring of the breakwater roost prior to the arrival of the Viking and its support craft (the tugboat Kimberly and a haul barge). We documented several major disruptions to the roosting pelican colony during the control period. Recreational (including fishing and party craft) and law enforcement boats illuminating the breakwater with high intensity spotlights, an earthquake on the morning of 16 October, and a brief fireworks display on the night of 16 October all caused major disarrangement of the roosting colony. Each of these was a brief, punctuated event that represented a dramatic change to the typically dark (except in the immediate vicinity of the lighted flagpole) and quiet environment of the ocean breakwater. During these events large numbers of pelicans departed from the breakwater but most returned shortly thereafter. At the other extreme, on the morning of 18 October (that is, between midnight and 0730 hours), when there was virtually no human activity in the vicinity of the breakwater, we observed fewer than 20 pelicans moving from appointed roost sites.

The maximum number of pelicans observed during the 4-day pre-construction period totaled (approximately) 900. On 16 October, approximately 400 pelicans departed from the breakwater *en masse* as a result of the M7.1 Hector Mine Earthquake (epicenter 47 miles ESE of Barstow, California). We did not observe any pelicans on the breakwater after the initial shock wave disrupted the colony. They remained away from the breakwater for a period of 45 minutes. Naturally this incident resulted in the minimum number of pelicans observed on the breakwater during the pre-construction monitoring period. Other than this spectacular but serendipitous event, the minimum number of pelicans that was observed on the breakwater during any

nighttime observation period was 230. This minimum number was associated with one of several spotlighting events. The offending individuals chased 140 individual pelicans from the breakwater by shining a high intensity light directly upon roosting pelicans on the breakwater. The reason for this spotlighting behavior is unknown. Spotlighting of the breakwater, however, appears to be one of two major events that routinely affect pelicans on their breakwater roost. The second is close approach to the pelicans on their roost by small watercraft (that is, less than 50 feet in length) that may or may not be accompanied by illumination by a high intensity spotlight. From our 4-day pre-construction monitoring, these phenomena occur on a frequent if irregular basis.

Because many of the observed movements by pelicans on the order of but a few individuals were unassociated with observable causation, we have presented data based on movements of groups of pelicans numbering 10 or more. We often found that movements of groups of this minimum size were not directly related to observable phenomena. However we found that most activities that we could associate with disturbance to pelicans caused the emigration of 10 or more individuals from their roosting positions. During the 4-day pre-construction monitoring period we documented a total of 1,979 individual pelicans disturbed from roost sites in clusters of 10 or more individuals. The maximum number disturbed during any one event equaled 726 and occurred during a fireworks display on the 16<sup>th</sup> of October. During the 4-day pre-construction monitoring period an average of 495 pelicans were displaced from the breakwater on a daily basis (Graph 1).

#### Temporary Barge

We did not observe any pelicans roosting on the temporary barge during the 10-day monitoring period that it remained within Marina del Rey Harbor. When we observed pelicans perching within the harbor all were perched at or near the water level and typically around lighted areas. The temporary barge was neither illuminated nor was there sufficient ambient light to cause its illumination. The top of the barge (that is, the only possible roosting surface) was high off the water surface. Moreover the illuminated areas where we most frequently observed pelicans were often associated with potential food sources including the bait dock and the landing near the Sheriff's Station where fishing boats docked. We typically observed pelicans in association with

other opportunistic fish-eating birds including great blue herons (*Ardea herodias*), snowy egrets (*Egretta thula*), and double-crested cormorants (*Phalocrocorax auritus*). Pelicans skimmed past the temporary barge just above the water surface *en route* to various roost sites within the harbor. We could typically observe between 10 and 20 pelicans from our observation point in the vicinity of the temporary barge.

No data for the barge are available from the period prior to breakwater dredging activity. We observed no use of the barge by pelicans and only infrequent use by small numbers of western gulls (*Larus occidentalis*). We monitored use of the barge nightly for a period of 10 days (18<sup>th</sup>/19<sup>th</sup> through 27<sup>th</sup>/28<sup>th</sup> October) until it was removed from the harbor. Although potentially of value as a roost site, the temporary barge had numerous obstacles to surmount to be of value during its short tenure in Marina del Rey Harbor. Briefly:

1. The barge was not in place for a suitable period of time prior to expectations of its intended use.
2. The barge was in a position that only regular inhabitants and transients of the harbor would pass by. The usual inhabitants of the harbor appeared to have favored roost sites within the harbor (for example, the bait dock).
3. It offered no immediate incentives (for example, an easily obtainable food source) to induce transients to its position.
4. The barge was small relative to the number of pelicans roosting in the Marina del Rey area.
5. Its location was a considerable distance from the primary roost site. Pelicans apparently perceive the relatively isolated (from humans and other possibly predatory species) breakwater as a secure haven for overnight roosting.
6. Pelicans appear to be attracted to light sources, or at least do not appear to shy away from lighted roost sites. The barge may have appeared inhospitable to passing pelicans because it lacked lights or because it may have appeared as a foreign object that did not offer a visual quality to appear as a secure location to roost. It is uncertain whether pelican decoys would have been of value in attracting pelicans to its location.
7. Despite increased numbers of disturbance to the pelican colony, virtually all incidents of disturbance were of short-term duration and were followed by a return to the breakwater, albeit sometimes to a different location along its length.

### Breakwater Monitoring during Dredging Activity

As we did with the pre-construction analysis, we analyzed data based on movements of groups of pelicans numbering 10 or more. Our 14 days of dredge monitoring indicate that dredging activities resulted in the disturbance of 6529 individual pelicans, general harbor activities (for example, the passing of small boats, film-making, law enforcement activities, mooring of fishing boats) displaced 3004 individuals, and 3056 individuals moved for no apparent reason (Graph 2). In the latter category ("no apparent reason") we were reasonably sure that human activities, with emphasis given to observing the activities of the Viking, were not associated with pelican movements. Many of the incidents in the category of "no apparent reason" involved squabbles over roost position, early evening roost position changes, and possibly responses to weather factors that we were not attuned to. Weather factors were relatively consistent throughout the monitoring period, however it is possible that changes in temperature, wind speed, and undetectable factors (for example, wave action) on the windward side of the breakwater may have contributed to pelican movements.

Out of a total of 12,589 movements, virtually all were of short-term nature. A total of 1,561 individuals were documented leaving the breakwater but not returning to roost at an alternative site along its course (Graph 3). Four hundred sixty of the 1,561 were displaced by a single event that occurred at 0530 on 21 October. Several small fishing boats moving alongside of the breakwater displaced a large percentage of the roosting pelicans from the breakwater. Almost immediately afterward, dense fog rolled into the harbor area. It is possible these birds returned to the breakwater under cover of the dense fog, moved to the windward side of the breakwater, or simply did not return. The dense fog precluded a morning count of the breakwater population. Of the remaining instances of abandonment of the roost by small numbers of pelicans, most were associated with dramatic events. Several examples follow:

1. A film crew on a nearby beach illuminated the breakwater producing near daylight conditions (27 October).
2. On several occasions, small pleasure craft approached the breakwater and also illuminated pelican roost areas with a high intensity floodlight at close range (for example on 23 October).

3. On several occasions the clamshell on the Viking contacted the hull of the haul barge creating a loud, booming pulse (for example on 26 October).

Pelican use of the leeward (that is, visible from shore) side of the Marina del Rey breakwater remained relatively constant throughout the monitoring period (Graph 4). Data is lacking from several monitoring nights because of dense fog. Our data represent only a portion of the total number of pelicans using the breakwater at any given time. On several occasions we found that at least 500 to 700 pelicans may roost on the windward side of the breakwater out of sight from the harbor side of inlet to Marina del Rey.

### **Discussion**

Unusual, sudden, or infrequent events of dramatic nature (for example, an earthquake, a pyrotechnic display, spotlighting of the colony associated with close approach to the breakwater, illuminating the breakwater from the Viking after periods of inactivity) displaced roosting pelicans from the breakwater for lengthy periods of time. Less dramatic but punctuated events including dredge start-up after periods of inactivity and the tugboat (Kimberly) passing between the dredge and the breakwater to retrieve the haul barge caused disturbance to the colony including movements of occasionally large numbers of birds. However these impacts were generally of short duration and resulted in pelicans shifting positions along the breakwater. Occasionally the very same activity that caused disturbance on one occasion had no impact on the colony when repeated.

More passive situations, including the introduction of light from the Viking on the breakwater for the duration of the monitoring period, resulted in alteration of roost location (for example, some pelicans moved out of the light field once darkness descended) without affecting use of the breakwater as a roost. With the exception of only a few incidents (the fireworks display and earthquake foremost) most disturbances to the colony after dark were short lived. Typically after the pelicans departed from their roosts on the breakwater they quickly returned after circling the breakwater one or two times, and subsequently landing, often very close to the original roost.

Impacts documented during our monitoring period were often unassociated with dredging activities. When possible the biological monitor worked with the Manson staff to reduce impacts

where possible and where impacts were directly related to dredging activity. For example, we did notice that sudden changes in the light regime from the Viking startled the pelicans and caused large numbers of birds to depart from the breakwater. On the second night of monitoring we recommended leaving the dredge lights on, even during periods of dredge inactivity to avoid sudden, disruptive changes. With constant lighting of portions of the breakwater roost area, pelicans did not appear to be deterred by the lights. The number of pelicans roosting within the shadow of the light field cast by the Viking increased through the monitoring period. Although this is a possibly surprising outcome, it should be noted that some of the most strongly contested roost locations on the breakwater are located at its center in the vicinity of the lighted flagpole.

Overall we detected no impact to pelicans that would constitute take of this endangered species. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect or attempt to engage in any such conduct" (U. S. Fish and Wildlife Service 1998). Although pelicans were disturbed as a result of dredging activity, none of the activities that caused the disturbance were directed toward the pelicans or their nighttime roosts. In this vein it is important to understand the meaning of the term harassment as it pertains to the Endangered Species Act of 1973, as amended. Harassment is defined as any "actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering" (*Ibid* 1998).

Our observations indicate that disturbances caused by the Manson dredge were primarily short-term in nature and usually resulted in pelicans shifting position along the breakwater. Even these incidents did not significantly alter normal behavioral patterns. Pelicans roosting on the breakwater at the entranceway to Marina del Rey appear to be subjected to short-term disturbance on a regular basis, yet continue to choose the breakwater as their primary local roost. We observed only one occasion prior to the arrival of the Manson dredge (that is, on the night of 17 October) that for an extended period of time there was virtually no disturbance to the pelican colony. Pelicans using the Marina del Rey breakwater are subject to disturbance on a regular basis. Most are of short-term duration and result in reorientation along the breakwater. Many incidents of disturbance are related to conditions we could not document, and may be in response to climatological changes or competition for roost sites. Unfortunately, because of the proximity

of the breakwater to human activity, pelicans are subject to purposeful and non-focused harassment on a frequent but probably irregular basis. Because there is no full-time monitoring of the breakwater or other protection afforded this roosting colony, it appears that it will continue to be subjected to harassment by the public. From our observations, the single most disruptive activity involved close approach to roosting pelicans accompanied by the shining of high intensity floodlights on the roosting birds. It is difficult not to consider this type of action as a form of harassment, especially because of the possible intent associated with its performance. This practice should be addressed at least with signage and possibly a more definitive program that involves public education.

Finally, dredge activity did not appear to physically alter the area around the breakwater with increased wave activity or changes in the "beach" along the toe of the breakwater rocks, a location where pelicans and shorebirds would sometimes stand or sit. Overall, no pelican or other roosting birds appeared to be in danger from the movements or activities of the dredge work.

### **Recommendations**

Based on our observations of pelicans at the Marina del Rey breakwater during dredging activity we recommend the following actions to reduce short-term impacts in the vicinity of pelican roosts when nighttime activity is imperative:

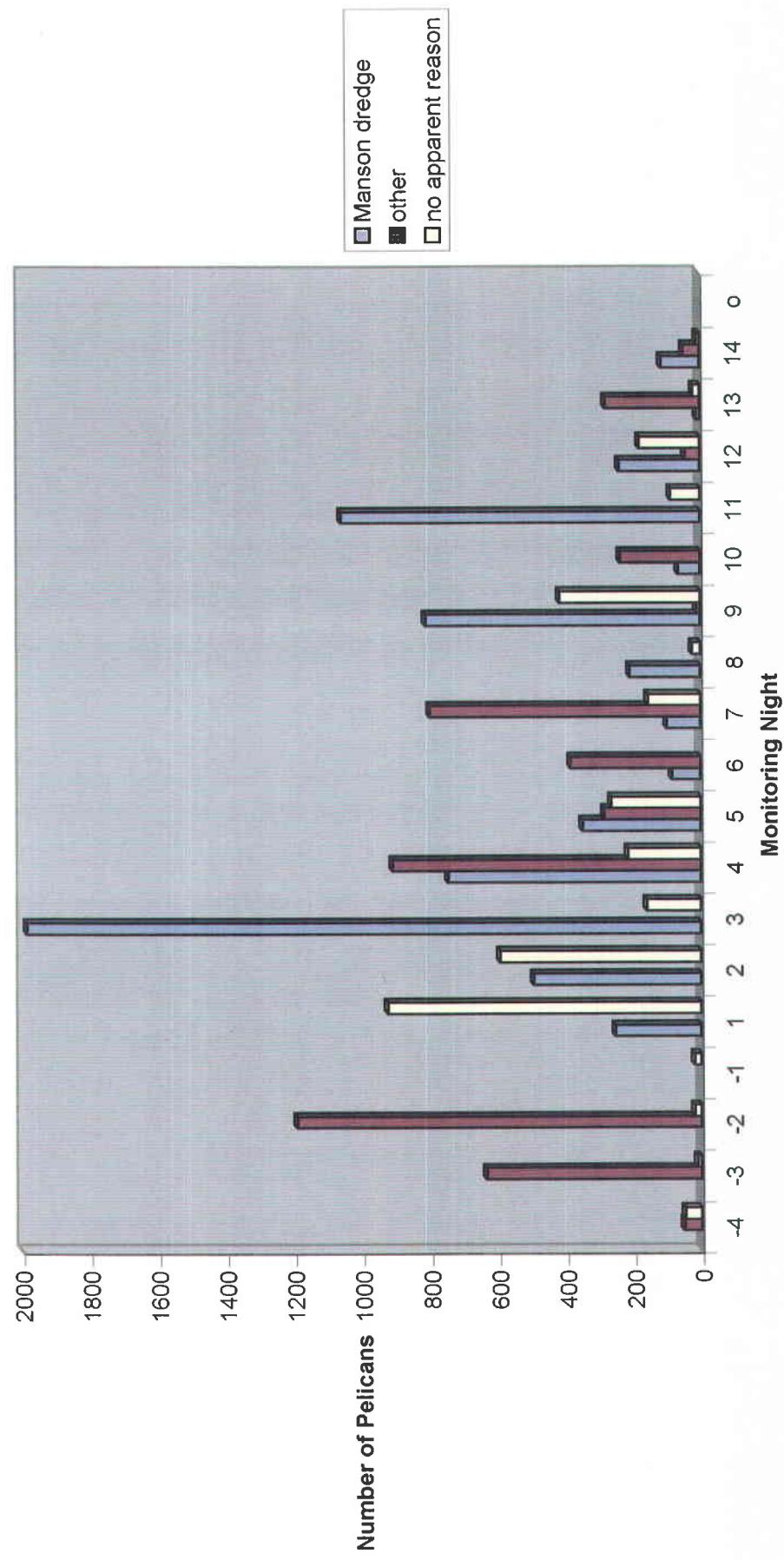
1. Maintain lighting as consistently as possible throughout each work night. Minimize turning on and off lights during the night. If operations cease, when possible, continue to maintain the pre-existing lighting regime.
2. Limit shutdown time when possible. Start-up events are usually dramatic and have significant immediate impacts to pelicans whereas pelicans appear to become accustomed to ongoing work.
3. If sunrise will occur within one hour of desired work start-up time, postpone start-up until after sunrise.
4. Do not approach (that is, limit the movements in the direction of) pelican roosts during nighttime activities. Once a work distance has been established (35 meters or greater) on any given night, the barge and attendant craft should not move nearer to pelican roosts. Work to

- be conducted in the immediate vicinity of nighttime roosts should be conducted during the day.
5. If a barge is to be provided as an alternate roost site, place the barge in an area of minimal disturbance that is near and visible to roosting birds.
  6. Place the barge well in advance of when its use is desired.
  7. Use a barge that is sufficiently large to handle a relatively large percentage of the impacted population.
  8. Provide conditions that will make the barge attractive to the target species. For pelicans this might mean providing illumination, but we strongly recommend against inducing roosting activity by providing food.

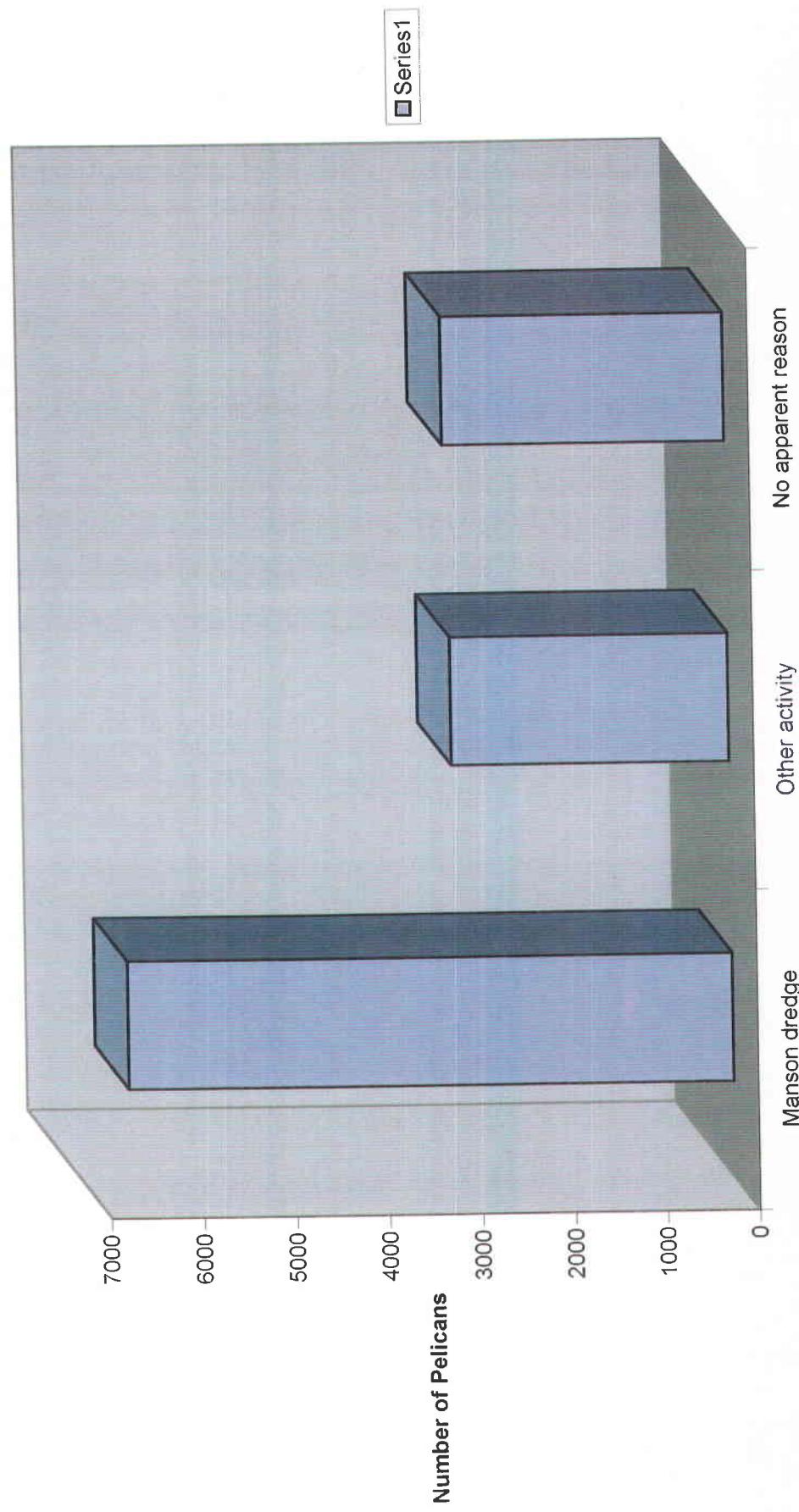
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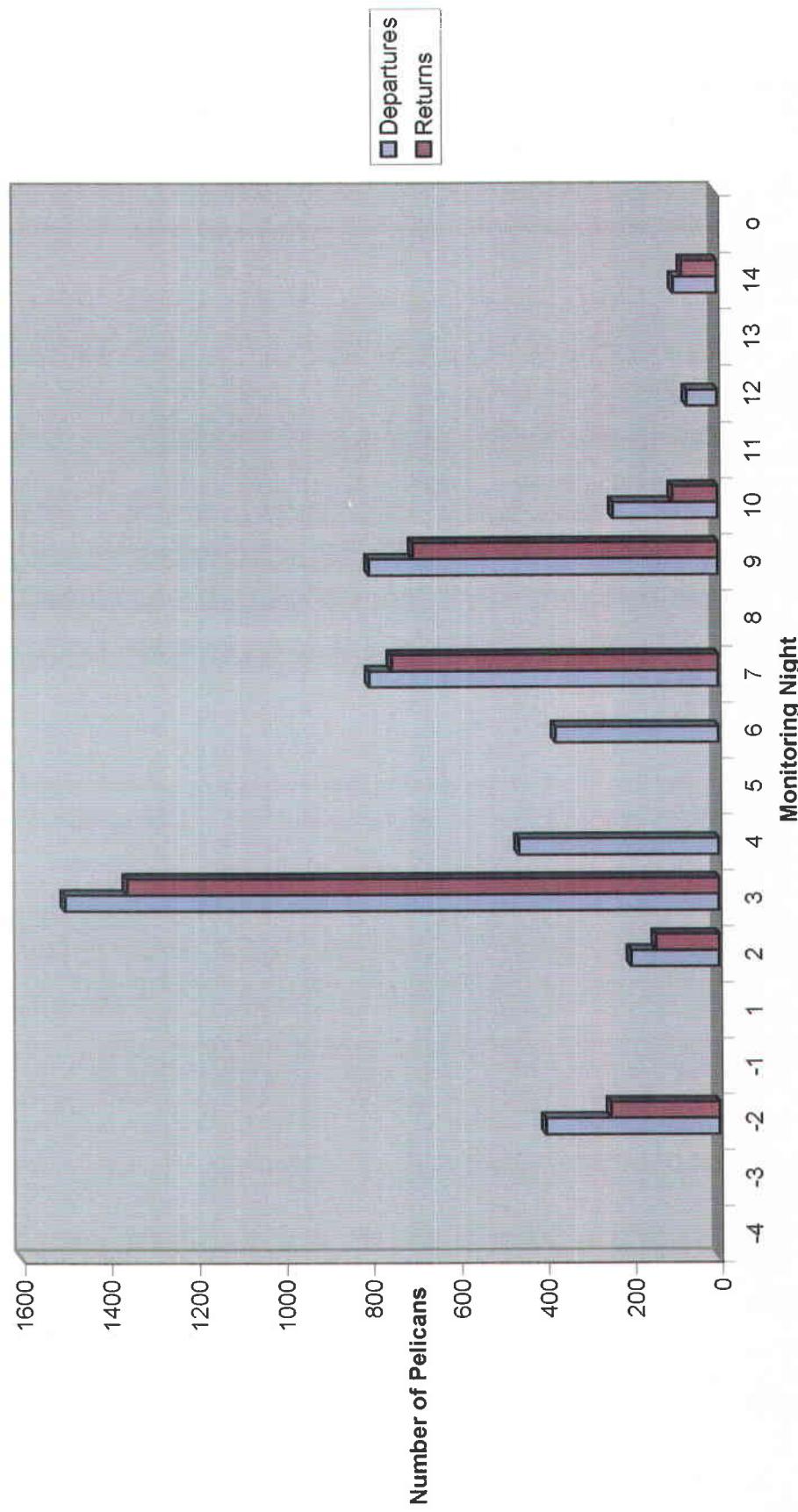
**Graph 1: Number of Pelicans Disturbed During 4-Night Control and 14-Night Dredge Monitoring**



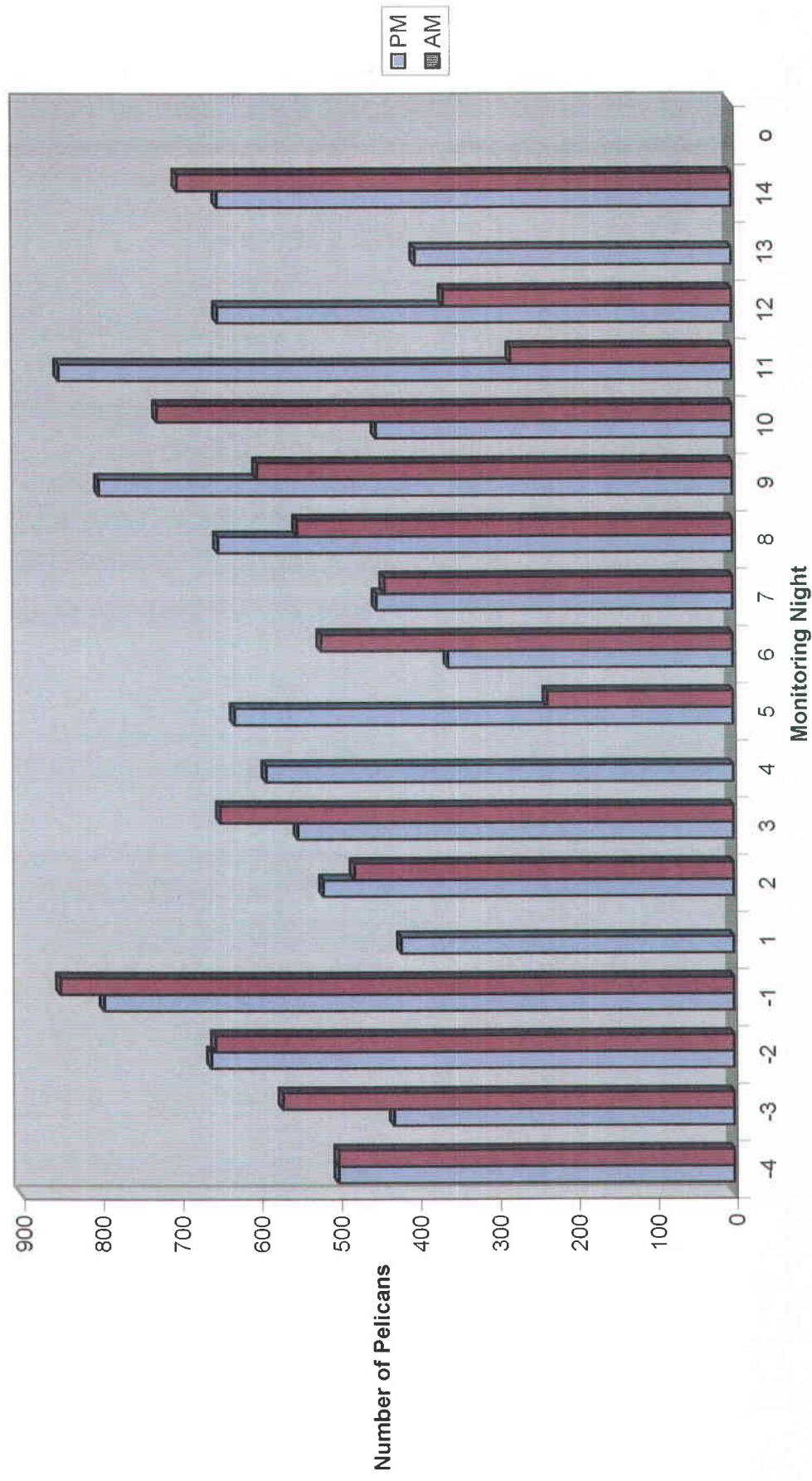
**Graph 2: Number of Pelicans Disturbed During 14-Day Dredge Monitoring**



**Graph 3: Number of Pelicans that Departed from the Breakwater without Observing the Same Number Returning (Perceived Abandonment)**



**Graph 4: Number of Pelicans Visible on the Breakwater in the PM and AM During Monitoring**



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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

US FWS  
CARLSBAD FIELD OFFICE, CA

|  |                        |                       |                                      |                      |               |
|--|------------------------|-----------------------|--------------------------------------|----------------------|---------------|
| 1. Name of Observer                          | Ingri Quon, Jeff Allen | 2. Date               | 10/14 -10/15/99                      | 3. Observation Night | 1 - prior     |
| 4. Location                                  | North Jetty            | 5. Time on Site       | 1900 - 0100, 0100 - 0715             |                      |               |
| 6. Sunset                                    | 1817                   | 7. Sunrise            | 0651                                 | 8. Tide              | 9. Moon Phase |
| 10. General Weather Conditions/ Visibility   |                        |                       | 64°F, ≤ 30% cover, 65 mph, excellent |                      |               |
| 11. Dredge Distance from Breakwater (meters) | N/A                    | 12. Dredge Noise (dB) | Distance/Time                        | N/A                  |               |

| Time            | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of             | Notes (Total number of pelicans, etc.) |  |
|-----------------|--------------------|--|--------------------------|--|--|
| Arriving        | Departing          | Arrival  | Departure                | Arrival                                | Departure  |
| 1900            |                    |  |                          |  | ~500 (60 around flag pole light) along top, inner shore and rock of the breakwater.      |
| 1925            | 4                  | None   | North (N)                |  |  |
| 1926            |                    | None   | North (N)                |  |  |
| Appendix N - 25 | 55                 |  | East (E)                 |  |  |
| 1928            | 165                | None   | West (W)                 |  |  |
| 1930            | 15                 | None   | South (S)                |  |  |
| 1932            | 3                  | None   | S                        |  |  |
| 1933            | 1                  | None   | N                        |  |  |
| 1942            | 1                  | None   | S                        |  |  |
| 1953            | 2                  | None   | N                        |  |  |
| 2000            |                    | None   | NW circle                |  | Most all asleep now, heads down.   |
| 2012            | 1                  | None   | Back S                   |  |  |
| 2013-2016       | 95 +12 +4 +2       | 5 +3 +2  | N arrival<br>N departure |  | Arrivals circle about then landed in middle of breakwater. Departures may have relanded. |

**Flagpole is lit all-night and located in middle of breakwater ridge.**

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Ingri Quon, Jeff Allen      2. Date 10/14-10/15/99      3. Observation Night      1 - prior  
 4. Location North Jetty

| Time      | Number of Pelicans | Reason for Flushin'g or Avoidance of Breakwater | Direction of           | Notes (Total number of pelicans, etc.)                          |
|-----------|--------------------|---|------------------------|---|
| Arriving  | Departing          |   | Arrival      Departure |   |
| 2025      | 1                  | None  | E                      | Skim over water (harbor), land on breakwater shore              |
| 2034      | 1                  | Non   | S                      | Circle around flagpole & land on mid breakwater                 |
| 2038      | 3                  | Non   | S                      | Circle around flagpole & land on mid breakwater                 |
| 2044      | 1                  | Non   | S                      | Circle around flagpole & land on mid breakwater                 |
| 2100      | 22                 | Non   | N                      | Circle around flagpole & land on mid breakwater                 |
| Appx 2107 | 1                  | 1   | Non;                   | Circle around flagpole & land on mid breakwater                 |
| 2113      | 3                  | Non;  | N                      | Circle around flagpole & land on mid breakwater                 |
| 2125      | 1                  | Non;  | S                      | Circle around flagpole & land on mid breakwater – wind die down |
| 2240      | 1                  | None  | N                      | Rose up & flew north  |
| 2250      | 52                 | Small boat approached & shore light             | N-then circle back     | Fly up then circle & land within one minute                     |
| 2325      | 1                  | None  | N-then circle back     | Fly up then circle & land within one minute                     |
| 2333      | 3                  | None  | S                      | Land near flagpole  |
| 0031      | 1                  | None  | N-then circle back     | Land near flagpole  |
| 0118      | 2                  | None  | E                      | Land near flagpole  |
| 0120      | 3                  | None  | E                      |   |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen      2. Date 10/14-10/15/99      3. Observation Night  
 4. Location North Jetty Marina del Rey      1- prior

| Time           | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of Arrival      Departure |   | Notes (Total number of pelicans, etc.)                |
|----------------|--------------------|--|-------------------------------------|---|---|
|                | Arriving           | Departing                                      |                                     |   |   |
| 0121           | 1                  | None   | W                                   |   | Landed near flag pole                                 |
| 0133           | 1                  | None   |                                     | E | Landed near flag pole                                 |
| 0135           | 1                  | None   | N                                   |   | Landed near flag pole south                           |
| 0139           | 2                  | None   | N                                   |   | Landed near flag pole                                 |
| 0146           | 8                  | None   | N                                   |   | Depart just north of pole, small boat near breakwater |
| Appx Z<br>0210 | 3                  | None   | S                                   |   | Landed S of pole                                      |
| 0214           | 1                  | None   | NW                                  |   |   |
| 0228           | 1                  | None   | N                                   |   | Landed S of pole                                      |
| 0305           | 1                  | None   | NW                                  |   | Landed S of pole                                      |
| 0322           | 1                  | None   | N                                   |   | Moved from north of flag pole to S                    |
| 0333           | 1                  | None   | N                                   |   | Landed S of pole                                      |
| 0343           | 1                  | None   | W                                   |   | Landed S of pole                                      |
| 0439           | 1                  | None   | S                                   |   | Landed N of pole                                      |
| 0441           | 38                 | None   | E                                   |   | Returned shortly after leaving                        |
| 0447           | 4                  | None   | N                                   |   | Relocated to N  |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen

4. Location North Jetty, Marina del Rey

2. Date 10/14-10/15/99

3. Observation Night

1 - prior

| Time                    | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of Arrival | Direction of Departure | Notes (Total number of pelicans, etc.) |
|-------------------------|--------------------|--|----------------------|------------------------|--|
|                         | Arriving           | Departing                                      |                      |                        |  |
| 0457                    | 1                  | None   |                      | E                      | Skim water fly toward Marina           |
| 0500                    | 2                  | None   |                      | E                      | Skim water fly toward Marina           |
| 0506                    | 1                  | None   |                      | N                      |  |
| 0517                    | 3                  | None   |                      | S                      |  |
| 0524                    | 1                  | None   | S                    |                        | Landed north of flag                   |
| 0619                    | 2                  | None   |                      | E                      | Skim water fly toward Marina           |
| 0631<br>Appendix N - 28 | 1                  | None   |                      | E                      | Skim water fly toward Marina           |
|                         | 1                  | None   |                      | E                      | Skim water fly toward Marina           |
| 0633                    | 1                  | Rowing team within 20 ft. of breakwater        |                      | E                      | Skim water fly toward Marina           |
| 0634                    | 6                  | Rowing team within 20 ft. of breakwater        |                      | E                      | Skim water fly toward Marina           |
| 0635                    | 7                  | Rowing team within 20 ft. of breakwater        |                      | E                      | Skim water fly toward Marina           |
| 0637                    | 1                  | Rowing team within 20 ft. of breakwater        |                      | E                      | Skim water fly toward Marina           |
| 0638                    | 3                  | None   |                      | NE                     | Fly N of North Jetty                   |
| 0640                    | 2                  | None   |                      | E                      | Fly toward Marina                      |
| 0642                    | 2                  | None   |                      | N                      | Along breakwater ridge                 |
| 0643                    | 2                  | None   | S                    |                        | Landed on mid-breakwater as group      |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen  
 4. Location North Jetty Marina

2. Date 10/14-10/15/99 3. Observation Night 1-prior

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen, Ingri Quon  
 2. Date 10/15-10/16/99 3. Observation Night 2 - prior  
 4. Location North Jetty, Marina del Rey 5. Time on Site 1815-0715  
 6. Sunset 1820 7. Sunrise ~0615 8. Tide 9. Moon Phase  
 10. General Weather Conditions/ Visibility Clear/F. umid/excellent visibility  
 11. Dredge Distance from Breakwater (meters) N/A 12. Dredge Noise (dB) Distance/Time N/A

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)                              |
|------|--------------------|--|--------------|---|
|      | Arriving           | Departing                                      | Arrival      | Departure   |
| 1815 | —                  | —  |              | 290 south of flag<br>140 north of flag                              |
| 1820 | 2                  |  | N            | Landed near flag  |
| 1826 | 3                  |  | W            |   |
| 1827 | 1                  |  | E            |   |
| 1828 | 2                  |  | S            |   |
| 1831 | —                  | —  |              | Helicopter – low fly by - ~80 ft. altitude<br>No pelicans disturbed |
| 1837 | 4                  |  | S            |   |
| 1840 | 2                  |  | SE           |   |
| 1840 | 5                  | 1  | E            | Toward marina   |
| 1846 | 1                  |  | W            |   |
| 1847 | 4                  |  | S            |   |
| 1848 | 2                  |  | E            | From marina   |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen

4. Location Marina Del Rey North Jetty

2. Date 10/15-10/16/99

3. Observation Night

Prior - 2

| Time          | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)   |
|---------------|--------------------|--|--------------|--|
|               | Arriving           | Departing                                      | Arrival      | Departure  |
| 1852          | 1                  |  | E            | From marina  |
| 1902          | 2                  |  | N            |  |
| 1905          | 5                  |  | S            |  |
| 1910          | 1                  |  | E            | From middle jetty  |
| 1919          | —                  | —  |              | 12 in flight around pole   |
| 1920          |                    |  |              | 5 flying, landing, flying  |
| 1952          | 1                  |  | N            |  |
| 2000          |                    |  | E            | 2 Great Egrets – to marina   |
| 2019          | 2                  |  | S            | Landed at N end of breakwater  |
| 2027          | 25                 |  | W            | Land N of flag   |
| 2046          | 1                  |  | E            |  |
| 2103          | —                  | —  |              | 3 occasionally in flight – always returning  |
| 2125          | 1                  |  | SE           |  |
| 2248          | 1                  |  | S            |  |
| 2300-<br>2305 | 175                | Boat with spot light                           |              | Boat with spotlight intentionally scared off 175 Pelicans from N of flag. Most returned to breakwater —more to the south than before |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen

4. Location North Jetty Marina del Rey

2. Date 10/15-10/16/99

3. Observation Night

2 - Prior

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of Arrival | Direction of Departure | Notes (Total number of pelicans, etc.)  |
|------|--------------------|--|----------------------|------------------------|---|
| 2307 | 1                  |  | E                    |                        | Flying high   |
| 2314 | 3                  |  | S                    |                        |   |
| 2320 | —                  | —  |                      |                        |   |
| 2329 | 60+                | Boat   | S → N                |                        | Fishermen entangle a Western Gрабе<br>Boat at south end scared Pelicans, roosted AT NORTH END |
| 2329 | 2                  |  | E                    |                        | Toward Marina   |
| 2356 |                    |  | E                    |                        |   |
| 2416 | —                  | —  |                      |                        |   |
| 0106 |                    |  | S                    |                        | Flying high<br>~160 south of flag<br>~90 North  |
| 0125 | 5                  | Small boat spotlight                           | S → N                |                        | Flew from South to North – one didn't land  |
| 0154 | 5                  |  | S                    |                        | Land N of flag  |
| 0250 | 300-400            | Earthquake – 30 seconds                        | All directions       |                        | ROCKS BARE All birds depart   |
| 0303 | 6                  | Aftershock                                     |                      |                        | Flew around flag  |
| 0309 | —                  | —  |                      |                        | 10 fly by flag  |
| 0312 | 25                 |  | N                    |                        | Circle, then land   |
| 0330 | 300-350            |  | N                    |                        | Circle twice, All landed at extreme N and S away from flag                                    |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Ingrid Quon      2. Date 10/15-10/16/99      3. Observation Night

4. Location North Jetty, Marina Del Rey

| Time     | Number of Pelicans   | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |
|----------|--|--|--------------|--|
| Time     | Arriving   | Departing                                      | Arrival      | Departure                              |
| 0351     | 1  |  | N            | Lands south of flag                    |
| 0358     | 1  |  | N            | Lands south of flag                    |
| 0440     | —  | —  |              | 66° 100% thin cloud cover. 0 wind      |
| 0503     | 2  |  | S            |  |
| 0630     |  |  |              | 1/3 of Pelicans awake, preening        |
| 0640-    |  |  |              | ½ went north                           |
| 0655     | 12   |  |              | ½ into Marina                          |
| 0655     | —  | —  |              | 180 south of flag                      |
| 0655     |  |  |              | 390 North of flag                      |
| 0700     | 2  |  |              | One to marina                          |
| 0700     |  |  | E            | One from North to south breakwater     |
| 0702     | 1  |  | E            | From marina, land N of flag            |
| 0704     | 1  |  | E            | From South of flag, to Marina          |
| 0705     | 4  |  | N            | 2 to marina 2 to North Breakwater      |
| 0707     | —  | —  |              | ¾ preening, ¼ asleep                   |
| 0707     | 1  |  | E            |  |
| 0711     | 3  |  | N            |  |
| 0714     | 2  |  | S            | Went to sea                            |
| 0715-END | Temp 64° 100% overcast wind - 2 MPH from NW - Tide was Mid |  |              |  |

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SHIFT 1

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen
2. Date 10/16-10/17/99
3. Observation Night 3 - Prior
4. Location North Jetty Marina Del Rey
5. Time on Site
6. Sunset 1817
7. Sunrise
8. Tide
9. Moon Phase
10. General Weather Conditions/ Visibility Overcast, 64° Wind 4 mph NW
11. Dredge Distance from Breakwater (meters) --
12. Dredge Noise (dB) Distance/Time --

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.)   |
|------|--------------------|--|--------------|-----------|--|
|      |                    |  | Arriving     | Departing |  |
| 1817 | —                  | —  | —            | —         | Sunset                                   |
| 1840 | —                  | —  |              |           | 450 at South, 210 North                  |
| 1841 | 4                  |  | E            |           |  |
| 1841 | 1                  |  | S            |           |  |
| 1844 | —                  | —  |              |           | 20 Stir above breakwater as it gets dark |
| 1848 | 9                  |  | S            |           | In group, all land                       |
| 1852 | 16                 |  | S            |           |  |
| 1855 | 7                  |  | N            |           |  |
| 1859 | 11                 |  | S            |           |  |
| 1902 | 7                  |  | W            |           | Land in various places along breakwater  |
| 1905 | 4                  |  | S            |           | Land at Southern end                     |
| 1906 |                    |  |              |           | 12 more from S to N                      |

## 1999 Marin: del Rey Harbor Pelican Monitoring Data Sheet

| SHIFT 1                                      |                |                                     |                |                      |           |
|--|----------------|-------------------------------------|----------------|----------------------|-----------|
| 1. Name of Observer                          | Jeffrey Allen  | 2. Date                             | 10/16-10/17/99 | 3. Observation Night | 3 - Prior |
| 4. Location                                  | Marina Del Rey | 5. Time on Site                     | 1830-0115      |                      |           |
| 6. Sunset                                    | 7. Sunrise     | 8. Tide                             |                | 9. Moon Phase        |           |
| 10. General Weather Conditions/ Visibility   |                |                                     |                |                      |           |
| 11. Dredge Distance from Breakwater (meters) |                | 12. Dredge Noise (dB) Distance/Time |                |                      |           |

| Time | Number of Pelicans | Reason for Fushing or Avoidance of) breakwater | Direction of |           | Notes (Total number of pelicans, etc.)                        |
|------|--------------------|--|--------------|-----------|---|
|      |                    |  | Arrival      | Departure |   |
| 1910 | 7                  |  | N            |           |   |
| 1910 | 2                  |  | S            |           |   |
| 1918 | —                  |  | —            | —         | 5 more from south to north BW                                 |
| 1923 | ALL                | Fireworks Display                              |              |           | Fireworks from boat just N of N jetty<br>All leave area to SW |
| 1928 | ~200               |  | SW           |           | All at southern end   |
| 1935 | 15                 |  | S            |           |   |
| 1940 | 40                 |  | S            |           | Circle area first   |
| 1948 | 60                 |  | S            |           | Land at S end   |
| 2000 | 10                 |  | S            |           | Land at S end   |
| 2006 | ~20                |  | SW           |           | Few returning is small groups                                 |
| 2014 | 1                  |  | E            |           | From marina   |
| 2024 | 3                  |  | NW           |           | Land at south   |

# 1999 Marin del Rey Harbor Pelican Monitoring Data Sheet

- SHIFT 1
1. Name of Observer Jeffrey Allen
  2. Date 10-16/10-17-99
  3. Observation Night 3 Prior
  4. Location Marina Del Rey - Jetty
  5. Time on Site 1830-0115
  6. Sunset 7. Sunrise
  7. Tide —
  8. Tide —
  9. Moon Phase —
  10. General Weather Conditions/ Visibility —
  11. Dredge Distance from Breakwater (meters) —
  12. Dredge Noise (dB) Distance/Time —

| Time     | Number of Pelicans | Reason for Fishing or Avoidance of Breakwater | Direction of      | Notes (Total number of pelicans, etc.) |
|----------|--------------------|---|-------------------|--|
| Arriving | Departing          |   | Arrival Departure |  |
| 2046     | 5                  |   | N                 |  |
| 2058     | 1                  |   | S                 | Flew around flag, landed to south      |
| 2112     | 1                  |   | E                 | Toward marina                          |
| 2120     | —                  | —   | —                 | Left to move truck                     |
| 2135     |                    |   |                   | Returned                               |
| 2145     |                    | Boat with potlight                            |                   | 50 stir in the air near south          |
| 2145     |                    | Boat with potlight                            |                   | Another 50 stir, then return           |
| 2150     | 50                 |   | SW                | Return to south end of BW              |
| 2153     | 1                  |   | W                 |  |
| 2158     |                    | Boat with light                               |                   | 5 more from S → N                      |
| 2208     | 2                  |   | E                 |  |
| 2213     | —                  | —   | —                 | Temp 64 - full marine layer            |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

**SHIFT 1**

1. Name of Observer Jeffrey Allen
2. Date 10-16/10-17-99
3. Observation Night 3 - Prior
4. Location Marina Del Rey
5. Time on Site 1830-0118
6. Sunset 7 Sunrise
7. Tide 8. Tide
8. Moon Phase 9. Moon Phase
9. General Weather Conditions/ Visibility 10. General Weather Conditions/ Visibility
10. Dredge Distance from Breakwater (meters) 11. Dredge Distance from Breakwater (meters)
11. Dredge Noise (dB) Distance/Time 12. Dredge Noise (dB) Distance/Time

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

|  |                              |  |                | SHIFT 1              |           |               |  |
|--|------------------------------|--|----------------|----------------------|-----------|---------------|--|
| 1. Name of Observer                        | Jeffrey Allen                | 2. Date                                      | 10-16/10-17-99 | 3. Observation Night | 3 - Prior |               |  |
| 4. Location                                | North Jetty - Marina del Rey | 5. Time on Site                              | —              |                      |           |               |  |
| 6. Sunset                                  | 7. Sunrise                   | 8. Tide                                      | —              |                      |           | 9. Moon Phase |  |
| 10. General Weather Conditions/ Visibility | —                            | 11. Dredge Distance from Breakwater (meters) | —              |                      |           |               |  |
|  |                              | 12. Dredge Noise (dB) Distance/Time          |                |                      |           |               |  |

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)                    |
|----------|--------------------|--|--------------|---|
| Arriving | Departing          | Arrival  | Departure    |   |
| 2355     | —                  | —  | —            | One flew around flag, come from South returned from South |
| 2358     | 1                  | Boat with spotlight                            | N            |   |
| 2400     | All                | Police boat – flashlights<br>Loudspeaker       | N            | All up from south, ~400 total                             |
| 2402     | 250                | —  | NW           | Returned to extreme north end of BW                       |
| 2405     | —                  | —  | —            | Most North of flag, some have not returned from West yet  |
| 2412     | 2                  | —  | S            | Land with group at north end                              |
| 2415     | 1                  | —  | S            | Landed with group of ~25 at south end                     |
| 2426     | 1                  | —  | W            | Joined group at S end                                     |
| 2439     | 1                  | —  | S            | From south to perch with group at North                   |
| 2442     | 1                  | —  | S            | From south to perch with group at North                   |
| 2451     | 5                  | —  | N            | To south BW   |
| 2452     | 1                  | —  | S → N        | Past flag to north  |
|          |                    |  |              |   |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

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1. Name of Observer W. Haas  
 4. Location North Jetty - Marina del Rey  
 5. Time on Site 10/17/99  
 2. Date 10/17/99  
 6. Sunset ---  
 7. Sunrise  
 10. General Weather Conditions' Visibility O'cast (coastal fog); wind from west 2-5 mph  
 11. Dredge Distance from Breakwater (meters) N/A  
 12. Dredge Noise (dB) Distance/Time N/A

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of  | Notes (Total number of pelicans, etc.)  |
|----------|--------------------|--|---|---|
| Arriving | Departing          | Arrival  | Departure   |   |
| 0101     | —                  | —  | N/A   | —   |
| 0120     | —                  | 4  | Unknown   | S → N<br>Small boat (private); light shine on water only  |
| 0124     | —                  | —  | N/A   | —<br>No obvious impetus for movement (NOIFM)  |
| 0134     | —                  | 2  | Small boat (fishing) near BW<br>shines light on roosting pelicans | —<br>—<br>Small boat (private); no flood lights   |
| 0147     | —                  | 2  | Unknown   | —<br>S → N<br>Light shined directly on BW at close distance   |
| 0213     | —                  | —  | N/A   | —<br>—<br>N.O.I.F.M.  |
| 0305     | —                  | —  | N/A   | —<br>—<br>Med-sized pleasure boat passes between BW & S Jetty. No spotlights. No apparent disturbance.          |
| 0325     | —                  | —  | N/A   | —<br>—<br>Harbor Patrol boat passed between BW & North Jetty, proceeded around outer BW                         |
| 0345     | 1                  | —  | Unknown   | N →<br>—<br>Harbor Patrol anchors in middle of channel between N & S Jetties                                    |
| 0410     | —                  | 2  | Unknown   | —<br>S → N<br>NOIFM. Movement noted just after fog retracted  |
| 0505     | 3                  | —  | Unknown   | S → N<br>NOIFM. A light on windward side of S end of BW.  |
| 0519     | —                  | 2  | Unknown   | —<br>S → N<br>Possibly wake from Harbor Patrol boat that left anchorage at 0515.<br>We Gr begin to call at 0525 |
|          | We Gu              | We Gr  | DC Co   | Br Pe<br>RB Gu  |

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1999 Marina del Rey Pelican Monitoring Data Sheet

1. Name of Observer W. Haas  
 2. Date 10/17/1999  
 3 - Prior \_\_\_\_\_  
 4. Location North Jetty - Marina del Rey  
 5. Time on Site 0100 hours  
 6. Sunset ---  
 7. Sunrise  
 8. Tide  
 9. Moon I have \_\_\_\_\_  
 10. General Weather Conditions/ Visibility High overcast (coastal fog), wind from W: N 0-3 mph  
 11. Dredge Distance from Breakwater (meters) N/A  
 12. Dredge Noise (dB) Distance/Time 1 J/A

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)   |
|----------|--------------------|--|--------------|--|
|          | Arriving           | Departing                                      | Arrival      | Departure  |
| 0552     | —                  | —  | N/A          | —  |
| 0557     | 3                  | —  | N/A          | N→S  |
| 0602     | —                  | —  | N/A          | —  |
| 0617     | 1                  | —  | N/A          | NW   |
| 0630-635 | —                  | 15-20  | N/A          | E into harbor  |
|          |                    |  |              | Pelican count for sunrise:<br>*Min 590 (estimate)<br>*Max 720 (estimate) } Range<br>* Does not include early transients.<br>Only animals on leeward side |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

|     |  |                                |     | FIRST SHIFT   |                 |
|-----|--|--------------------------------|-----|---|-----------------|
|     |  |                                |     | Day 4 - Prior   |                 |
| 1.  | Name of Observer                         | W. Haas                        | 2.  | Date  | 10/17/99        |
| 4.  | Location                                 | North Jetty, Marina del Rey    | 5.  | Time on Site  | 1800-0100 hours |
| 6.  | Sunset                                   | ---                            | 7.  | Tide  | 9. Moon Phase   |
| 10. | General Weather Conditions/ Visibility   | Clear. Temp Range 74°F → 62°F. | 8.  | Visibility > 10 mi. (lights at base of PVP clear & distinct |                 |
| 11. | Dredge Distance from Breakwater (meters) | N/A                            | 12. | Dredge Noise (dB) Distance/Time                             | N/A             |

| Time      | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)  |
|-----------|--------------------|--|--------------|---|
|           | Arriving           | Departing                                      | Arrival      | Departure   |
| 1815-1830 |                    | N/A  | S→N          | (schematic)<br>See distribution of pelicans along BW  |
|           |                    | N/A  | S→N          |   |
|           |                    | N/A  | S→N          | Most pelicans arrive at BW from the south. By 1830 hrs, approx 795 individuals ( $\pm$ 40) along E edge and atop breakwater. I counted immigration between 1830 and the final arrival at 1934. (See Arriving column). |
| Appendix  |                    |  | S→N          |   |
| 1830-45   | 24                 | —  | N/A          |   |
| 1845-41   | 31                 | —  | N/A          |   |
| 1900-15   | 8                  | —  | N/A          |   |
| 1915-30   | 4                  | —  | N/A          |   |
| 1930-45   | —                  | —  | N/A          |   |
| 1945      | —                  | —  | N/A          |   |
| 1957      | —                  | Strobe light from Aircraft (low)               | —            | S→N   |
| 2008      | —                  | —  | —            | Explosion (large firecracker?) sufficient to be noticeable on Jetty but no response from birds.   |
| 2015-2100 | —                  | —  | —            | Very little activity in the vicinity of the mouth of the harbor. Birds esp. quiet & inactive. Occasional squabbler between cormorant  |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

|  |                                |                                     |                   |                      |               |
|--|--------------------------------|-------------------------------------|-------------------|----------------------|---------------|
| 1. Name of Observer                          | W. Haas                        | 2. Date                             | 10/17/99          | 3. Observation Night | Day 4 - Prior |
| 4. Location                                  | North Jetty - Marina del Rey   | 5. Time on Site                     | 1800 - 0100 hours |                      |               |
| 6. Sunset                                    | 18                             | 7. Sunrise                          | --                | 8. Tide              | 9. Moon Phase |
| 10. General Weather Conditions/ Visibility   | Clear: Temp Range 74°F → 62°F. |                                     |                   |                      |               |
| 11. Dredge Distance from Breakwater (meters) | N/A                            | 12. Dredge Noise (dB) Distance/Time | N/A               |                      |               |

**BW - Breakwater**  
**NOIFM - No impetus for movement detected**

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

- |  |                              |  |             |                                     |                       |
|--|------------------------------|--|-------------|-------------------------------------|-----------------------|
| 1. Name of Observer                        | Jeffrey Allen                | 2. Date                                      | 10/17-10/18 | 3. Observation Night                | 4 - Prior             |
| 4. Location                                | Marina Del Rey - North Jetty | 5. Time on Site                              | 0100 - 0730 |                                     | 2 <sup>nd</sup> SHIFT |
| 6. Sunset                                  | 18--                         | 7. Sunrise                                   | 0717        | 8. Tide                             | 9. Moon Phase         |
| 10. General Weather Conditions/ Visibility | Clear                        | 11. Dredge Distance from Breakwater (meters) | 59°         | 12. Dredge Noise (dB) Distance/Time |                       |

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of           | Notes (Total number of pelicans, etc.) |
|----------|--------------------|--|------------------------|--|
| Arriving | Departing          |  | Arrival      Departure |  |
| 0100     | —                  | —  |                        | Monitor arrived at site                |
| 0126     |                    |  | S                      |  |
| 0200     |                    |  | S                      |  |
| 0205     |                    |  | S                      | From flag area                         |
| 0216     | —                  | —  |                        | Wind increase                          |
| 0230     | 1                  |  | SE                     | Landed N of flag                       |
| 0243     | 1                  |  | E                      |  |
| 0300     |                    |  |                        | Santa Ana winds build                  |
| 0303     | 1 → 1              |  |                        | Moved from N to S                      |
| 0314     | 1                  |  | S                      | Leaves from flag area                  |
| 0332     | 1                  |  | S                      |  |
| 0336     | 2                  |  | NW                     | Landed in south                        |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen
2. Date 10-17/10-18
3. Observation Night 4 - Prior
4. Location Marina Del Rey - North Jetty
5. Time on Site 0100 - 0730
6. Sunset 18--
7. Sunrise 0717
8. Tide 9. Moon Phase
10. General Weather Conditions/ Visibility Clear, windy, 59°
11. Dredge Distance from Breakwater (meters)
12. Dredge Noise (dB) Distance/Time

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|--------------|-----------|--|
|      |                    |  | Arrival      | Departure |  |
| 0346 | 1                  |  |              |           | Moved to north end                     |
| 0426 | —                  | —  |              |           | 2 fly around a bit, then land again    |
| 0430 | 5                  | Police boat nearby                             | S            |           | Landed N of flag                       |
| 0435 | 1                  |  | S            |           | Landed N of flag                       |
| 0455 | 3                  |  | S            |           | From flag area                         |
| 0525 | 3                  |  | S            |           | From flag area                         |
| 0556 | 4                  |  | N            |           | Pass flag                              |
| 0603 | 2                  |  | S            |           |  |
| 0612 |                    |  |              |           | Wind to 20 mph at times, gusty         |
| 0631 | 3                  |  | N            |           | One lands at N, others near flag       |
| 0634 |                    |  |              |           | 15 stir - land in south                |
| 0638 |                    |  |              |           | Dredge and Tugs arrive                 |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

- |  |                              |                                     |             |                      |               |
|--|------------------------------|-------------------------------------|-------------|----------------------|---------------|
| 1. Name of Observer                          | Jeffrey Allen                | 2. Date                             | 10-17/10-18 | 3. Observation Night | 4 - Prior     |
| 4. Location                                  | Marina Del Rey - North Jetty | 5. Time on Site                     | 0100 - 730  |                      |               |
| 6. Sunset                                    | 18--                         | 7. Sunrise                          | 0717        | 8. Tide              | 9. Moon Phase |
| 10. General Weather Conditions/ Visibility   | Clear, windy, 59°            |                                     |             |                      |               |
| 11. Dredge Distance from Breakwater (meters) |                              | 12. Dredge Noise (dB) Distance/Time |             |                      |               |

| Time            | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |   |
|-----------------|--------------------|--|--------------|--|---|
| Arriving        | Departing          |  | Arrival      | Departure                              |   |
| 0643            |                    |  |              |  | Viking and Peter M off north end  |
| 0645            | 10                 |  |              |  | ~ 800-900 Pelicans on BW  |
| 0645            | 3                  |  | E            |  | -Not near Viking  |
| 0650            | --                 | —  | NW           |  |   |
| 0650            | 4                  | 5  |              |  | ~ 50 to 60% active  |
| 0650            |                    |  | S            | E                                      | Increase in activity  |
| 0654            | 2                  | 5  |              |  | Viking centered in channel  |
| 0658            |                    |  | E            | E                                      | -   |
| 0700            | 10                 |  |              |  | Viking at 45° angle to Jetties  |
| 0703            |                    |  | E            |  | Bathing in water N of Jetty   |
| 0713            |                    |  |              |  | <u>Sunrise</u> Viking turns to south  |
| 0722            |                    |  |              |  | Viking moves into position along Jetty  |
| 0730            | 5                  |  |              |  | Main Flock - 90% awoke, no visual disturbance due to presence of dredge. Monitor left site. |
| Appendix N - 45 |                    |  |              |  |   |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen  
 2. Date 10-18/10-19  
 3. Observation Night On night
4. Location Marina Del Rey, North Jetty  
 5. Time on Site 1800-0100
6. Sunset 1816 7. Sunrise 0720  
 8. Tide Variable  
 9. Moon Phase  $\frac{1}{2} / \frac{3}{4}$
10. General Weather Conditions/ Visibility Clear, occasional breeze,  $54^\circ$   
 11. Dredge Distance from Breakwater (meters) 15m  
 12. Dredge Noise (dB) Distance/Time

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)          |
|------|--------------------|--|--------------|---|
|      | Arriving           | Departing                                      | Arrival      | Departure                                       |
| 1800 | —                  | —  |              | Monitor arrives - ~250 in south<br>170 in north |
| 1816 |                    |  |              | Sunset  |
| 1820 | 5                  |  | W            | Land in south                                   |
| 1820 | 3                  |  | E            | Land in south                                   |
| 1822 | 4                  |  | E            | Empty container moved into position             |
| 1825 | 4                  |  | S            | Land in north                                   |
| 1826 |                    |  |              | 10 more from south to north                     |
| 1827 | 2                  |  | N            | Land in north                                   |
| 1830 | 6                  |  | S            | Land in south                                   |
| 1839 | 10                 |  | E            | From marina                                     |
| 1841 | 3                  |  | E            | -lights are turned on-                          |
| 1843 | 10                 |  | S            | Land in north                                   |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

|  |                             |                                     |             |                      |                  |
|--|-----------------------------|-------------------------------------|-------------|----------------------|------------------|
| 1. Name of Observer                          | Jeffrey Allen               | 2. Date                             | 10-18/10-19 | 3. Observation Night | Night 1, Shift 1 |
| 4. Location                                  | Marina Del Rey, North Jetty | 5. Time on Site                     |             |                      |                  |
| 6. Sunset                                    | 7. Sunrise                  | 8. Tide                             |             | 9. Moon Phase        |                  |
| 10. General Weather Conditions/ Visibility   |                             |                                     |             |                      |                  |
| 11. Dredge Distance from Breakwater (meters) |                             | 12. Dredge Noise (dB) Distance/Time |             |                      |                  |

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of           | Notes (Total number of pelicans, etc.)  |
|----------|--------------------|--|------------------------|---|
| Arriving | Departing          |  | Arrival      Departure |   |
| 1848     |                    | Bucket drop just before movement               |                        | 8 more from S to N  |
| 1850     |                    |  |                        |   |
| 1852     | 8                  |  | N                      | 3 fly to south, 5 land in north   |
| 1853     | 14                 |  | S                      | Circle and land in north  |
| 1857     | 175                |  | N                      | Circle, some land in N, others fly south, then ~ 350 from south more to north |
| 1901     | 9                  |  | N                      | Circle, land in N – very crowded  |
| 1907     | 40                 |  | S                      | Circle, the land, 10 fly to south   |
| 1907     | 10                 |  | E                      | Join group in north   |
| 1911     |                    |  |                        | 3 move N to S   |
| 1918     |                    |  |                        | 5 fly to north, circle, then land   |
| 1927     |                    |  |                        | 80 from S → N, then back  |
| 1947     | 18                 |  |                        | From S to N   |

Appendix N - 47

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen
2. Date 10-18/10-19
3. Observation Night Night 1, Shift 1
4. Location Marina Del Rey - North Jetty
5. Time on Site 1800-0100
6. Sunset 7. Sunrise
8. Tide 9. Moon Phase
10. General Weather Conditions/ Visibility
11. Dredge Distance from Breakwater (meters)
12. Dredge Noise (dB) Distance/Time

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.)                |
|------|--------------------|--|--------------|-----------|---|
|      |                    |  | Arrival      | Departure |   |
| 1950 |                    |  |              |           | 25 more from S to N                                   |
| 1956 | 1                  |  | E            |           |   |
| 1958 |                    |  |              |           | 6 more from S to N                                    |
| 2008 |                    |  |              |           | 9 more S to N   |
| 2010 |                    |  |              |           | 10 more S to N  |
| 2018 | 4                  |  | E            |           | Takes awhile for them to land, very crowded area in N |
| 2023 | 4                  |  | N            |           | Fly to south  |
| 2028 |                    |  |              |           | 1 moves N to S  |
| 2042 |                    |  |              |           | 3 stir above north end                                |
| 2046 |                    | Coast Guard boat uses loud speaker-spoke a few |              |           | 2 fly from S to N the back                            |
| 2055 |                    |  |              |           | 8 from N to S, west of breakwater                     |
| 2056 |                    |  |              |           | 6 from S to N   |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen
2. Date 10-18/10-19
3. Observation Night Night 1, Shift 1
4. Location Marina Del Rey N-Jetty
5. Time on Site 1800-0100
6. Sunset 7. Sunrise
8. Tide 9. Moon Phase
10. General Weather Conditions/ Visibility
11. Dredge Distance from Breakwater (meters)
12. Dredge Noise (dB) Distance/Time

| Time | Number of Pelicans |           | Reason for Flushing or Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.)               |
|------|--------------------|-----------|--|--------------|-----------|--|
|      | Arriving           | Departing |  | Arrival      | Departure |  |
| 2100 |                    |           |  |              |           | Movement from S → N, others shifting perch locations |
| 2102 |                    |           |  |              |           | 1 moves S → N  |
| 2108 |                    |           |  |              |           | 3 up in N, then land again                           |
| 2125 |                    |           |  |              |           | 10 from S to N                                       |
| 2127 | 4                  |           |  | E            |           | From Venice area, land in N                          |
| 2130 | 3                  |           |  | N            |           | Land in N  |
| 2132 | 2                  |           |  | S            |           | Land in N  |
| 2133 |                    |           |  |              |           | 95 from S to N, ~20 Circle flag for awhile           |
| 2137 |                    |           |  |              |           | Most of the 95 have settled on perches               |
| 2140 |                    |           |  |              |           | Dredge stops   |
| 2142 | 2                  |           |  | 5            |           | Trouble finding place to land in N                   |
| 2150 |                    |           |  |              |           | 4 in the air above N group                           |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

|  |                         |                                     |             |                      |                  |
|--|-------------------------|-------------------------------------|-------------|----------------------|------------------|
| 1. Name of Observer                          | Jeffrey Allen           | 2. Date                             | 10-18/10-19 | 3. Observation Night | Night 1, Shift 1 |
| 4. Location                                  | Marina Del Rey, N-Jetty | 5. Time on Site                     | 1800-0100   |                      |                  |
| 6. Sunset                                    | 7. Sunrise              | 8. Tide                             |             | 9. Moon Phase        |                  |
| 10. General Weather Conditions/ Visibility   |                         |                                     |             |                      |                  |
| 11. Dredge Distance from Breakwater (meters) |                         | 12. Dredge Noise (dB) Distance/Time |             |                      |                  |

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.)   |
|------|--------------------|--|--------------|-----------|--|
|      |                    |  | Arriving     | Departure |  |
| 2158 | 3                  |  | S            | S         | Land in N  |
| 2200 | 2                  |  | S            | S         | Land in north  |
| 2212 |                    |  |              | 1 N → S   |  |
| 2219 |                    |  |              | 4 N → S   |  |
| 2226 |                    |  |              | 1 N → S   |  |
| 2229 | 16                 |  | E            | E         | Toward beach N of Jetty  |
| 2232 |                    |  |              |           | Viking turns lights out  |
| 2244 |                    |  |              |           | Wind increase, temperature drop  |
| 2249 | 12                 |  | S            | S         | Lights back on   |
| 2255 |                    | No apparent reason                             |              |           | 2 stir above N, then land again  |
| 2257 |                    | No noise from Viking                           |              |           | <u>400 leave for south end.</u> Another 100 circles for a while, then lands in S |
| 2302 |                    |  |              |           | Another 70 fly S   |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

- |  |                          |                                     |             |                      |                 |
|--|--------------------------|-------------------------------------|-------------|----------------------|-----------------|
| 1. Name of Observer                          | Jeffrey Allen            | 2. Date                             | 10-18/10-19 | 3. Observation Night | Night 1 Shift 1 |
| 4. Location                                  | Marina Del Rey - N Jetty | 5. Time on Site                     | 1800-0100   |                      |                 |
| 6. Sunset                                    | 7. Sunrise               | 8. Tide                             |             | 9. Moon Phase        |                 |
| 10. General Weather Conditions/ Visibility   |                          |                                     |             |                      |                 |
| 11. Dredge Distance from Breakwater (meters) |                          | 12. Dredge Noise (dB) Distance/Time |             |                      |                 |

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)   |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure                                |
| 2305 |                    | No obvious cause                               |              | Fewer than 20 remaining in N area        |
| 2323 |                    |  |              | Activity in south, No N → S movement     |
| 2332 | 3                  |  |              | To water, then return                    |
| 2338 | 2                  |  |              | Along breakwater                         |
| 2357 | 3                  |  | E            | 1 moves for N to S                       |
| 2404 | 2                  |  | N            | 1 moves for N to S                       |
| 2428 |                    |  |              | Occasional movement seen in S, None in N |
| 2436 | 4                  |  | N            | Fly to south area                        |
| 2440 |                    |  |              | Brian L on site                          |
| 2450 |                    |  |              | 7 more S to N                            |
|      |                    | SEE NEXT SHEET                                 |              |  |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

|  |                             |                                     |             |                      |                                |
|--|-----------------------------|-------------------------------------|-------------|----------------------|--------------------------------|
| 1. Name of Observer                          | Brian Lohstroh              | 2. Date                             | 10/18-10/19 | 3. Observation Night | Night 1 Shift 2                |
| 4. Location                                  | Marina Del Rey, North Jetty | 5. Time on Site                     | 2440 - 0720 |                      |                                |
| 6. Sunset                                    | 7. Sunrise                  | 8. Tide                             |             | 9. Moon Phase        | 1 <sup>st</sup> Quarter Waxing |
| 10. General Weather Conditions/ Visibility   | Hazy, clear                 |                                     |             |                      |                                |
| 11. Dredge Distance from Breakwater (meters) |                             | 12. Dredge Noise (dB) Distance/Time |             |                      |                                |

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |   |
|------|--------------------|--|--------------|--|---|
|      | Arriving           | Departing                                      |              | Arrival                                | Departure   |
| 2450 |                    | 7<br>Noise, dredge sounds                      | North        |  | Move from south end of breakwater to north end  |
| 0113 |                    | 2<br>Noise, dredge sounds                      | North        |  | Move from south end of breakwater to north end  |
| 0125 |                    | 150-200<br>Noise, lights out                   | North        |  | Loud noise created while lights out<br>Pelicans fly about, land on south end  |
| 0140 |                    | 2<br>Tugboat moving barge                      | South        |  | Moving to southern perches on breakwater  |
| 0210 |                    | 20<br>Noise, lights out                        | North        |  | Moving to northern perches on breakwater  |
| 0230 |                    | 2<br>Tugboat moving barge                      | South        |  | Moving to southern perches on breakwater  |
| 0245 |                    | 3<br>Arrival of new barge                      | North        |  | Moving to northern perches on breakwater  |
| 0250 |                    | 7<br>Dredge noise, crane swing                 | North        |  | 4 move to northern perches<br>3 remain on southern perches  |
| 0258 |                    | 2<br>Dredge noise, crane swing                 | Both         |  | Pelicans constantly moving back and forth in groups on 1 to 8 from BW side of dredge  |
| 0315 | Ø                  | N/A  | N/A          |  | Bulk of flock roosting directly west of dredge illuminated by lights of dredge<br>Pelicans seem to be calming down becoming assimilated to the re-initiation of dredging activities, no pelicans in flux. |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Brian Lohstroh  
 2. Date 10/18-10/19  
 3. Observation Night  
 Night 1 Shift 2  
 4. Location \_\_\_\_\_  
 5. Time on Site \_\_\_\_\_  
 6. Sunset 7. Sunrise 0720  
 8. Tide \_\_\_\_\_  
 9. Moon Phase \_\_\_\_\_  
 10. General Weather Conditions/ Visibility \_\_\_\_\_  
 11. Dredge Distance from Breakwater (meters) \_\_\_\_\_  
 12. Dredge Noise (dB) Distance/Time \_\_\_\_\_

**Time Number of Pelicans Reason for Flushing or Avoidance of Breakwater Direction of Notes (Total number of pelicans, etc.)**

| Time            | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)   |
|-----------------|--------------------|--|--------------|--|
| Arriving        | Departing          | Arrival  | Departure    |  |
| 0420            | 3                  | Assumably dredge activities, noises            | North        | Pelicans take flight, circle about, and land @ same general location off dredge      |
| 0428            | 2                  | Assumably dredge activities, noises            | North        | Shifting from southern roosts to northern roosts on breakwater.                      |
| 0430            | 2                  | Assumably dredge activities, noises            | North        | Move from southern tip of breakwater to area west of dredge, illuminated by dredge   |
| Appendix N - 53 | 4                  | Assumably dredge activities, noises            | South        | Move from northern tip of breakwater to area west of dredge illuminated by dredge.   |
| 0458            | 3                  | Assumably dredge activities, noises            | South        | Move from northern tip of breakwater to area west of dredge illuminated by dredge.   |
| 0510            | 4                  | Assumably dredge activities, noises            | South        | Move from northern tip of breakwater to area west of dredge illuminated by dredge.   |
| 0530            | 12                 | Assumably dredge activities, noises            | South        | Move from northern tip to southern tip of breakwater, 1 remained North (circle back) |
| 0553            | 10                 | Assumably dredge activities, noises            | North        | Shifting from southern to northern perches   |
| 0555            | 7                  | Assumably dredge activities, noises            | South        | Shifting from northern perches to roost in area illuminated by dredge.               |
| 0620            | 50-60              | First Light                                    | North        | Birds depart to the harbor   |
| 0702            | 10-20              | First Light                                    | North        | Birds beginning to depart to forage north in flocks of 10-20 birds                   |
| 0720            | —                  | —  | —            | Biologist off site, sunrise  |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

|  |                                |                       |                |                      |           |
|--|--------------------------------|-----------------------|----------------|----------------------|-----------|
| 1. Name of Observer                          | W. Haas                        | 2. Date               | 10/18-10/19/99 | 3. Observation Night | (Pelican) |
| 4. Location                                  | Pelican Barge - Marina del Rey | 5. Time on Site       | 1800-0700      | Barge (Night 1)      |           |
| 6. Sunset                                    | 7. Sunrise                     | 8. Tide               |                | 9. Moon Phase        |           |
| 10. General Weather Conditions/ Visibility   | Clear, very little wind        |                       |                |                      |           |
| 11. Dredge Distance from Breakwater (meters) | N/A                            | 12. Dredge Noise (dB) | Distance/Time  | N/A                  |           |

| Time            | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |           |
|-----------------|--------------------|--|--------------|--|-----------|
|                 | Arriving           | Departing                                      |              | Arrival                                | Departure |
| 1800            | Ø                  | Ø  | N/A          | Ø                                      | Ø         |
| 1900            | Ø                  | Ø  | N/A          | Ø                                      | Ø         |
| 2000            | Ø                  | Ø  | N/A          | Ø                                      | Ø         |
| Appendix N - 54 | Ø                  | Ø  | N/A          | Ø                                      | Ø         |
| 2100            | Ø                  | Ø  | N/A          | Ø                                      | Ø         |
| 2200            | Ø                  | Ø  | N/A          | Ø                                      | Ø         |
| 2300            | Ø                  | Ø  | N/A          | Ø                                      | Ø         |
| 0001            | Ø                  | Ø  | N/A          | Ø                                      | Ø         |
| 0100            | Ø                  | Ø  | N/A          | Ø                                      | Ø         |
| 0200            | Ø                  | Ø  | N/A          | Ø                                      | Ø         |
| 0300            | Ø                  | Ø  | N/A          | Ø                                      | Ø         |
| 0400            | Ø                  | Ø  | N/A          | Ø                                      | Ø         |
| 0500            | Ø                  | Ø  | N/A          | Ø                                      | Ø         |
| 0600            | Ø                  | Ø  | N/A          | Ø                                      | Ø         |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

|   |                  |  |             |                                     |               |
|---|------------------|--|-------------|-------------------------------------|---------------|
| 1. Name of Observer                       | Brian Lohstroh   | 2. Date                                      | 10/19-10/20 | 3. Observation Night                |               |
| 4. Location                               | On Viking Dredge | 5. Time on Site                              | 1830-0800   | 6. Tide                             | 9. Moon Phase |
| 6. Sunset                                 | 1830             | 7. Sunrise                                   | 0715        | 8. Tide                             | 3/4           |
| 10. General Weather Conditions/Visibility | Sky 30% cover    | 11. Dredge Distance from Breakwater (meters) | ~35         | 12. Dredge Noise (dB) Distance/Time | 65°F -61.5°F  |

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)   |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure  |
| 1830 | 418                | Initial count S                                |              | Initial estimate for # of pelicans on southern end of breakwater, New birds arriving constantly to roost |
| 1830 | 100                | Initial count N                                |              | Initial estimate for # of pelicans on Northern end of BW   |
| 1900 | 80                 | N/A  | N+S          | New birds arriving to roost  |
| 1902 | 172                | Dredge Activity                                | South        | Dredge reactivated, pelicans spooked, flying about   |
| 1907 | 172                | N/A  | South        | Previously spooked flock arriving back   |
| 1910 | 10                 | N/A  | S            | Roosting on southern end of breakwater   |
| 1912 | 13                 | N/A  | N            | Moving to south end  |
| 1913 | 2                  | N/A  | N            | Arriving to roost on S end of breakwater   |
| 1927 | 72                 | N/A  | N            | Arriving to roost on S end of breakwater   |
| 1933 | 5                  | N/A  | N            | Arriving to roost on S end of breakwater   |
| 1935 | 8                  | N/A  | N            | Arriving to roost on S end of breakwater   |
| 1937 | 4                  | N/A  | N            | Arriving to roost on S end of breakwater   |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Brian Lohstroh  
 4. Location On Viking Dredge, Marina Del Rey Harbor

2. Date 10/19-10/20      3. Observation Night 2

| Time            | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of       | Notes (Total number of pelicans, etc.)                                   |
|-----------------|--------------------|--|--------------------|--|
|                 | Arriving           | Departing                                      | Arrival            | Departure  |
| 1938            | 5                  | N/A  | N                  | Roosting on south end of dredge  |
| 1940            | 2                  | N/A  | N                  | Roosting on south end of dredge  |
| 1941            | 3                  | N/A  | N                  | Roosting on south end of dredge  |
| 1942            | 5                  | N/A  | N                  | Roosting on south end of dredge  |
| 1945-1953       | 51                 | N/A  | N                  | Arriving in small groups periodically to roost                           |
| 1953 Appendix N | 187                | Dredge starts                                  | N                  | Pelicans spooked by sudden activities                                    |
| 1958-56         | 20                 | N/A  | N                  | Portion of previously disturbed flock arriving back                      |
| 2002            | 79                 | N/A  | N                  | Portion of previously disturbed flock arriving back                      |
| 2005-2140       | 46                 | N/A  | N                  | Portion of previously disturbed flock arriving back                      |
| 2147            | 3                  | 3  | Dredge starts      | S N Readjusting roost positions on BW                                    |
| 2005-2240       | 10                 | 10   | Dredge activity    | S N Readjusting roost positions on BW                                    |
| 2305            | 7                  |  | Dredge moves S     | S Pelicans moving to southern roosts Dredge getting to close for comfort |
| 2415            | 2                  | 2  | None               | N S Pelicans shifting roosts   |
| 2422            | 6                  |  | Dredging commences | N Dredge shift change  |
| 2136            | 3                  |  | N/A                | N Roosting on S end of breakwater  |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Brian Lohstroh  
 2. Date 10/19-10/20  
 3. Observation Night 2  
 4. Location On Viking Dredge, Marina Del Rey Harbor

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)  |
|----------|--------------------|--|--------------|---|
| Arriving | Departing          |  | Arrival      | Departure   |
| 0149     | 4                  | N/A  | S            | Arriving to roost on S end of breakwater  |
| 0159     | 136                | Dredge bucket dropped to close to breakwater   | S            | Clamshell dropped on SW corner of dredge to close for comfort                                   |
| 0210     | 136                | N/A  | N+S          | Flock splits and lands on N+S end of breakwater   |
| 0230     | (5)                | Tugboat Activity                               | S            | Fly further south to roost  |
| 0248     |                    |  |              | Dredge activity ceases, waiting for new barge   |
| 0615     |                    |  |              | First light   |
| 0635     | (5)                | Dredge reactivated                             | N            | Fly north to roost  |
| 0700     | 2-7                | Sunrise  |              | 430 pelicans counted on south end of breakwater,<br>small groups leaving to the south to forage |
|          |                    |  |              | 59°   |
|          |                    |  |              |   |
|          |                    |  |              |   |
|          |                    |  |              |   |
|          |                    |  |              |   |
|          |                    |  |              |   |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

- |  |                             |                                     |                                |                      |                |
|--|-----------------------------|-------------------------------------|--------------------------------|----------------------|----------------|
| 1. Name of Observer                          | Jeffrey Allen, Brian Foster | 2. Date                             | 10-19/10-20                    | 3. Observation Night | <u>2</u>       |
| 4. Location                                  | Marina Del Rey N Jetty      | 5. Time on Site                     | 1800-2200 (JA), 2200-0200 (BE) | 6. Tide              | 0200-0715 (JA) |
| 6. Sunset                                    | 1817                        | 8. Tide                             |                                | 9. Moon Phase        | <u>3/4</u>     |
| 10. General Weather Conditions/ Visibility   | Clear, 60°, slight breeze   |                                     |                                |                      |                |
| 11. Dredge Distance from Breakwater (meters) | 35                          | 12. Dredge Noise (dB) Distance/Time |                                |                      |                |

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure                              |
| 1817 | 6                  |  | S            | Sunset, land in north                  |
| 1819 |                    |  |              | 98 at N end, ~ 250 estimated in south  |
| 1821 | 16                 |  | E            | Land in north                          |
| 1822 | 15                 |  | S            | Land in north                          |
| 1824 | 1                  |  | E            |  |
| 1830 |                    |  |              | 2 more from N to S                     |
| 1831 | 3                  |  | S            | Land in S                              |
| 1832 | 3                  |  | NE           |  |
| 1834 | 9                  |  | S            | Land in S                              |
| 1835 | 4                  |  | N            | Land in north                          |
| 1839 | 35                 |  | N            | All land N, 20 circle first            |
| 1842 | 11                 |  | N            | Land in S                              |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen / Brian Foster      2. Date 10-19/10-20      3. Observation Night 2  
 4. Location Marina Del Rey      5. Time on Site \_\_\_\_\_  
 6. Sunset 7. Sunrise      8. Tide \_\_\_\_\_      9. Moon Phase \_\_\_\_\_  
 10. General Weather Conditions/ Visibility \_\_\_\_\_  
 11. Dredge Distance from Breakwater (meters) \_\_\_\_\_  
 12. Dredge Noise (dB) Distance/Time \_\_\_\_\_

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure                              |
| 1844 | 9                  |  | N            | 7 Fly south, then back to N            |
| 1851 | 10                 |  | N            | Land in N                              |
| 1857 | 5                  |  | N            |  |
| 1905 | 40                 |  |              | 40 in air above BW                     |
| 1913 | 20                 |  | N            | Land in N                              |
| 1917 |                    |  |              | 5 move from S → N                      |
| 1919 |                    |  |              | 4 moved S to N                         |
| 1920 |                    |  |              | 17 moved N → S                         |
| 1924 |                    |  |              | 11 move N → S                          |
| 1936 |                    |  |              | 5 move N → S                           |
| 1949 |                    |  |              | 7 over south end                       |
| 1950 |                    |  |              | 10 move N → S                          |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen / Brian Foster
2. Date 10-19/10-20
3. Observation Night 2
4. Location \_\_\_\_\_
5. Time on Site \_\_\_\_\_
6. Sunset 7. Sunrise
7. Tide \_\_\_\_\_
8. Tide \_\_\_\_\_
9. Moon Phase \_\_\_\_\_
10. General Weather Conditions/ Visibility \_\_\_\_\_
11. Dredge Distance from Breakwater (meters) \_\_\_\_\_
12. Dredge Noise (dB) Distance/Time \_\_\_\_\_

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure                              |
| 1951 |                    | 5  |              | E                                      |
| 1953 |                    |  |              | 4 move N → S                           |
| 1956 |                    |  |              | 63 move N → S                          |
| 1959 |                    |  |              | 21 move N → S                          |
| 2005 |                    |  |              | 70 move N → S                          |
| 2008 |                    |  |              | 5 move N → S                           |
| 2026 |                    |  |              | No more then 10 in north now           |
| 2058 | 1                  | S  |              | To south group                         |
| 2100 |                    |  |              | Container rotated by Kimberly          |
| 2110 | 1                  | N  |              | Lands in south                         |
| 2112 |                    |  |              | Kimberly moves container out           |
| 2119 |                    |  |              | 2 move S → N                           |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen, Brian Foster
2. Date 10-19/10-20
3. Observation Night 2
4. Location Marina Del Rey - N. Jetty
5. Time on Site
6. Sunset 7. Sunrise
8. Tide
9. Moon Phase
10. General Weather Conditions/ Visibility
11. Dredge Distance from Breakwater (meters)
12. Dredge Noise (dB) Distance/Time

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.)    |
|------|--------------------|--|--------------|-----------|---|
|      |                    |  | Arrival      | Departure |   |
| 2131 |                    |  |              |           | New container arrives                     |
| 2155 |                    |  |              |           | Oil barrels loaded onto Viking            |
| 2217 | 1                  |  | N            |           |   |
| 2248 |                    |  |              |           | Venice Beach light put out                |
| 2330 |                    |  |              |           | Dredge stopped, scoop rested on Viking    |
| 2417 | 1                  |  | W            |           |   |
| 2424 |                    |  |              |           | Dredging resumes                          |
| 0158 |                    |  |              |           | 14 circled from south end to N, then back |
| 0211 | 15                 |  | E            |           |   |
| 0221 | 2                  |  | N            |           |   |
| 0230 | 2                  |  | N/E          |           | One from N, are from E                    |
| 0238 |                    |  |              |           | Lights off                                |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen / Brian Foster
2. Date 10-19/10-20
3. Observation Night 2
4. Location Marina Del Rey, N Jetty
5. Time on Site
6. Sunset 7. Sunrise
8. Tide
9. Moon Phase
10. General Weather Conditions/ Visibility
11. Dredge Distance from Breakwater (meters)
12. Dredge Noise (dB) Distance/Time

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of           | Notes (Total number of pelicans, etc.)    |
|----------|--------------------|--|------------------------|---|
| Arriving | Departing          |  | Arrival      Departure |   |
| 0251     |                    |  |                        | Lights on Viking turned on                |
| 0256     | 2                  |  | N                      | Land in S                                 |
| 0259     | 1                  |  | N                      |   |
| 0349     | 1                  |  | N                      | From south                                |
| 0350     | 4                  |  |                        | Land in S                                 |
| 0454     | 1                  |  | N                      | Lands in south                            |
| 0459     |                    | No obvious cause                               | N                      | Lands in S                                |
| 0501     |                    |  |                        | 300 fly to north end, the return to south |
| 0508     |                    |  |                        | 45 move S to N                            |
| 0510     |                    |  |                        | 2 at N fly then land again                |
| 0525     |                    |  |                        | Large smoke plume in southern sky         |
| 0528     |                    |  |                        | 1 moves N → S                             |
|          |                    |  |                        | 1 moves S → N                             |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen / Brian Foster      2. Date 10-19/10-20      3. Observation Night 2  
 4. Location Marina Del Rey, N-Jetty      5. Time on Site \_\_\_\_\_  
 6. Sunset 7. Sunrise      7. Tide 9. Moon Phase  
 10. General Weather Conditions/ Visibility \_\_\_\_\_  
 11. Dredge Distance from Breakwater (meters) \_\_\_\_\_  
 12. Dredge Noise (dB) Distance/Time \_\_\_\_\_

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of           | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|------------------------|--|
|      | Arriving           | Departing                                      | Arrival      Departure |  |
| 0535 |                    |  |                        | 2 move S → N                           |
| 0541 |                    |  |                        | 3 move N → S                           |
| 0555 |                    |  |                        | 20 circle and land S of flag           |
| 0604 |                    |  |                        | 5 move S → N                           |
| 0619 | 2                  |  | N                      | From south                             |
| 0620 | 1                  | E  |                        | Lands with north group                 |
| 0626 | 1                  | N  |                        | Lands in south                         |
| 0637 |                    |  |                        | 12 move S → N                          |
| 0638 | 3                  |  | E                      | To marina from south                   |
| 0642 | 23                 |  | E                      | From south BW                          |
| 0644 |                    |  |                        | 6 fly by from E, then leave N          |
| 0648 |                    |  |                        | 49 on north part of BW                 |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen, Brian Foster      2. Date 10-19/10-20      3. Observation Night 2  
 4. Location N-Jetty, Marina Del Rey      5. Time on Site \_\_\_\_\_  
 6. Sunset      7. Sunrise      8. Tide \_\_\_\_\_      9. Moon Phase \_\_\_\_\_  
 10. General Weather Conditions/ Visibility \_\_\_\_\_  
 11. Dredge Distance from Breakwater (meters) \_\_\_\_\_  
 12. Dredge Noise (dB) Distance/Time \_\_\_\_\_

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

- |  |                          |                                     |                |                      |                |
|--|--------------------------|-------------------------------------|----------------|----------------------|----------------|
| 1. Name of Observer                          | Brian Foster, Jeff Allen | 2. Date                             | 10-19/10-20-99 | 3. Observation Night | 2 after        |
| 4. Location                                  | Barge                    | 5. Time on Site                     | 1835-0710      |                      |                |
| 6. Sunset                                    | 1820                     | 7. Sunrise                          | 0710           | 8. Tide              | High           |
| 10. General Weather Conditions/ Visibility   | Clear 68°                |                                     |                | 9. Moon Phase        | Waxing Gibbons |
| 11. Dredge Distance from Breakwater (meters) |                          | 12. Dredge Noise (dB) Distance/Time |                |                      |                |

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Arrival | Departure | Notes (Total number of pelicans, etc.) |
|----------|--------------------|--|---------|-----------|--|
| Arriving | Departing          |  | Arrival | Departure |  |
| 1845     | 0                  | 0  | —       | —         | Total = 0                              |
| 1950     | 0                  | 0  | —       | —         | Total = 0                              |
| 2045     | 0                  | 0  | —       | —         | Total = 0                              |
| 2140     |                    |  |         |           |  |
| 2245     | 0                  | 0  | —       | —         | 0 Total                                |
| 2345     | 0                  | 0  | —       | —         | 0 / Kimberly passes barge              |
| 2442     | 0                  | 0  | —       | —         | 0 Pelicans                             |
| 0045     | 0                  | 0  | —       | —         | Ø                                      |
| 0250     | 0                  | 0  | —       | —         | Ø                                      |
| 0348     | 0                  | 0  | —       | —         | Ø                                      |
| 0441     | 0                  | 0  | —       | —         | Ø                                      |
| 0536     | 0                  | 0  | —       | —         | Ø                                      |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Brian Foster  
 2. Date 10-19/10-20-99  
 3. Observation Night 2 After

4. Location Barge  
 5. Time on Site \_\_\_\_\_  
 6. Sunset \_\_\_\_\_  
 7. Sunrise \_\_\_\_\_  
 8. Tide \_\_\_\_\_  
 9. Moon Phase \_\_\_\_\_

10. General Weather Conditions/ Visibility \_\_\_\_\_  
 11. Dredge Distance from Breakwater (meters) \_\_\_\_\_  
 12. Dredge Noise (dB) Distance/Time \_\_\_\_\_

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

- |  |                  |                          |               |                      |                                   |
|--|------------------|--------------------------|---------------|----------------------|-----------------------------------|
| 1. Name of Observer                          | Brian Lohstroh   | 2. Date                  | 10/19-10/20   | 3. Observation Night | 2 Dredge Shift                    |
| 4. Location                                  | On Viking Dredge | 5. Time on Site          | 1830-0800     |                      |                                   |
| 6. Sunset                                    | 1830             | 7. Sunrise               | 0715          | 8. Tide              |                                   |
| 10. General Weather Conditions/ Visibility   | Sky 30% cover    | Light winds 0-3 mph, 65° |               | 9. Moon Phase        | 1 <sup>st</sup> Quarter waxing +5 |
| 11. Dredge Distance from Breakwater (meters) | ~ 35             | 12. Dredge Noise (dB)    | Distance/Time |                      |                                   |

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)             |                                      |
|------|--------------------|--|--------------|--|--------------------------------------|
|      | Arriving           | Departing                                      |              | Arrival  | Departure                            |
| 1830 | 418                | Initial count                                  |              |  |                                      |
| 1830 | 100                | New birds arriving to roost                    |              |  | Number of birds on northern end of B |
| 1900 | 80                 |  |              |  | Dredge inactive                      |
| 1902 | 172                | Dredge noise                                   | South        | Dredge reactivated, Pelicans spooked, flying about |                                      |
| 1910 | 10                 | Dredge noise                                   | From South   | Roosting on southern end of breakwater             |                                      |
| 1912 | 13                 | Dredge noise                                   | North        | Shifting to south end                              |                                      |
| 1913 | 2                  | No obvious cause                               | From North   | Roosting on south end                              |                                      |
| 1927 | 28                 | No obvious cause                               | From North   | Roosting on south end                              |                                      |
| 1927 | 26                 | No obvious cause                               | From North   | Roosting on south end                              |                                      |
| 1927 | 26                 | No obvious cause                               | From North   | Roosting on south end                              |                                      |
| 1933 | 5                  | No obvious cause                               | From North   | Roosting on south end                              |                                      |
| 1935 | 8                  | No obvious cause                               | From North   | Roosting on south end                              |                                      |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

- |  |                |                                     |               |
|--|----------------|-------------------------------------|---------------|
| 1. Name of Observer                          | Brian Lohstroh | 2. Date                             | 2 Dredge      |
| 4. Location                                  |                | 5. Time on Site                     |               |
| 6. Sunset                                    | 7. Sunrise     | 8. Tide                             | 9. Moon Phase |
| 10. General Weather Conditions/ Visibility   |                |                                     |               |
| 11. Dredge Distance from Breakwater (meters) |                | 12. Dredge Noise (dB) Distance/Time |               |

| Time         | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.) |
|--------------|--------------------|--|--------------|-----------|--|
|              |                    |  | Arrival      | Departure |  |
| 1931         | 4                  | No obvious cause                               | From North   |           |  |
| 1938         | 5                  | No obvious cause                               | From North   |           | Roosting south of dredge               |
| 1940         | 2                  | No obvious cause                               | From North   |           | Roosting south of dredge               |
| 1941         | 3                  | No obvious cause                               | From North   |           | Roosting south of dredge               |
| 1942         | 5                  | No obvious cause                               | From North   |           | Roosting south of dredge               |
| 1945-1953    | 51                 | Dredging noise/movement                        | From North   |           | Arriving in small groups, periodically |
| 1953         | 187                | Dredging starts after pause                    | From North   |           | Initiation of dredging, mass exodus    |
| 1958-2002    | 70                 | No obvious cause                               | From North   |           | Periodically arriving in small groups  |
| (~50°F) 2002 | 79                 | No obvious cause                               | From North   |           | Mass flock arrives from north          |
| 2005-2140    | 46                 | No obvious cause                               | From North   |           | Periodically arriving in small groups  |
| 2147         | 3                  | Dredging re-initiated                          | South        | South     | Readjusting perch position             |
| 2200-2240    | 10                 |  | South        | South     | Readjusting perch position             |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

- |  |                |                                     |  |                      |          |
|--|----------------|-------------------------------------|--|----------------------|----------|
| 1. Name of Observer                          | Brian Lohstroh | 2. Date                             |  | 3. Observation Night | 2 Dredge |
| 4. Location                                  |                | 5. Time on Site                     |  |                      |          |
| 6. Sunset                                    | 7. Sunrise     | 8. Tide                             |  | 9. Moon Phase        |          |
| 10. General Weather Conditions/ Visibility   |                |                                     |  |                      |          |
| 11. Dredge Distance from Breakwater (meters) |                | 12. Dredge Noise (dB) Distance/Time |  |                      |          |

| Time      | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of              | Notes (Total number of pelicans, etc.) |   |
|-----------|--------------------|--|---------------------------|--|---|
| 51.5°F    | Arriving           | Departing                                      | Arrival                   | Departure                              |   |
| 2305      |                    | 7  | Dredge moving south       | South                                  | Moving to southern roosts, dredge getting to close for comfort.                                     |
| 2415      | 1-2                | 1-2  | No activity, shift change | —                                      | Pelicans shifting roosts circle about to the North return South end of breakwater to roost          |
| 2422      |                    | 6  | Dredging commences        | North                                  | Roost shifting due to dredge re-initiation  |
| 0136      | 3                  |  |                           | From North                             | Roosting on southern end of breakwater  |
| 2422-0136 | 1-2                | 1-2  |                           | South                                  | Roost shifting, returning to southern roost   |
| 0149      | 4                  |  |                           | South                                  | Flying in from north to roost southern breakwater   |
| 0159      | 136                | Dredging close to roost                        |                           | South                                  | Pelicans frightened when launch came close to breakwater, some circled North, most landed far south |
| 0230      | 5                  | Tugboat /barge                                 |                           | South                                  | Flying further south to roost   |
| 0248      |                    | Dredging activity ceases                       |                           |  | Waiting for next barge to arrive  |
| 0615      |                    | First light, no sign of barge                  |                           |  | Pelicans shifting roosts, minor activity  |
| 0635      | 5                  | Engines start                                  |                           |  | Dredge re-activated   |
| 0700      | 430                |  |                           |  | Count in morning, south breakwater. Roost small groups leaving to the south                         |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

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1. Name of Observer Brian Lohstroh
4. Location Marina Del Rey N. Jetty
6. Sunset 1815
7. Sunrise 0705
5. Time on Site 1845-2300 BL
8. Tide 9. Moon Phase  $\frac{3}{4}$
10. General Weather Conditions/ Visibility 63.5°, wind 0-2 mph, 35% cloud cover
11. Dredge Distance from Breakwater (meters) 35
12. Dredge Noise (dB) Distance/Time

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.)   |
|------|--------------------|--|--------------|-----------|--|
|      |                    |  | Arriving     | Departing |  |
| 1849 | 25                 | N/A  |              |           |  |
| 1854 | 48                 | N/A  |              |           | From foraging area ROOSTING              |
| 1856 | 41                 | N/A  | N            |           | To south ROOSTING                        |
| 1859 | 49                 | N/A  | N            |           | To south ROOSTING                        |
| 1903 | 42                 | Dredge noise                                   |              |           | Circle about                             |
| 1904 | 42                 | N/A  | N            |           | To south, returning after circling about |
| 1907 | 11                 | N/A  |              |           |  |
| 1917 | 300                | Dredge activities begin                        |              |           | S Land in south, but not all             |
| 1918 | 150                |  | N/A          | N         | Land in south                            |
| 1920 | 12                 |  | N/A          |           |  |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

|  |                         |                                     |             |                      |   |         |
|--|-------------------------|-------------------------------------|-------------|----------------------|---|---------|
| 1. Name of Observer                          | Brian Lohstroh          | 2. Date                             | 10-20/10-21 | 3. Observation Night | 3 | Shift 1 |
| 4. Location                                  | Marina Del Rey, N Jetty | 5. Time on Site                     | 1845-2300   |                      |   |         |
| 6. Sunset                                    | 7. Sunrise              | 8. Tide                             |             | 9. Moon Phase        |   |         |
| 10. General Weather Conditions/ Visibility   |                         |                                     |             |                      |   |         |
| 11. Dredge Distance from Breakwater (meters) |                         | 12. Dredge Noise (dB) Distance/Time |             |                      |   |         |

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater            | Direction of           | Notes (Total number of pelicans, etc.)   |
|----------|--------------------|---|------------------------|--|
| Arriving | Departing          |   | Arrival      Departure |  |
| 1921     | 50                 | N/A   | S                      | From previous group that was scared off  |
| 1935     | 260                | Sporadic activities. No dredging, just noise and movement | S                      | Large flock, circling                    |
| 1941     | 160                | N/A   |                        | Portion of flock lands further south     |
| 1943     | 100                | N/A   | N                      | Land in south/from previous group        |
| 1944     |                    | Activities inconsistent                                   |                        | 37 move S → N                            |
| 1945     |                    | Activities inconsistent                                   |                        | 19 move S → N                            |
| 2004     |                    | Activities inconsistent                                   |                        | 21 move S → S get up, then land          |
| 2007     | 148                | Dredge starts   |                        | Flock spook by dredge                    |
| 2010     | 100                | N/A   |                        | Land in south                            |
| 2011     | 48                 | N/A   |                        | Land in north                            |
| 2013     | 36                 | Dredge activities   |                        | Circling around                          |
| 2021     | 36                 | N/A   | N                      | Land in south, from previous disturbance |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

- |  |                        |                 |             |  |                                     |         |
|--|------------------------|-----------------|-------------|--|-------------------------------------|---------|
| 1. Name of Observer                        | Brian Lohstroh         | 2. Date         | 10-20/10-21 | 3. Observation Night                         | 3                                   | Shift 1 |
| 4. Location                                | Marina Del Rey N Jetty | 5. Time on Site |             | 6. Sunset                                    | 7. Sunrise                          | 8. Tide |
| 10. General Weather Conditions/ Visibility |                        | 9. Moon Phase   |             | 11. Dredge Distance from Breakwater (meters) | 12. Dredge Noise (dB) Distance/Time |         |

| Time                    | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of    | Notes (Total number of pelicans, etc.) |  |  |
|-------------------------|--------------------|--|-----------------|--|--|--|
| Arriving                | Departing          | Arrival  | Departure       |  |  |  |
| 2022                    | 28                 | N/A  | S               | Land in south                          |  |  |
| 2035                    |                    | Dredge activity                                |                 | 26                                     |  |  |
| 2042                    | —                  | —  | Dredge activity | 27 more S → N                          |  |  |
| 2116                    | —                  | —  | Dredge activity | 8 move N → S                           |  |  |
| 2124<br>Appendix N - 72 | —                  | —  | Dredge activity | 68, circle, then land again            |  |  |
| 2156                    | —                  | —  | N/A             | 2 move S → N                           |  |  |
| 2206                    | —                  | —  | N/A             | 3 move S → S Land again                |  |  |
| 2221                    | —                  | —  | N/A             | 4 move S → S Land again                |  |  |
| 2222                    | 34                 | N/A  | N               | Arriving from northern areas           |  |  |
| 2246                    | —                  | —  | N/A             | 2 move S → N                           |  |  |
| 2304                    | —                  | —  | N/A             | BL leaves site                         |  |  |
|                         |                    |  |                 |  |  |  |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

- |  |               |                                     |             |                      |   |
|--|---------------|-------------------------------------|-------------|----------------------|---|
| 1. Name of Observer                          | Jeffrey Allen | 2. Date                             | 10-20/10-21 | 3. Observation Night | 3 |
| 4. Location                                  | Viking, S End | 5. Time on Site                     | 2345 - 0705 |                      |   |
| 6. Sunset                                    | 7. Sunrise    | 8. Tide                             |             | 9. Moon Phase        |   |
| 10. General Weather Conditions/ Visibility   |               |                                     |             |                      |   |
| 11. Dredge Distance from Breakwater (meters) |               | 12. Dredge Noise (dB) Distance/Time |             |                      |   |

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |  |
|----------|--------------------|--|--------------|--|--|
| Arriving | Departing          |  | Arrival      | Departure                              |  |
| 2345     | 1                  | None apparent                                  |              | N                                      | Viking at IDLE - shift change<br>550 Pelicans S of flag, none seen in N<br>Note: All Pelicans in area of brightest light |
| 0000     | Ø                  | Dredge begins operation                        |              |  | Circle, then land in S   |
|          |                    |  |              |  | Circle, then land in S   |
| 0005     | 3                  |  | N            |  | Circle, then land in S   |
| 0009     | 5                  |  | W            |  | Circle, then land in S   |
| 0016     | 2                  |  | N            |  | Circle, then land in S   |
| 0017     | 2                  |  | S            |  | Circle, then land in S   |
| 0019     | 1                  |  | SE           |  | Circle, then land in S   |
| 0023     | 1                  | No obvious reason                              | SE           | From south end                         |  |
| 0028     |                    |  |              | 4 stir, circle, land again             |  |
| 0035     | 4                  |  | W            | 4 land just S of flag                  |  |
| 0039     | 70                 | No activity from Viking                        | S            | Circle to west, fly round orbit        |  |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen      2. Date 10-20/10-21      3. Observation Night 3  
 4. Location Viking      5. Time on Site \_\_\_\_\_  
 6. Sunset \_\_\_\_\_      7. Sunrise \_\_\_\_\_      8. Tide \_\_\_\_\_      9. Moon Phase \_\_\_\_\_  
 10. General Weather Conditions/ Visibility \_\_\_\_\_  
 11. Dredge Distance from Breakwater (meters) \_\_\_\_\_      12. Dredge Noise (dB) Distance/Time \_\_\_\_\_

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater     | Direction of           | Notes (Total number of pelicans, etc.)               |
|------|--------------------|--|------------------------|--|
|      | Arriving           | Departing  | Arrival      Departure |  |
| 0043 | 70                 |  | NW                     | All disturbed before, have returned                  |
| 0045 | 1                  |  | S                      | Container SWAP in progress                           |
| 0105 | 1                  | 3  | No activity on Viking  | S      S<br>2 stirring over site as well             |
| 0113 | 2                  | No activity on Viking                              | E                      |  |
| 0119 | 2                  | No activity on Viking                              | S                      | 2 stir over S end, take off, circle, then land again |
| 0127 |                    | No birds disturbed                                 |                        | Rockport in place, scooping begins                   |
| 0138 | 3                  |  | N                      | 2 stir, return / 3 from N land in S                  |
| 0145 | 1                  |  | S                      | Lands with group                                     |
| 0151 | 3                  |  | N                      | 3 - circle to south, land with group                 |
| 0209 | 8                  | No change in normal. Scoop frequency-not the cause | N                      | From N end of S group                                |
| 0219 | 5                  | No change in normal. Scoop frequency-not the cause | SE                     | One E from north as well                             |
| 0234 | 1                  | No change in normal. Scoop frequency-not the cause | N                      |  |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen  
 2. Date 10-20/10-21  
 3. Observation Night 3  
 4. Location Viking  
 5. Time on Site \_\_\_\_\_  
 6. Sunset 7. Sunrise \_\_\_\_\_  
 8. Tide \_\_\_\_\_ 9. Moon Phase \_\_\_\_\_  
 10. General Weather Conditions/ Visibility \_\_\_\_\_  
 11. Dredge Distance from Breakwater (meters) \_\_\_\_\_  
 12. Dredge Noise (dB) Distance/Time \_\_\_\_\_

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater                                      | Direction of | Notes (Total number of pelicans, etc.)  |
|------|--------------------|---|--------------|---|
|      | Arriving           | Departing   | Arrival      | Departure   |
| 0246 | —                  | —   |              | Viking moves to south, pelicans not disturbed   |
| 0252 | 3                  | 3 Crane operating   |              | 3 Stir, fly south then back north   |
| 0316 | 2                  | Crane operating   | N            | Land near S end   |
| 0320 | 5                  | Crane operating   | E            | Fly to E around N & Viking  |
| 0324 | 3                  | Crane operating   |              | 3 fly S → N then land in S  |
| 0328 | 5                  | 4 Crane operating   | SE           | 5 fly around land , 4 others leave  |
| 0340 | 6                  | Crane operating   | S            |   |
| 0359 | 3                  | Crane operating   | E            | From S end  |
| 0402 | 10                 |   | W            | Circle several times, then land   |
| 0405 | 6                  | 2   | S            | Fly to area just south of flag and perch. 3 more land at S end  |
| 0410 | 1                  | Viking moves South  | W            | Pelicans not disturbed by sound or movement   |
| 0414 | ~1200              | MANY from other side of BW. No obvious activity on Viking. No source of disturbance |              | Flock to south, then North, then south. Split into 3 groups, all go north separately. At least 400 (422) now at absolute north tip of BW. |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen  
 2. Date 10-20/10-21 3. Observation Night 3  
 4. Location Viking 5. Time on Site  
 6. Sunset 7. Sunrise 8. Tide 9. Moon Phase  
 10. General Weather Conditions/ Visibility  
 11. Dredge Distance from Breakwater (meters)  
 12. Dredge Noise (dB) Distance/Time

| Time       | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.)  |
|------------|--------------------|--|--------------|-----------|---|
|            |                    |  | Arriving     | Departing |   |
| 0427       | 10                 |  |              | W         | Fly by south, then land at north tip.<br>36 – then another 50 from W, All circle, then fly to north |
| 0430       | 36/50              |  |              |           |   |
| 0432       | 100                |  | W            |           | Fly into area from west, land in extreme north  |
| 0436       | 300 to 400         |  | W            |           | Fly to extreme north end  |
| 76<br>0438 | ~200               |  |              |           | From N end fly over S , then  |
| 0440       |                    | Breakwater now dark                            |              |           | Crane down, lights off – scoop problem  |
| 0450       |                    |  |              |           | Small flocks still flying by S end still no landing in S  |
| 0456       |                    |  |              |           | Flocks from 10-30 over S, still none on BW though   |
| 0458       |                    |  |              |           | 90 circle S area, then fly N  |
| 0506       |                    |  |              |           | Small flocks still in N air site  |
| 0512       |                    |  |              |           | Most (~500) landed at northern extreme  |
| 0526       |                    |  |              |           | Groups of 2 to 10 still flying over S end   |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen      2. Date 10-20/10-21      3. Observation Night 3  
 4. Location Viking      5. Time on Site \_\_\_\_\_  
 6. Sunset 7. Sunrise      8. Tide \_\_\_\_\_      9. Moon Phase \_\_\_\_\_  
 10. General Weather Conditions/ Visibility \_\_\_\_\_  
 11. Dredge Distance from Breakwater (meters) \_\_\_\_\_  
 12. Dredge Noise (dB) Distance/Time \_\_\_\_\_

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)            |
|------|--------------------|--|--------------|---|
|      | Arriving           | Departing                                      | Arrival      | Departure   |
| 0532 | 8                  |  | S            | Flew to north end                                 |
| 0538 |                    |  |              | Wind change in from E, now W                      |
| 0609 | —                  | —  |              | ~ 400 in N area of BW, Ø in south                 |
| 0616 | 6                  |  | S            | Landed in North                                   |
| 0619 |                    |  |              | 4- fly by from N to S                             |
| 0630 | 7                  |  | E            | Land in extreme N                                 |
| 0637 | 3                  | 4  | S            | Pelicans flying to S end from N end of breakwater |
| 0642 | 8                  |  | N            | ~ 30 at S end now                                 |
| 0646 | 25                 |  | N            | From N to S                                       |
| 0649 | —                  | —  |              | 30 more from N → S                                |
| 0700 |                    |  |              | ~ 350 → 450 at N end, 50 at south                 |
| 0702 | 60                 | 60   |              |   |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

|  |              |                                     |           |                      |                |
|--|--------------|-------------------------------------|-----------|----------------------|----------------|
| 1. Name of Observer                          | Brian Foster | 2. Date                             | 10/20/99  | 3. Observation Night | 3 After        |
| 4. Location                                  | Barge        | 5. Time on Site                     | 1810-0800 |                      |                |
| 6. Sunset                                    | 1815         | 7. Sunrise                          | 0716      | 8. Tide              | High           |
| 10. General Weather Conditions/ Visibility   | Clear, 70°F  |                                     |           | 9. Moon Phase        | Waxing gibbons |
| 11. Dredge Distance from Breakwater (meters) |              | 12. Dredge Noise (dB) Distance/Time |           |                      |                |

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |   |
|------|--------------------|--|--------------|--|---|
|      | Arriving           | Departing                                      | Arrival      | Departure                              |   |
| 1816 | 1                  | 1  | —            | NE                                     | SW<br>1 in transit NE → SW  |
| 1915 | —                  | —  | —            | —                                      | ∅ sightings   |
| 2010 | 0                  | 0  | —            | 0                                      | 0<br>∅ sightings  |
| 2100 | 0                  | 0  | —            | 0                                      | 0<br>∅ sightings  |
| 2120 | 0                  | 0  | —            | 0                                      | 0<br>3 Pelicans roasting on "live bait" dock. (Most brightly lit dock visible). |
| 2200 | 1                  | 1<br>(Foraging in channel)                     | NE           | SW                                     | (6 BH on barge 2145); 5 BP on live bait dock                                    |
| 2210 | 1                  | 1  | W            | NE                                     | Flew up channel, 4 BP on live bait (2 foraging)                                 |
| 2240 | 1                  | 1<br>Transit                                   | NE           | W                                      | Flew out toward breakwater; 3 BP on live bait                                   |
| 2420 | 0                  | 0  | —            | —                                      | 4 BP on live bait dock  |
| 0120 | 0                  | 0  | —            | —                                      | 1 BP on live bait dock  |
| 0215 | 0                  | 0  | —            | —                                      | No pelicans on live bait dock   |
| 0320 | 0                  | 0  | —            | —                                      | ∅   |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Brian Foster  
 2. Date 10-20/10-21  
 3. Observation Night 3 After  
 4. Location Barge  
 5. Time on Site \_\_\_\_\_  
 6. Sunset \_\_\_\_\_  
 7. Sunrise \_\_\_\_\_  
 8. Tide \_\_\_\_\_  
 9. Moon Phase \_\_\_\_\_  
 10. General Weather Conditions/ Visibility \_\_\_\_\_  
 11. Dredge Distance from Breakwater (meters) \_\_\_\_\_  
 12. Dredge Noise (dB) Distance/Time \_\_\_\_\_

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.)  |
|------|--------------------|--|--------------|-----------|---|
|      | Arriving           | Departing                                      | Arrival      | Departure |   |
| 0420 | 0                  | 0  | —            | —         | Ø, no sightings                         |
| 0515 | 0                  | 0  | —            | —         | Ø                                       |
| 0620 | 0                  | 0  | —            | —         | Ø                                       |
| 0634 | 2                  | 2  | W            | NE        | 2 in transit, 10m altitude, into marina |
| 0704 | 3                  | 3  | W            | NE        | 3 in transit, <1 & 3m alt.              |
| 0706 | 5                  | 5  | W            | NE        | 5 in transit, <1m alt.                  |
| 0709 | 2                  | 2  | W            | NE        | 2 in transit, <1m alt.                  |
| 0730 | —                  | —  | —            | —         | Jetty (from middle) count ~ 750 BP      |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Brian Foster  
 2. Date 10/20 3. Observation Night 3 after  
 4. Location Breakwater 5. Time on Site 2300-2400 hrs  
 6. Sunset 7. Sunrise 8. Tide 9. Moon Phase  
 10. General Weather Conditions/ Visibility  
 11. Dredge Distance from Breakwater (meters) \_\_\_\_\_  
 12. Dredge Noise (dB) Distance/Time \_\_\_\_\_

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure                              |
| 2326 | 1                  | 1  | NW           | NW                                     |
| 2330 | —                  | —  | —            | —                                      |
| 2344 | 2                  | 2  | W            | S                                      |
| 2352 | 1                  |  | S            | Just flew S & out of site              |
| 2355 | 1                  |  | S            | Flew in, landed                        |
| 2357 | —                  | —  | —            | Dredge active again                    |
| 2347 | —                  | —  |              | J. Allen arrives on Viking             |
|      |                    | SEE  |              |  |
|      |                    |  |              | NEXT                                   |
|      |                    |  |              | SHEET                                  |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

US FWS

CARLSBAD FIELD OFFICE, CA

|  |   |                                     |              |                      |     |
|--|---|-------------------------------------|--------------|----------------------|-----|
| 1. Name of Observer                          | Jeffrey Allen, Brian Lohstroh                                     | 2. Date                             | 10-21/10-22  | 3. Observation Night | 4   |
| 4. Location                                  | Marina Del Rey, N-Jetty   | 5. Time on Site                     | 1800-2445/BL | 2445-0645/JA         |     |
| 6. Sunset                                    | 1815  | 7. Sunrise                          | Cloudy       | 9. Moon Phase        | 3/4 |
| 10. General Weather Conditions/ Visibility   | Clear night - fog in the morning ~ 0615, temp = 60° winds 0-3 mph |                                     |              |                      |     |
| 11. Dredge Distance from Breakwater (meters) | ~ 35  | 12. Dredge Noise (dB) Distance/Time |              |                      |     |

| Time      | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |  |
|-----------|--------------------|--|--------------|--|--|
|           | Arriving           | Departing                                      |              | Arrival                                | Departure  |
| 1800      | 38                 | N/A  | N            |  | Sunset, Pelicans arriving to roost   |
| 1815      |                    |  |              |  | 320 Pelicans on northern end of breakwater<br>(estimate)                     |
| 1815      |                    |  |              |  | 270 Pelicans on southern end of breakwater<br>(estimate)                     |
| 1819      | 24                 | N/A  | N            |  | Arriving to roost on southern end  |
| 1838      | 280                | Tugboat operations                             | N            |  | Tugboat coming too close to breakwater                                       |
| 1838-1900 | 280                | N/A  | N & S        |  | Previously disturbed group arriving back to roost on both ends of breakwater |
| 1902      | Move ↑             | N/A  |              |  | 7 birds move to south end  |
| 1919      | Move ↑             | N/A  |              |  | 24 birds move to south end   |
| 1936      | Move ↑             | N/A  |              |  | 10 birds move to south end, in lights of dredge                              |
| 2002      | Move ↑             | N/A  |              |  | 32 birds move to south end, in lights of dredge                              |
| 2008      | Move ↑             | Dredge activities                              |              |  | 7 birds move further south away from dredge                                  |
| 2010      | Move ↑             | N/A  |              |  | 4 birds move to south end  |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Brian Lohstroh      2. Date 10-21/10-22      3. Observation Night 4  
 4. Location North Jetty, Marina Del Rey Harbor

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)           |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure  |
| 2119 | Move ↑             | Dredge starts suddenly after pause             | N            | 13 move to north end of breakwater               |
| 2138 | ↑                  | Dredge activity                                | N            | 4 move to north end of breakwater                |
| 2156 | ↑                  | Dredge activity                                | N            | 2 move to north end of breakwater                |
| 2219 | ↑                  | Dredge activity                                | S            | 1 bird moves to south end, winds 3-5 mph         |
| 2242 | ↑                  | No obvious cause                               | S            | 2 birds move to south end, wind 3-5 mph          |
| 2258 | ↑                  | Dredge activity                                | N            | 26 birds move to north end of breakwater         |
| 2305 | ↑                  | No obvious cause                               | S            | 150 birds move to south end, dredge not active   |
| 2310 | ↑                  | Dredge activities begin after pause            | S            | 300 birds move to south end                      |
| 2312 | ↑                  | N/A  | S            | 3 birds move to south end                        |
| 2331 | ↑                  | No obvious cause                               | S            | 8 birds move to south end                        |
| 2348 | ↑                  | Dredge activities                              | N            | 2 birds move to north end                        |
| 2402 | ↑                  | No obvious cause                               | S            | 4 birds move to south end dredge not active      |
| 2417 | ↑                  | Dredge starts suddenly after break             | N            | 17 birds move to north end                       |
| 2421 | ↑                  | Dredge activities                              | N            | 3 birds move to north end                        |
| 2428 | ↑                  | Tugboat operations w/barge                     | S            | 6 birds move to south end temp 61.5°F winds calm |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

| 1. Name of Observer             | Jeffrey Allen      |   | 2. Date      | 10-21/10-22 | 3. Observation Night                               | 4 |
|---------------------------------|--------------------|---|--------------|-------------|--|---|
| 4. Location<br>(Time data lost) |                    |   |              |             |  |   |
| Time<br>(estimate)              | Number of Pelicans | Reason for Flushing or<br>Avoidance of Breakwater | Direction of |             | Notes (Total number of pelicans, etc.)             |   |
|                                 | Arriving           | Departing   | Arrival      | Departure   |  |   |
| 0045                            | —                  | —   | —            | —           | JA arrives on site                                 |   |
| ~0050                           |                    | Viking not operating                              |              |             | 1 moving N→S                                       |   |
| ~0100                           |                    | Viking not operating                              |              |             | Rockport bottomed out in low tide                  |   |
| ~0110                           | 1 ↘ 1              | Viking not operating                              | N            | S           | Dredge unloads material from Rockport into channel |   |
| ~0115                           |                    | Viking not operating                              |              |             | Rockport grounded off end of N Jetty               |   |
| ~0130                           | 2                  | Viking not operating                              | S            |             | Land in N from S                                   |   |
| ~0145                           | 150                | Fishing boat                                      |              |             | Most returned shortly afterward                    |   |
| —                               | 15                 | Viking not operating                              |              |             | Settle with group in the north                     |   |
| —                               |                    | Viking not operating                              | N/A          |             | Tug arrives with empty container                   |   |
| —                               | 1                  | Viking not operating                              | Unknown      |             | Flying to marina                                   |   |
| —                               | 1                  | Viking not operating                              | Unknown      |             | Flying from S lands in N (Rockport still stuck)    |   |
| —                               | 1                  | Viking not operating                              | Unknown      |             | Moved from S to N                                  |   |
| —                               | 1                  | Viking not operating                              |              |             | Moves from N to S (Rockport still stuck)           |   |
| ~230                            | 1                  | Viking not operating                              | E            |             | Moves N → S Rockport is free from tide             |   |
| —                               | 1                  | Viking not operating                              |              |             | Lands in north                                     |   |

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# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen  
 4. Location North Jetty Marina Del Rey Harbor

2. Date 10-21/10-22      3. Observation Night 4

(Time data lost)

| Time<br>(estimate) | Number of Pelicans                | Reason for Flushing or<br>Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |
|--------------------|-----------------------------------|---|--------------|--|
| Arriving           | Departing                         | Arrival   | Departure    |  |
| —                  | —                                 | Viking operations begin                           |              |  |
| ~0400              | 70                                | Scoop lands near<br>breakwater                    | S            | Empty container moved into position    |
| 30                 |                                   |   |              | Flock moves, circles overhead          |
| 50                 | Moved away from<br>dredge         | S   |              | Land in north, from south              |
| 3                  | Scoop drop                        | S   |              | Group lands after being spooked        |
| 1                  |                                   | N   |              | Moved away from dredge                 |
| 900                |                                   |   |              | Circling over N end                    |
| 6                  | Unknown                           | S   |              | Number estimate on entire distribution |
| 300                | Light flashing from other<br>side | S   |              | From south, along breakwater           |
| 100                |                                   |   |              | Flew SE from breakwater                |
| 3                  | Unknown                           |   |              | From group spooked earlier             |
| 9                  | Dredge                            |   |              | Move from N to S                       |
| 7                  |                                   | Maybe due to dredge ops                           |              | Fly to north end land                  |
| 15                 | Dredge ops                        |   |              | Circle above breakwater                |
| 15                 | Maybe due to dredge               |   |              | Move from S to N                       |
|                    |                                   |   |              | Move from S to N                       |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen

2. Date 10-20/10-21

3. Observation Night 4

4. Location N-Jetty, Marina Del Rey Harbor

(Time data lost)

| Time<br>(Estimate) | Number of Pelicans | Reason for Flushing or<br>Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.)           |
|--------------------|--------------------|---|--------------|-----------|--|
|                    |                    |   | Arrival      | Departure |  |
| ~0330              | 1 ← — 1            | Crane noise                                       | N            |           | 11 circling over south                           |
|                    | 7 ← — 7            |   |              |           | 7 moved from S to N                              |
|                    | 3 ← — 3            | Unknown   | N            |           | 3 circling over north jetty                      |
|                    | 2 ← — 2            | Unknown   |              |           | 2 circling over north                            |
|                    | 5 ← — 5            | Unknown   |              |           | Land in N from S                                 |
|                    | 5 ← — 5            | Unknown   |              |           | Landed in N flock                                |
| ~0430              | 2 ← — 2            | Unknown   |              |           | Move from S → N                                  |
| ~0530              | 150                | Small fishing boats<br>near BW                    | N            |           | Flock from south heads to north                  |
|                    | 80                 | Small fishing boats<br>near BW                    | NE           |           | Boats following BW northward                     |
|                    | 60                 | Small fishing boats<br>near BW                    | N            |           | Boats following BW northward                     |
|                    | 70                 | Small fishing boats<br>near BW                    | N            |           | Scared off, circle                               |
|                    | 100                | Boats move to south                               |              |           | Scared off birds from southern tip               |
| 0615               |                    |   |              |           | Dense fog builds/can't see where they land after |
| 0617               | 1                  |   | E            |           | To marina  |
| 0630               |                    |   |              |           | JA departs, no vis due to fog                    |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

- |  |   |                 |               |                      |            |
|--|---|-----------------|---------------|----------------------|------------|
| 1. Name of Observer                          | Jeff Allen  | 2. Date         | 10-21/10-22   | 3. Observation Night | 4          |
| 4. Location                                  | Barge Monitoring                                      | 5. Time on Site | 180-0700      |                      |            |
| 6. Sunset                                    | 1815  | 7. Sunrise      | ~0700         | 8. Tide              | Low @ 0100 |
| 10. General Weather Conditions/ Visibility   | Clear night, 61.5°F, winds 0-5, clouds/fog in morning |                 | 9. Moon Phase | $\frac{3}{4}$        |            |
| 11. Dredge Distance from Breakwater (meters) | 12. Dredge Noise (dB) Distance/Time                   |                 |               |                      |            |

| Time | Number of Pelicans |           | Reason for Flushing or Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.) |
|------|--------------------|-----------|--|--------------|-----------|--|
|      | Arriving           | Departing |  | Arrival      | Departure |  |
| 1825 | Ø                  | Ø         |  |              |           | No activity                            |
| 1930 | Ø                  | Ø         |  |              |           | No activity                            |
| 2035 | Ø                  | Ø         |  |              |           | No activity                            |
| 2137 | Ø                  | Ø         |  |              |           | No activity                            |
| 2240 | Ø                  | Ø         |  |              |           | No activity                            |
| 2335 | Ø                  | Ø         |  |              |           | No activity                            |
| 0100 | Ø                  | Ø         |  |              |           | No activity                            |
| 0210 | Ø                  | Ø         |  |              |           | No activity                            |
| 0315 | Ø                  | Ø         |  |              |           | No activity                            |
| 0406 | Ø                  | Ø         |  |              |           | No activity                            |
| 0507 | Ø                  | Ø         |  |              |           | No activity                            |
| 0600 | Ø                  | Ø         |  |              |           | No activity                            |
| 0700 | Ø                  | Ø         |  |              |           | No activity                            |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

US FWS  
CARLSBAD FIELD OFFICE, CA

1. Name of Observer Brian Lohstroh, Ingrid Quon, Thomas Myers
2. Date 10/22 -10/23
3. Observation Night
4. Location North Jetty
5. Time on Site 1800-0715
6. Sunset 1810
7. Sunrise 0715
8. Tide Moderate/low
9. Moon Phase 7/8 full
10. General Weather Conditions/ Visibility Hazy 35% cover, temp 63°F - 58°F, wind 0-5 mph, fog
11. Dredge Distance from Breakwater (meters) ~ 50
12. Dredge Noise (dB) Distance/Time Minimal

| Time      | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)  |
|-----------|--------------------|--|--------------|---|
| (Brian)   | Arriving           | Departing                                      | Arrival      | Departure   |
| 1820      |                    | Dredge inactive                                |              | 430 pelicans north of flagpole<br>Roosting unknown # south (dredge in jetty)<br>At least 200 on the south end |
| 1825-1840 | 42                 | Dredge inactive                                | E            | Arriving to roost in small groups   |
| 1908      | 3 ← — 3            | Dredge inactive                                | S            | Moving to the south end to roost  |
| 1915      | 12 ↓ — 12          | Dredge inactive                                | S            | Moving to the south end to roost  |
| 1915-1925 | 26 ↓ — 26          | Dredge inactive                                | S            | Moving to the south end to roost  |
| 1929      | 75 ↓ — 75          | Dredge inactive                                | N            | Moving to the north end to roost  |
| 1932      | 22 ↓ — 22          | Dredge inactive                                | S            | Moving to the south end to roost  |
| 1933      | 175 ↓ — 175        | Fishing boat too close                         | S            | Moving to the north end to south  |
| 1941      | 100 ↓ — 100        | Fishing boat too close                         | S            | Moving to the north end to south  |
| 1954      | 56 ↓ — 56          | No obvious cause                               | S            | Moving to the north end to south  |
| 2002      | 1                  | No obvious cause                               | E            | Moving inland   |
| 2015      | 100 ↓ — 100        | No obvious cause                               | S            | Large flock circles about, lands in same location,<br>south of dredge   |

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# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Brian Lohstroh, Ingri Quon  
 4. Location North Jetty

2. Date 10/22 - 10/23 3. Observation Night 5

| Time                    | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater                    | Direction of | Notes (Total number of pelicans, etc.)   |
|-------------------------|--------------------|---|--------------|--|
|                         | Arriving           | Departing   | Arrival      | Departure  |
| (Brian)<br>2025         | 2 ↘ — 2            | No obvious cause<br>No dredging                                   |              | Moving to south end to roost   |
| 2029                    | 2                  | N/A   | E            | Flying in from E, roosting N   |
| 2054                    | 9 ↘ — 9            | No obvious cause  |              | Moving to roost on the south   |
| 2110                    | 3 ↘ — 3            | No obvious cause  |              | Moving to roost on the south   |
| 2113                    | 5 ↘ — 5            | No obvious cause  |              | Moving to roost on the south   |
| 2200                    |                    |   |              | Tug boat/barge operations<br>61°F calm   |
| 2224                    | 1 ↘ — 1            | No obvious cause  | N            | Moving to roost north  |
| 2235                    |                    |   |              | New barge arrives, dredge ops commence   |
| 2253<br>(Ingri)<br>2300 | 6 ↘ — 6            | Dredge ops  | S            | Moving to southern roosts<br>Total count N break water ~ 40<br>S break water ~ 120 |
| 2305                    | 1                  | Unknown   |              | S Fly S away from jetty & breakwater   |
| 2315                    | 6 ↘ — 6            | Possibly occasional dredge noise - squeaks                        |              | Move about on south breakwater   |
| 2330                    | 300-400 ↘ — 400    | Dredge rotation or activity on ocean side of dredge (not visible) | N → S<br>→ N | Pelicans & ~ 1000 gulls circle around BW then land after 3 minutes                 |
| 0005                    | 10 ↘ — 10          | Small motor boat  | N            | Move from S to N. BW<br>-low tide-   |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer      Ingri Quon, Thomas Myers  
 2. Date      10/22-10/23  
 4. Location      N. Jetty, Marina Del Rey Harbor  
 Sunrise 0715

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of    | Notes (Total number of pelicans, etc.)               |
|----------|--------------------|--|-----------------|--|
| Arriving | Departing          |  | Arrival         | Departure  |
| 0010     |                    |  |                 |  |
| 0030     | 1                  |  | E               | From harbor - land N BW                              |
| 0050     | 2                  |  | E               | From harbor - land N BW                              |
| 0225     | 6                  |  | —               | Pelicans fly about S BW<br>* Fog horn started ~ 1415 |
| 0255     | 13                 |  | SE              | Fly low & land near dredge on S. BW                  |
| 0257     | 1                  |  | E               | From harbor land N. BW                               |
| 0400     |                    | Dense Fog                                      |                 |  |
| 0615     |                    | Fog Lift                                       |                 |  |
| 0645     |                    | Dredge shut down Lights still on. Barge gone   |                 | Total count N. BW 180<br>-Sleeping- S. BW 50-60      |
| 0650     | 33                 |  | E toward Harbor | Depart from S. BW                                    |
| < 0655   | 22                 |  | E toward Harbor | Black turnstone 10, Fo Te 3<br>Willet 2, Gr 8, Te 40 |
| 0700     | see notes          |  | —               | 7 Pelicans fly from Harbor to NW ocean               |
| 0701     | 3                  |  | E               | From harbor  |
| 0702     | see notes          |  |                 | 3 Pelicans fly from harbor to NW ocean               |
| 0705     | 2                  |  | N               | Fly from S BW to N BW                                |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Ingri Quon, Tom Myers, Brian Lohstroh
2. Date 10/22 - 10/23
3. Observation Night 5
4. Location Barge - Coast Guard Area
5. Time on Site 1845 - 2215, 2215 - 0230, 0230 - 0715
6. Sunset ~1835
7. Sunrise 0715
8. Tide
9. Moon Phase 7/8 phase
10. General Weather Conditions/ Visibility  $\leq 63^{\circ}\text{F}$ , 10% cover < 5 mph, fog
11. Dredge Distance from Breakwater (meters) N/A
12. Dredge Noise (dB) Distance/Time N/A

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.)   |
|------|--------------------|--|--------------|-----------|--|
|      |                    |  | Arrival      | Departure |  |
| 1845 | —                  | —  |              |           | No pelicans on barge   |
| 1900 | —                  | —  | E            |           | One fly over Coast Guard station going east  |
| 1950 |                    |  |              |           | Adult Great Blue Heron landing in cyprus next to 2 other GB Heron (young)  |
| 2005 |                    |  |              |           | 2 <sup>nd</sup> Adult Great Blue Heron land in tree.<br>@ 2007 3 <sup>rd</sup> Adult land on boat near sheriff station |
| 90   |                    |  |              |           | No Pelicans seen in harbor   |
| 2100 |                    |  |              |           | No Pelicans on barge   |
| 2105 | 3                  | Dock   |              |           | Not Sure   |
| 2200 | 3                  |  |              |           | Perched on live bait dock across harbor  |
| 2230 | —                  | —  |              |           | Not Sure   |
| 2330 | 1                  | dock   |              |           | No longer at live bait dock  |
| 0030 | 3                  | dock   |              |           | Only Great Blue Heron & 2 Gulls  |
| 0200 | —                  | —  |              |           | No Pelicans on barge or dock   |
| 0230 | 2                  | dock   |              |           | Sitting on live bait dock with 2 Great Blue Herons   |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Briam Lohstroh      2. Date 10/22-10/23      3. Observation Night 5  
 4. Location Barge - Coast Guard docks      5. Time on Site \_\_\_\_\_  
 6. Sunset ~1835      7. Sunrise 0715      8. Tide \_\_\_\_\_  
 9. Moon Phase \_\_\_\_\_  
 10. General Weather Conditions/ Visibility \_\_\_\_\_  
 11. Dredge Distance from Breakwater (meters) N/A      12. Dredge Noise (dB) Distance/Time      N/A

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

|  |                                      |                       |               |                      |             |
|--|--------------------------------------|-----------------------|---------------|----------------------|-------------|
| 1. Name of Observer                          | Thomas Myers, Jeff Allen, Ingri Quon | 2. Date               | 10/23/99      | 3. Observation Night | 6           |
| 4. Location                                  | Barge                                | 5. Time on Site       | 1815 -0715    |                      |             |
| 6. Sunset                                    | 1815                                 | 7. Sunrise            | 0715          |                      |             |
| 10. General Weather Conditions/ Visibility   | Clear, 3-5 mph / NW, 66°F            | 8. Tide               |               | 9. Moon Phase        | Almost Full |
| 11. Dredge Distance from Breakwater (meters) | N/A                                  | 12. Dredge Noise (dB) | Distance/Time | N/A                  |             |

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |   |
|------|--------------------|--|--------------|--|---|
|      | Arriving           | Departing                                      | Arrival      | Departure                              |   |
| 1815 |                    | Total  |              |  | 1 on Coast Guard dock & 4 in vicinity. 2 on live bait dock across harbor. 2 in water next to live bait dock |
| 1820 |                    | 1  |              | W                                      | Leaving harbor going towards jetty  |
| 1825 |                    | 5  |              | W                                      | Leaving harbor towards jetty  |
| 1830 |                    | 2  |              | W                                      | Leaving harbor towards jetty  |
| 1833 | 2                  | 1  | E            | W                                      | Leaving harbor towards jetty. 2 others in water in front of Coast Guard Station                             |
| 1837 | 2                  | Boat coming into harbor                        |              | E                                      | 2 in water from USCG into harbor  |
| 1840 | 2                  |  | W → E        |  | Coming into harbor from jetty   |
| 1843 | 1                  |  |              | W                                      | Going towards jetty from harbor   |
| 1852 | 1                  |  |              | W                                      | Going towards jetty from harbor   |
| 1915 |                    |  |              |  | 2 sitting on live bait dock across harbor   |
| 2015 | 1                  |  |              |  | 1 sitting on live bait dock with 1 GBHeron  |
| 2115 | 9 + 1              |  |              |  | 9 on live bait dock. 1 arrived, landed in water at dock, 1 other in water next to dock                      |
|      |                    |  |              |  | 1847 - Tugboat arrives, drops 1 person off, then departs 1849   |
|      |                    |  |              |  | 0645 - Tugboat arrives, picks up 1 person   |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Thomas Myers Ingri Quon, Jeff Allen  
 2. Date 10/23 - 10/24    3. Observation Night 6  
 4. Location Barge

| Time          | Number of Pelicans |           | Reason for Flushing or Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.)       |
|---------------|--------------------|-----------|--|--------------|-----------|--|
|               | Arriving           | Departing |  | Arrival      | Departure |  |
| 2215          |                    | 7         |  |              |           | 4 on live bait dock                          |
| 2230          |                    | 3         |  |              |           | 1 on live bait dock                          |
| 2310          | Ø                  | Ø         |  |              |           | Ø on dock or barge                           |
| 2313          |                    |           |  |              |           | Kimberly arrives at dock for shift change    |
| 2340          |                    |           |  |              |           | 1 GBH on bait dock                           |
| 2430          | 1                  |           |  |              |           | One on live bait dock. Ø on barge            |
| 0125          |                    |           |  |              | Ø         |  |
| 0214          |                    |           |  |              |           | 1 Pelican at bait dock                       |
| 0249          |                    |           |  |              |           | 1 Pelican at bait dock, and one egret        |
| Ingri<br>0400 |                    |           |  |              |           | 1 Pelican at bait dock, and one egret        |
| 0500          |                    |           |  |              |           | 1 Pelican at bait dock, and one egret        |
| 0600          |                    | 1         | Sky lightening – visible<br>(sunrise)          |              |           | No birds on bait barge. Racoons              |
| 0630          |                    |           |  | E            |           | Boat activity at live bait dock              |
| 0637          |                    | 3+1       |  |              |           |  |
| 0640-         |                    |           |  |              |           | Fly off of docked boats near Sheriff Station |
| 0650          | 1+1+1+1            |           |  | W            |           | Fly into boat area of harbor                 |



# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Ingri Quon, Thomas Myers, Jeff Allen
2. Date 10/23 - 10/24
3. Observation Night 6
4. Location North Jetty
5. Time on Site 1815 - 0715
6. Sunset 1830
7. Sunrise 0715
8. Tide 5.1 @ 2130, 0.6 @ 0330
9. Moon Phase ~ full, rise ~ 1800
10. General Weather Conditions/ Visibility °F < 5% cover 0-5 mph SW
11. Dredge Distance from Breakwater (meters) ~ 60
12. Dredge Noise (dB) Distance/Time -2 to +6dB/~500'/0100 at range 60
- Barge ~ 35

| Time  | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |
|-------|--------------------|--|--------------|--|
|       | Arriving           | Departing                                      | Arrival      | Departure                              |
| 0815  | 60                 |  | W            | From ocean                             |
| 0830  | 5                  |  | E            | From harbor                            |
| 1830- | 26+ 5+             |  | W            | From ocean                             |
| 1845  | +52                |  | E            | From harbor or coast<br>N of N. Jetty  |
| 1830- | 7+ 3+ 8+           | 157(@1845)                                     |              | Total 220 N flag                       |
| 1845  | 8+ 8+ 6+           | 12+15+10                                       |              | 140 S flag                             |
| 1815  |                    |  |              |  |
| 1837  | 1                  |  | W            | Go into harbor                         |
| 1845- | 25+2+6+            |  |              | From N. coast. Land on S of flag       |
| 1900  | +12+2              |  |              |  |
| 1855- |                    |  |              |  |
| 1900  | 2+4                |  | E            | From harbor                            |
| 1900  | 1                  |  | E            | Flew into harbor                       |
| 1900  | 2                  |  | N            | Flew up coast                          |
| 1903  | 2                  |  | SE           | Flew to N of flag                      |
| 1905  | 1                  |  | W            | Flew into Harbor                       |

BW = Break water

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Ingri Quon, Thomas myers, J Allen      2. Date 10/23 -10/24      3. Observation Night 6  
 4. Location North Jetty

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)  |
|------|--------------------|--|--------------|---|
|      | Arriving           | Departing                                      | Arrival      | Departure                               |
| 1915 |                    |  |              | Total<br>280 S of flag<br>85 N of flag  |
| 1915 | 3 + 2              |  | S            |   |
| 1916 | 8                  |  | N            | Land on S of Flag                       |
| 1916 | 2                  |  | E            | Land on S of Flag                       |
| 1920 | 2                  |  | E            | Land on S of Flag                       |
| 1922 | 1                  |  | N            | From N coast, Land on N of flag         |
| 1924 | 3                  |  | E            | From Harbor                             |
| 1925 | 2                  |  | N            | Land N of flag                          |
| 1927 | 3                  |  | S            | Land N of flag                          |
| 1930 | 2                  |  | W            | Fly into harbor, landed on middle jetty |
| 1930 | 1                  |  | N            |   |
| 1933 | 1                  |  | E            | Landed S of flag                        |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Ingri Quon, Thomas Myers, Jeff Allen  
 4. Location North Jetty, Marina Del Rey

2. Date 10/23-10/24      3. Observation Night 6

| Time          | Number of Pelicans       | Reason for Flushing or Avoidance of Breakwater  | Direction of | Notes (Total number of pelicans, etc.)                                     |
|---------------|--------------------------|---|--------------|--|
|               | Arriving                 | Departing                                       | Arrival      | Departure  |
| 1935-<br>2000 | 2+1                      |   |              | E  |
| 1935-<br>2000 | 1+1                      |   |              | E  |
| 1935-<br>2000 | 1+1                      |   |              | N  |
| 1935-<br>2000 | 1+1+2+1<br>2+2+4         |   |              | N  |
| 1945-<br>2000 | 1                        |   | W            | Landed on middle jetty   |
| 1945-<br>1957 |                          |   |              | Moved disposal barge to N end of dredge. Pelicans not disturbed            |
|               |                          |   |              | 44 gulls fly in from N<br>29+36  |
|               |                          |   |              | Take the barge N → ocean   |
| 2015          | 1                        |   | N            | Land N of flag pole  |
| 2031          | 1                        |   | E            | Land N from harbor   |
| 2031          | 3+1+1+3<br>1+4+1<br>+4+1 |   | N            | Land N of flag      43      Flying N of flag<br>1 Grebe                    |
| 2045          |                          |   | N            | Land S of flag      2 Skimmers   |
| 2050-<br>2100 |                          |   |              | Bring barge back from N. Position barge adjacent to dredge – minimal noise |
| 2110          | 1                        |   | W            | Land N of flag   |
| 2100-<br>2120 | 85                       | Barge move into position<br>-pass by breakwater | S            | Move S from N of flag  |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Ingri Quon, T. Myers, J. Allen      2. Date 10/23-10/24      3. Observation Night 6  
 4. Location N. Jetty, Marina Del Rey

| Time             | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of |             | Notes (Total number of pelicans, etc.)   |
|------------------|--------------------|--|--------------|-------------|--|
|                  |                    |  | Arrival      | Departure   |  |
| I. Quon<br>2145  | 1                  | Boat (small) spotlight                         |              | N           |  |
|                  | 350-400            | Unknown or boat spotlight                      |              | SE & Circle | Pelicans on BW ridge S of flag still in place. 350-400 Pelicans possibly from ocean side of BW |
| T. Myers<br>2345 | 2                  |  | S            |             | Move S from N of flag  |
| 2400             |                    |  |              |             | 280 total N of flag<br>200 S of flag   |
| 0006             | 1                  |  | N-S          |             | Flew in circle N of flag from leeward side to windward side of BW                              |
| 0021             | 3                  |  | S            |             | Move S from N of flag  |
| 0026             | 1                  |  | S            |             | Move S from N of flag  |
| 0100             |                    |  |              |             | Total 200 N flag   |
| 0200             |                    |  |              |             | Total 300 S flag   |
| 0230             |                    |  |              |             | Total 200 N flag   |
| 0330             |                    |  |              |             | Total 200 N flag   |
| J. Allen<br>0416 | 1                  |  | S            |             | From N to S  |
| 0450             |                    | Dredge operating normally                      |              | E           | Empty container moved into position  |
| 0554             | 1                  |  |              |             | Toward marina  |

-Tugboat arrived @ 2350, departed @2400; arrived 0020

-Lights on barge turned off @ 0008, then turned dim 30 sec. Later, Full 10 min. later

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Ingri Quon, Jeff Allen, Ingri Quon  
 2. Date 10/23-10/24      3. Observation Night 6  
 4. Location North Jetty, Marina Del Rey

| Time             | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)            |
|------------------|--------------------|--|--------------|---|
| Arriving         | Departing          |  | Arrival      | Departure   |
| J. Allen<br>0634 | 2                  | No unusual dredge movements                    | E            | One from N, one from S                            |
| 0636             | 2                  | No unusual dredge movements                    | E            | Both from N                                       |
| 0637             | 8                  | No unusual dredge movements                    | SE           | Both from N                                       |
| 0641             | 5                  | No unusual dredge movements                    | E            | Both from N                                       |
| 0645             | 10                 | No unusual dredge movements                    | S            | Leave near south jetty                            |
| 0650             | 2                  | No unusual dredge movements                    | E            | North ~ 450<br>Count South ~ 70 (in visible area) |
| 0654             | 15                 | No unusual dredge movements                    | E            | All from N end of BW                              |
| 0657             | 9                  | No unusual dredge movements                    | E            | From north  |
| 0700             | 3                  | No unusual dredge movements                    | E            | From north, many now alert and active             |
| 0702             | 10                 | Fishing boat near BW north end                 | S            | Spooked by boat against BW near north tip         |
|                  |                    |  |              |   |
|                  |                    |  |              |   |
|                  |                    |  |              |   |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

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1. Name of Observer Thomas Myers, Jeff Allen, Ingri Quon
2. Date 10/24-10/25/99
3. Observation Night 7
4. Location N. Jetty/ Breakwater
5. Time on Site 1815-0710
6. Sunset 1815
7. Sunrise 8. Tide 1.3 @ 1815; 5.0 @ 2200; 0.8 @ 0400
8. Tide 1.3 @ 1815; 5.0 @ 2200; 0.8 @ 0400
9. Moon Phase Full
10. General Weather Conditions/ Visibility 10% C; 0-3 mph/w; 68°F
11. Dredge Distance from Breakwater (meters) 20-40
12. Dredge Noise (dB) Distance/Time Loudest from N Jetty 60dB<sup>±3</sup>/~300m/0440

Time Number of Pelicans Reason for Flushing or Avoidance of Breakwater Direction of Notes (Total number of pelicans, etc.)

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of      | Notes (Total number of pelicans, etc.)       |
|----------|--------------------|--|-------------------|--|
| Arriving | Departing          |  | Arrival Departure |  |
| 1815     | 10                 |  | E                 | Going into south channel                     |
| 1820     |                    |  |                   | Total 200 S of flag<br>250 N of flag         |
| 1826     | 25                 | 25   | S → N             | From S of flag to N of flag                  |
| 1827     | 2                  |  | E                 | From harbor to N of flag                     |
| 1828     | 30                 | 30   | S → N             | From S of flag to N of flag                  |
| 1829     | 2                  |  | E                 | From harbor to N of flag                     |
| 1833     | 4                  |  | E                 | From harbor to N of flag                     |
| 1836     | 1                  |  | E                 | From harbor to N of flag                     |
| 1838     | 10                 |  | N                 | From open water to N of flag                 |
| 1839     | 50                 | 50   | S → N             | From S of flag to N of flag                  |
| 1840     | 3                  | 3  | N → S             | From N of flag to S of flag                  |
| 1841     | 6                  |  | E                 | From harbor 3 to N of flag<br>3 to S of flag |

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-Tugboat leaving 1833, arrives 1851

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Thomas Myers

4. Location Jetty north, Marina Del Rey

2. Date 10/24/99      3. Observation Night 7

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater   | Direction of | Notes (Total number of pelicans, etc.)   |
|----------|--------------------|--|--------------|--|
| Arriving | Departing          |  | Arrival      | Departure  |
| 1845     | 5                  | 5  |              | S → N      From S of flag to N of flag   |
| 1847     | 3                  |  | E            | From harbor to N of flag   |
| 1852     | 6                  |  | E            | From harbor to N of flag   |
| 1856     | 17                 |  | N            | From open water to S of flag   |
| 1859     | 11                 | 11   | S            | S → N      From S of flag to N of flag   |
| 1900     | 14                 |  | N            | From open water to S of flag   |
| 1904     | 20                 | Possibly by a pounding<br>of metal on barge  | N            | From open water      10 to S of flag<br>10 to N of flag  |
| 1908     | 150                | 150  | S → N        | From N of flag into harbor   |
| 1915     | 10                 | 10   | S → N        | 10 from S of flag to N of flag<br>10 from N of flag to S of flag   |
| 1930     | 1                  |  | E            | From N of flag into harbor   |
| 1950     |                    | Barge + platform rig 1<br>full length S from last<br>night -more Pelicans on<br>N side of flag |              | Total 500 N of flag ~ 200 S of flag → bright lights make<br>it hard to see on south side since barge has moved |
| 2008     | 20                 | 20   | N → S        | Leaving from N of flag to S jetty area   |
| 2033     | 8                  | 8  | N → S        | Leaving from N of flag to S of flag  |
| 2035     | 3                  |  | S → N        | Arriving from S area to N of flag  |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Tom Myers, J. Allen, I. Quon  
 4. Location Jetty North, Marina Del Rey Harbor

2. Date 10/24/99      3. Observation Night 7

| Time          | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)                   |
|---------------|--------------------|--|--------------|--|
|               | Arriving           | Departing                                      | Arrival      | Departure  |
| 2048          | 2                  |  | E            | From harbor to N of flag                                 |
| 2100          |                    |  |              | Total 500 N of flag                                      |
| 2101-<br>2102 |                    |  |              | Lights out on platform                                   |
| 2118          |                    |  |              | Tugboat returns with new barge                           |
| 2120          | 2                  | 2  | S → N        | From S of flag to N of flag                              |
| 2138          | 1                  | 1  | S            | From S channel are to N of flag                          |
| 2230          |                    |  |              | 500 N of flag  |
| 2250          |                    |  | S            | Total 150 S of flag                                      |
| 2341          | 2                  |  | E            | 7 from N to S<br><br>To north                            |
| 0119          | ~ 800              | Sheriff boat at N end                          | SE           | Entire flock, N + S in air                               |
| 0121          | ~ 500              |  | SE           | Land N of flag   |
| 0123          | ~ 250              |  | SE           | To south tip   |
| 0125          |                    |  |              | Many still restless over roosts                          |
| 0149          | 2                  |  | E            | Toward marina  |
| 0224          |                    |  |              | All lights out on crane. Crane lowered. Barge lights on. |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer T. Myers, J. Allen, I. Quon  
 2. Date 10/24-10/25  
 4. Location North Jetty, Marina Del Rey  
 3. Observation Night 7

| Time          | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of   | Notes (Total number of pelicans, etc.)                                |
|---------------|--------------------|--|----------------|---|
|               | Arriving           | Departing                                      | Arrival        | Departure   |
| 0240          | 6                  |  | N              | Land N of flag w/~ 390 others already there                           |
| 0243-<br>247  |                    |  |                | Tug move around S. BW birds not disturbed. Tug between barge & BW     |
| 0343          |                    |  |                | Dim barge lights  |
| 0350          |                    |  | No Disturbance | Raise crane w/o lights. Tugboat move south w/full barge               |
| 0400          |                    |  |                | Crane lights & dredge full on   |
| 0428-<br>0435 | ① ~ 90             | 15 + 85 Tug & barge pass by                    | S              | Tug & barge pulled into harbor from N 200-300 still perched - wake up |
| 0440          |                    |  |                | Start dredging again - Land within 3 minutes N of flag                |
| 0635-<br>0637 | 7                  | Down   | E              | 60 dB ±2<br>Tugboat go into harbor                                    |
| 0640          | 3                  | Down   | E              | Gulls (~ 10) fly about, noisy   |
| 0645          | 1 + 7              | Down   | E              | Total 420 N of flag<br>20 S of flag                                   |
| 0645-<br>0655 | 9 + 11             | Down   | E              | Most awake & preening   |
| 0700-<br>0710 | 5                  | Down   | E              |   |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

|  |                                       |                       |                                  |
|--|---------------------------------------|-----------------------|----------------------------------|
| 1. Name of Observer                          | Jeff Allen, Ingrid Quon, Thomas Myers | 2. Date               | 10/24-10/25/99                   |
| 4. Location                                  | Barge                                 | 5. Time on Site       | 1800-0730                        |
| 6. Sunset                                    | 1815                                  | 7. Sunrise            | 0715                             |
| 10. General Weather Conditions/ Visibility   | High 5.0 (@2200; Low 0.8 @ 0400)      | 8. Tide               | High 5.0 (@2200; Low 0.8 @ 0400) |
| 11. Dredge Distance from Breakwater (meters) | N/A                                   | 9. Moon Phase         | Full                             |
|  |                                       | 12. Dredge Noise (dB) | N/A                              |

| Time  | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |
|-------|--------------------|--|--------------|--|
|       | Arriving           | Departing                                      | Arrival      | Departure                              |
| 1800  |                    |  |              | Arrive on site                         |
| 1824  |                    |  |              | 12 fly by barge to W                   |
| 1838  |                    |  |              | 8 fly to breakwater                    |
| 1851  |                    |  |              | 1 fly by to marina                     |
| 2012  |                    |  |              | Ø Pelicans in area                     |
| 2100  |                    |  |              | Ø Pelicans                             |
| <2200 | 2                  |  |              | 2 Pelicans on bait dock                |
| 2209  | 4                  |  | W            | Land in water adjacent coast guard     |
| 2209  |                    |  |              | 4 Pelicans on docks near sheriff       |
| 2300  |                    |  |              | Ø Pelicans on docks                    |
| 2400  | 2                  | dock   |              | 2 Pelicans on bait dock                |
| 0100  |                    |  |              | 2 Pelicans on bait dock                |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Thomas Myers  
 4. Location Barge, Marina Del Rey

2. Date 10/24 -10/25/99 3. Observation Night 7

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)                          |
|------|--------------------|--|--------------|---|
|      | Arriving           | Departing                                      | Arrival      | Departure   |
| 0200 |                    |  |              | Ø Pelicans on docks   |
| 0300 |                    |  |              | Ø Pelicans on docks   |
| 0400 |                    |  |              | Ø Pelicans on docks   |
| 0500 |                    |  | 1            | on bait dock  |
| 0630 |                    |  |              | 5 on docks in front of Sheriff's Station                        |
| 0645 |                    |  | 1            | GBHe on bait dock   |
| 0645 |                    |  | 1            | at dock E of Sheriff's dock                                     |
| 0650 |                    |  |              | Ø at large east dock (abandoned)                                |
| 0655 | 5                  |  |              | 5 arrived at dock E of Sheriff's Station                        |
| 0700 | 1                  |  |              | Landed on e dock (abandoned), displacing gull sitting on piling |
| 0705 | 1                  |  |              | Left E dock (abandoned) towards dock to W                       |
| 0710 |                    |  |              | Sunrise, tugboat just left USCG                                 |
| 0720 |                    |  |              | 1 sitting at dock at Horn Blower Cruises                        |
| 0720 |                    |  |              | 2 sitting on sport fishing boat coming into harbor              |
| 0725 |                    |  |              | 26 sitting at Del Rey Sport Fishing dock                        |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen, Tom Myers, Ingrid Quon
4. Location Barge, Marina Del Rey

I. Name of Observer      II. Name of Observer      III. Date      IV. Observation Night

#### 4. Location Barge, Marina Del Rey

/ 1. CONVERSATION WITH MARY

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Ingri Quon, Tom Myers, Jeff Allen 2. Date 10/25-10/26/99 3. Observation Night 8  
 4. Location Barge - Coast Guard Station 5. Time on Site 1810-1845, 2130-0300, 0300-0730  
 6. Sunset 1815 7. Sunrise 0720 8. Tide -0.5 @1630, 6.0 @1130 9. Moon Phase < Full out all night  
 10. General Weather Conditions/ Visibility 65-58oF, Ø% cover, < 5 mph SW  
 11. Dredge Distance from Breakwater (meters) N/A 12. Dredge Noise (dB) N/A

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)      |
|----------|--------------------|--|--------------|---|
| Arriving | Departing          | Arrival  | Departure    | BW = Breakwater                             |
| 1810     |                    |  |              | No birds on barge. 160 gulls fly W to ocean |
| 1813     |                    |  |              | *   |
| 1815     |                    |  | *            | /Fly thru channel to ocean/ BW. (west)      |
| 1820     |                    |  | *            | 4 Fly out of harbor over crew boat house    |
| 1820     |                    |  | *            | /Fly thru channel toward ocean/BW           |
| 1830     |                    |  | *            | 3 from harbor channel -- fly west           |
| 1845     |                    |  | *            | 23 Pelicans on dock near Sheriff's Station  |
| 2130     |                    |  | *            | 2 from harbor channel                       |
| 2200     |                    |  | *            | 2 Pelicans @ bait dock                      |
| 2300     |                    |  | *            | 4 Pelicans on Sheriff docks                 |
| 2400     |                    |  | *            | 1 Pelican, 1 GBHe at bait dock              |
| 0100     |                    |  | *            | 4 Pelicans on bait dock                     |
|          |                    |  | *            | Ø Pelicans, 1 GBHe on bait dock             |
|          |                    |  | *            | 2 Pelicans on bait dock                     |

I. Quon went to dredge during 1<sup>st</sup> shift at the barge to check S. BW. Tugboat arrives @ 2309, departs @ 2347  
 Black crowned night heron 3  
 Great blue heron 2 + 2  
**NONE USED BARGE**

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

Thomas Myers, Jeff Allen

2. Date 10/25-10/26/99 3. Observation Night 8

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Arrival | Departure | Direction of                                      | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|---------|-----------|---|--|
|      | Arriving           | Departing                                      |         |           |   |  |
| 0200 |                    |  |         |           | Ø Pelicans  |  |
| 0300 |                    |  |         |           | * 2 Pelicans, 1 GBHe on bait dock                 |  |
| 0355 |                    |  |         |           | * 1 Pelican N → S past barge                      |  |
| 0430 |                    |  |         |           | Nothing   |  |
| 0500 |                    |  |         |           | Still nothing                                     |  |
| 0615 |                    |  |         |           | GBH lands in tree above me                        |  |
| 0640 |                    |  |         |           | Ø Pelicans  |  |
| 0642 |                    |  |         |           | * One Pelican flies to docks at Sheriff Station   |  |
| 0648 |                    |  |         |           | * Two Pelicans fly to docks at Sheriff Station    |  |
| 0700 |                    |  |         |           | * 15 to docks from west                           |  |
| 0704 |                    |  |         |           | * 3 to docks from west                            |  |
| 0723 |                    |  |         |           | * Ø Pelicans on barge, ~15 near Sheriff's Station |  |
| 0730 |                    |  |         |           | JA leaves site                                    |  |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

|  |                                    |                       |                         |                      |                  |
|--|------------------------------------|-----------------------|-------------------------|----------------------|------------------|
| 1. Name of Observer                          | Jeff Allen, Ingrid Quon, Tom Myers | 2. Date               | 10/25-10/26/99          | 3. Observation Night | 8                |
| 4. Location                                  | North Jetty                        | 5. Time on Site       | 1800-0735               |                      |                  |
| 6. Sunset                                    | 1815                               | 7. Sunrise            | 0719                    |                      |                  |
| 10. General Weather Conditions/ Visibility   | 65-58°F, Ø% cover                  | 8. Tide               | -0.5 @ 1630, 6.0 @ 1130 | 9. Moon Phase        | ~ full all night |
| 11. Dredge Distance from Breakwater (meters) | 25m barge                          | 12. Dredge Noise (dB) | 40m dredge              | Distance/Time        |                  |

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)  |
|----------|--------------------|--|--------------|---|
| Arriving | Departing          |  | Arrival      | Departure   |
| 1800     |                    |  |              | North end ~ 450 Note - flag not present. No flag lights<br>South end ~ 200 on difficult to see N→S movement |
| 1803     | 13                 |  | E            | From marina to BW   |
| 1818     | 7                  |  | N            | From N to North Jetty   |
| 1820     | 8                  |  | N            |   |
| 1823     | 16                 |  | E            |   |
| 1829     | 3                  |  | E            | To marina   |
| 1836     | 5                  |  | N            | Land in N group   |
| 1839     | 25                 |  | S + N        | 3 from S, 22 from N   |
| 1842     | 2                  |  | E            | To marina   |
| 1846     | 28                 |  | S            | Land in north group   |
| 1847     | 18                 |  | N + S        | 14 from N & 4 from S  |
| 1849     | 2+1                |  | S            | Land in N   |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer J. Allen, I. Quon, T. Myers  
 4. Location N. Jetty, Marina Del Rey Harbor

2. Date 10/25-10/26/99 3. Observation Night 8

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)                                     |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure  |
| 1852 | 15,5               |  | N, S         | 15 from N 5 from S   |
| 1856 | 3+9+11             |  | N            | To north end   |
| 1858 | 4                  |  | S            | To north group   |
| 1900 | 8                  |  | N            | To N group   |
| 1904 | 35 + 20            |  | S            | To north group   |
| 1905 | 8                  |  | N            | To north group   |
| 1925 | ~50                |  | S            | 52 S of flag - count only / ~50 circled - landed<br>780 N of flag in north |
| 1936 | 10                 |  | S            | Land N of flag   |
| 1938 | 6                  |  | S            | To N   |
| 1950 | 15                 | 15   | S            | Move from S → N / All lights out   |
| 2015 | 1                  | 1  | N → S        | 43 S of flag   |
| 2020 | 5                  | 5  | S            | New container brought in, 5 got up, then landed again                      |
| 2119 | 1                  | 1  | N            | One moved from S to N  |
| 2123 | 1                  |  | E            | From marina to north of flag   |
| 2145 | 1                  |  | S            | Landed in N  |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer J. Allen, I. Quon, T. Myers  
 4. Location N. Jetty, Marina Del Rey Harbor

2. Date 10/25-10/26/99 3. Observation Night 8

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater                             | Direction of           | Notes (Total number of pelicans, etc.)   |
|------|--------------------|--|------------------------|--|
|      | Arriving           | Departing  | Arrival                | Departure  |
| 2225 | 1                  |  | E                      | Fly in from harbor. Land N of flag   |
| 2400 |                    |  |                        | Crew switch  |
| 0135 |                    |  |                        | Crane/dredge inactive = swing crane from S to n w/full lights - no bird disturbance. |
| 0144 | 3 + 2              | 3 + 2  | Possibly dredge lights | N  |
| 0144 |                    | 1 + 1  | Possibly dredge lights | E  |
| 0153 |                    |  |                        | Flew from S to N of flag   |
| 0225 |                    |  |                        | Lights off on crane, others dimmed   |
| 0243 | 1                  | Unknown  | E                      | Lights gradually get brighter to full bright @ 0225                                  |
| 0250 |                    |  |                        | Fly to harbor  |
| 0255 |                    |  |                        | Dim lights   |
| 0312 | 210 ↘ — 210        | Started up dredge & lights & moved barge                                   | N                      | Swing crane over barge w/o lights  |
| 0400 | 1 ↘ — 1            | Empty barge being moved into position possibly from boat going by to the N | N ↘ — N                | Flew N & landed N of flag  |
| 0500 | 1 ↘ — 1            |  | N ↘ — N                | Flew in a circle N of flag & landed  |
| 0530 |                    |  |                        | Flew in a circle & landed both in N area   |
| 600  | 2 ↘ — 2            | Another boat going by (possibly too much noise)                            | N ↘ — N                | Lights on but crane/dredge inactive; almost at south tip of BW                       |
|      |                    |  |                        | Flew in a circle and landed N of flag  |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer T. Myers, I. Quon, J. Allen  
 2. Date 10/25 -10/26/99  
 4. Location N. Jetty, Marina Del Rey Harbor  
 3. Observation Night 8

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)                |
|------|--------------------|--|--------------|---|
|      | Arriving           | Departing                                      | Arrival      | Departure   |
| 0631 | 1 + 1              | Unknown  | E            | Fly towards harbor/totals: 50 N of flag, 50 S of flag |
| 0636 | 1                  | Unknown  | E            | Flying to harbor                                      |
| 0639 | 2                  | Unknown  | E            | Flying to harbor                                      |
| 0640 |                    |  |              | Tugboat going into harbor                             |
| 0642 | 1 + 2              | Unknown  | E            | Fly into harbor                                       |
| 0642 | 10                 | Unknown  | 1 NE<br>9 N  | Towards north beaches                                 |
| 0649 | 1                  | Unknown  | N            | Towards north beaches                                 |
| 0649 | 1                  | Unknown  | E            | Towards harbor  |
| 0650 | 6                  | Unknown  | E            | Towards harbor  |
| 0651 | 3                  | Unknown  | N            | Towards north beaches                                 |
| 0653 | 1                  | Unknown  | NE           | Towards beach   |
| 0653 | 1                  | Unknown  | E            | Toward harbor   |
| 0653 | 3                  | Unknown  | S            | Towards south jetty                                   |
| 0655 | 2 + 1              | Unknown  | E            | Towards harbor  |
| 0655 | 1                  | Unknown  | NE           | Towards beach   |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer T. Myers, I. Quon, J. Allen  
 4. Location N. Jetty, Marina Del Rey Harbor

2. Date 10/25-10/26/99 3. Observation Night 8

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)              |
|----------|--------------------|--|--------------|---|
| Arriving | Departing          |  | Arrival      | Departure   |
| 0657     | 3+11               | unknown  | E            | Into harbor   |
| 0700     | 1                  | unknown  | E            | Into harbor   |
| 0700     | 3+2+3              | unknown  | NE           | Towards beach                                       |
| 0701     | 3+1+1              | unknown  | E            | Towards harbor                                      |
| 0702     | 1                  | unknown  | E            | Towards harbor                                      |
| 0702     | 2                  | unknown  | NE           | Towards beach                                       |
| 0705     | 2                  | unknown  | NE           | Towards beach                                       |
| 0705     | 1                  | unknown  | S            | Toward south jetty                                  |
| 0705     | 4                  | unknown  | N            | Toward north beaches                                |
| 0706     | 2                  | unknown  | E            | Towards harbor                                      |
| 0707     | 1+6+1              | unknown  | W            | Onto north BW                                       |
| 0709     | 2                  | unknown  | NE           | Towards beaches                                     |
| 709      | 1                  | unknown  | E            | Towards harbor w/ brief landing in water in channel |
| 712      | 2                  | unknown  | S            | Towards south beaches                               |
| 712      | 1 + 2              | unknown  | E            | Into harbor   |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer T. Myers, I. Quon, J. Allen  
 4. Location N. Jetty, Marina Del Rey Harbor

2. Date 10/25-10/26/99 3. Observation Night 8

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)                     |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure  |
| 0715 | 3                  | Unknown  |              |  |
| 0716 | 6                  | Unknown  | S            | Into/towards south beaches from S. BW                      |
| 0718 | 1                  | Unknown  | E            | Into south channel from S. BW                              |
| 0719 |                    |  |              | Sunrise at BW  |
| 0723 | 1                  | Unknown  | E            | Into harbor  |
| 0723 | 6                  | Unknown  | NE           | Towards beaches  |
| 0725 |                    |  |              | 1 landed on sign in front of me                            |
| 0726 | 3                  | Unknown  | NE           | Towards beaches  |
| 0728 | 2                  | Unknown  | SW           | Flew in circles, landed in water, came back to N. BW       |
| 0729 | 2                  | Unknown  | NE           | Towards beaches  |
| 0730 | 2                  | Unknown  | SW           | Coming into N. BW from beach                               |
| 0731 | 1                  | Unknown  | E            | Into harbor  |
| 0733 |                    |  |              | Tugboat "Kimberly" arrives/ shift change                   |
| 0733 | 1                  |  | E            | Into harbor  |
| 0733 | 2                  |  | NE           | Towards beaches/ Totals left S 300 N of flag, 20 S of flag |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Melissa Mersy, Ingrid Quon, Jeff Allen 2. Date 10/26-10/27/99 3. Observation Night 9  
 4. Location Barge - Coast Guard Station 5. Time on Site 1815-2300 MM & IQ, 2200-0300 IQ, 0300-0730 JA  
 6. Sunset ~1815 7. Sunrise ~0710 8. Tide -0.6 @ 1800, 4.3 @ 1200 9. Moon Phase ¾ all night  
 10. General Weather Conditions/ Visibility 65°-60°F, Ø%--100% cover, 0-5 mph  
 11. Dredge Distance from Breakwater (meters) N/A 12. Dredge Noise (dB) N/A

| Time            | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Arriving | Departing | Arrival | Departure | Direction of   | Notes (Total number of pelicans, etc.) |
|-----------------|--------------------|--|----------|-----------|---------|-----------|--|--|
| Melissa<br>1815 | 2                  |  |          |           | W       |           | *=Pelican data from area<br>From Sheriff dock 3 gull on barge<br>8 fly NW                                    |  |
| 1825            | 1                  |  |          |           | W       |           | * Land on Sheriff dock<br>4 + 5 Pelicans on dock @ Sheriff's   |  |
| 1835            | 2 + 1              | 1  |          |           | W       | N         | * Land on Sheriff dock<br>Depart from Sheriff dock   |  |
| 2000            |                    |  |          |           |         |           | * 10 Pelicans on dock @ Sheriffs   |  |
| 2100            |                    |  |          |           |         |           | * 9 Pelicans on dock @ Sheriffs  |  |
| 2200            |                    |  |          |           |         |           | * 9 Pelicans on dock @ Sheriffs<br>None on bait dock = GBHeron, gulls  |  |
| 2300            |                    |  |          |           |         |           | * 9 Pelicans on dock @ Sheriffs<br>None on bait dock = GBHeron, gulls  |  |
| 2400            |                    |  |          |           |         |           | * 9 Pelicans on dock @ Sheriffs<br>None on bait dock = GBHeron, gulls  |  |
| 0100            |                    |  |          |           |         |           | * 9 Pelicans on dock @ Sheriffs<br>None on bait dock = GBHeron, gulls  |  |
| 0200            |                    |  |          |           |         |           | * 10 Pelicans on dock @ Sheriffs<br>One Pelican on bait dock   |  |
| 0316            |                    |  |          |           |         |           | 2 on docks, 7 in water near docks<br>1 on bait dock  |  |
| 0410            |                    |  |          |           |         |           | 1 fly-by from marina to W  |  |
|                 |                    | Tugboat crew change 2330-1200                  |          |           |         |           | Great Blue Herons <del>JH</del> II<br>Black crowned night heron 2<br>White crowned sparrow <del>WH</del> III |  |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer J. Allen  
 4. Location Barge - Coast Guard

2. Date 10-25/10-26 3. Observation Night 9

Coast Guard, Marina Del Rey Harbor

2. Date 10-25/10-26 3. Observation Night 9

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

- |  |                                     |  |             |                       |               |
|--|-------------------------------------|--|-------------|-----------------------|---------------|
| 1. Name of Observer                        | J. Allen, Melissa Mersy, Ingri Quon | 2. Date                                      | 10-26/10-27 | 3. Observation Night  | 9             |
| 4. Location                                | Marina Del Rey - N Jetty            | 5. Time on Site                              | 1840 - 0715 |                       |               |
| 6. Sunset                                  | 1815                                | 7. Sunrise                                   | ~0710       | 8. Tide               | 9. Moon Phase |
| 10. General Weather Conditions/ Visibility | 65-60°F, Ø-100% cover               | 11. Dredge Distance from Breakwater (meters) | ~40 m       | 12. Dredge Noise (dB) | <60dB/>300m   |

Barge ~ 25 m

Reason for Flushing or  
Avoidance of Breakwater

| Time     | Number of Pelicans | Reason for Flushing or<br>Avoidance of Breakwater | Direction of           | Notes (Total number of pelicans, etc.) |   |
|----------|--------------------|---|------------------------|--|---|
| Arriving | Departing          |   | Arrival                | Departure                              |   |
| 1840     | —                  | —   | In air when I arrived  |  | ~600 over north end - flocking                            |
| 1845     | 200                | 800   | Scoop dropped on barge | S                                      | ~ scared off, ½ fly to north from south - others fly to O |
| 1848     | 200                |   |                        | S                                      | Land in north from S                                      |
| 1852     | —                  | —   |                        |  | All disturbed pelicans settled now                        |
| 1858     | 300+               |   |                        | SE                                     | All circle over W, land in N                              |
| 1913     | 15                 |   |                        | N                                      | Land N of flag  |
| 1934     | 3                  | 3   | Unknown                | N                                      | From N, circle, back to N                                 |
| 1939     | 2                  | Unknown   |                        | N                                      | From N, fly to N  |
| 1950     | 2+6                |   |                        | N                                      | Landed in N   |
| 1953     | ~400               | None observed                                     |                        | W                                      | From end opposite of Viking                               |
| 1955     | ~400               |   |                        | W                                      | Return from west, land in N                               |
| 2010     | 4                  | 4   | Loud dredge noise      | N                                      | Stir above N  |

Appendix N - 117

Note: Flag lights off - Pelicans N and S of flag in one continued group  
 - Dredge @ S end of BW, no pelicans south of dredge

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer J. Allen, M. Mersy, I. Quon  
 4. Location N. Jetty, Marina Del Rey Harbor

2. Date 10/26-10/27/99 3. Observation Night 9

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Arrival                          | Departure | Direction of | Notes (Total number of pelicans, etc.)          |
|------|--------------------|--|----------------------------------|-----------|--------------|---|
|      | Arriving           | Departing                                      |                                  |           |              |   |
| 2024 | 7                  | 7  | None observed                    | N         | N            | Fly to S, then back to N                        |
| 2037 | 3                  | 3  | None observed                    | S         | S            | 3 circle, land N                                |
| 2055 | 4                  |  |                                  | S         |              | Flying N past Viking lights                     |
| 2100 | 1                  |  |                                  | E         |              | To N end  |
| 2103 | 4                  |  |                                  | S         |              | Land in N                                       |
| 2108 | 4                  | 2  | Unknown                          | S         | S            | From N, 4 from S, land in N                     |
| 2121 | 1                  | Unknown  |                                  | S         |              | Flying high over BW                             |
| 2137 | 9                  |  | W                                |           |              | Land in N                                       |
| 2141 | 3                  | Unknown  |                                  | E         |              | Low, toward marina                              |
| 2145 | 7                  |  |                                  | N         |              | Flew to S, 3 come to N                          |
| 2157 | 1                  |  | S                                |           |              | Landed in N                                     |
| 2207 | 1                  |  |                                  | E         |              | To marina                                       |
| 2225 | 1                  | Unknown  |                                  | S         |              | Flying low near BW                              |
| 2247 | 12                 | 12   | A boat entered the harbor from N | N         | N            | Flew above BW and landed once the boat was gone |
| 2258 | 1                  | Unknown  | S                                |           |              | Landed N of flagpole near other pelicans        |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer J. Allen, M. Mersey, I. Quon  
 2. Date 10/26-10/27/99 3. Observation Night 9  
 4. Location N. Jetty, Marina Del Rey Harbor

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)                      |
|------|--------------------|--|--------------|---|
|      | Arriving           | Departing                                      | Arrival      | Departure   |
| 2315 | 2                  | Unknown  | S            | S end of BW near dredge                                     |
| 2322 | 2                  | Unknown  | N            | Flew briefly over BW landed N of flagpole                   |
| 2334 | 1                  | Unknown  | E            | To marina   |
| 2340 |                    |  |              | 8 gulls flew S  |
| 2344 |                    |  |              | 2 bright lights on crane extremely bright, stopped dredging |
| 2349 | 1                  | Small boat entered harbor from N               | S            |   |
| 0004 | 1                  | Unknown  | E            | Toward marina   |
| 0011 |                    |  |              | All lts on dredge off- immediately 3 lights back on         |
| 0022 |                    |  |              | 2 lts on crane on   |
| 0030 |                    |  |              | Dredge completely lit up                                    |
| 0049 | 1                  | Unknown  | E            | Toward marina   |
| 0110 |                    |  |              | All lights on dredge off - immediately lts on deck dim      |
| 0116 | 4                  | Noise from dredge starting                     | S            | N   |
| 0124 | 1                  | Unknown  | E            | From marina   |
| 0139 | 2                  |  | S            | Landed N of flag pole                                       |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer J. Allen, M. Mersy, I. Quon  
 4. Location N. Jetty, Marina Del Rey Harbor

2. Date 10/26-10/27/99 3. Observation Night 9

| Time          | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of           | Notes (Total number of pelicans, etc.)                         |
|---------------|--------------------|--|------------------------|--|
| Arriving      | Departing          |  | Arrival      Departure |  |
| 0205          |                    |  |                        | Tugboat & barge entered harbor from the N along the BW         |
| 0210          | 1                  | Tugboat & barge                                | E                      | Toward marina  |
| 0212          | 5                  | Tugboat & barge                                | N      N               | Circled over BW & landed                                       |
| 0214          |                    |  |                        | Tugboat and barge stop at the dredge                           |
| 0216          | 2                  | 2  | N      N               | Circled over BW and landed                                     |
| 0221          | 4                  | 4  | N      N               | Circled over BW and landed                                     |
| 0225          | 2                  | Tugboat  | N                      | Tugboat going N along BW                                       |
| 0227          | 7                  | Tugboat  | N      N               | 7 Pelicans & 30 gulls flying around tugboat @ N end of BW      |
| 0237          | 1                  | Unknown  | SE                     | Toward marina  |
| 0247          |                    |  |                        | 25 gulls circled around tugboat - noisy W of N. Jetty/ E of BW |
| 0249          | 4                  | 4  | Tugboat                | Circled around and landed                                      |
| 0251          | 1                  | Tugboat  | N                      | Flew N   |
| Ingri<br>0315 | 1                  |  | N                      | Land N of flag   |
| 0340          | 1?                 |  | S?                     | 1 pelican fly around dredge                                    |
| 0344          | 3                  |  | S                      | Possibly from S of flag, land N of flag                        |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer J. Allen, M. Mersy, I. Quon

2. Date 10/26-10/27/99 3. Observation Night 9

4. Location N. Jetty, Marina Del Rey Harbor

| Time      | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Arrival          | Departure | Direction of | Notes (Total number of pelicans, etc.)   |
|-----------|--------------------|--|------------------|-----------|--------------|--|
|           | Arriving           | Departing                                      |                  |           |              |  |
| 0350      | 1                  | Unknown  |                  | E         |              | Fly from N of flag into harbor   |
| 0352      | 1                  | Unknown  |                  | E         |              | Fly from N of flag into harbor   |
| 0400      | 4                  | Unknown  |                  | S         |              | From N of flag   |
| 0413      | 1                  |  | E                |           |              | From harbor, land N of flag  |
| 0425      |                    |  |                  |           |              | 1 Pelican from harbor to N coast   |
| 0426      | 1                  |  | E                |           |              | Land N of flag   |
| 0430      | 1                  |  | E                |           |              | Circle around, land in water several times between end of jetties then                     |
| 0430-0436 |                    | Dredge moved between N & middle jetty          |                  |           |              | 1 and N of flag<br>Stopped dredging - moving dredge N. Overall birds not disturbed - sleep |
| 0437      | 2                  | Move dredge closer                             |                  | N→S       | Circle about | Circle N of flag   |
| 0450      |                    |  | Pelican sleeping |           |              | Start dredging across from flag. Moved slowly into place w/full lights                     |
| 0453      | 1                  |  | E                |           |              | Land N of flag/ 6 western Grebes near dredge   |
| 0505      |                    |  |                  |           |              | Land dredge quietly on dredge- birds ok  |
| 0515      |                    |  |                  |           |              | Crane lowered, lights on   |
| 0550      |                    |  |                  |           |              | Raise crane  |
|           |                    |  |                  |           |              | 0506 60-64 db @ 100mm=distance to pelicans   |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer J. Allen, M. Mersy, I. Quon  
4. Location N. Jetty, Marina Del Rey Harbor

2. Date 10/26-10/27      3. Observation Night 9

#### 4. Location N. Jetty, Marina Del Rey Harbor

| Time      | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Arrival | Departure | Direction of  | Notes (Total number of pelicans, etc.) |
|-----------|--------------------|--|---------|-----------|---|--|
| Arriving  | Departing          |  | Arrival | Departure |   |  |
| 0553      | 1                  | Unknown  |         | E         | Into harbor   |  |
| 0604      | 12                 | Start up crane noise briefly (<1 min)          |         | S         | Fly toward S. BW                                    |  |
| 0610-0630 |                    |  |         |           | Dim lights → full                                   |  |
| 0631      | 1                  | Unknown (lights?)                              |         | E         | From N. BW fly into harbor                          |  |
| 0640      | 8                  | Unknown (lights?)                              |         | N         | Fly N up coast                                      |  |
| 0645      | 12                 | 5+12   |         | N E-N     | 5 fly N up coast<br>12 fly about N. BW              |  |
| 0650-0700 |                    | 7+6  |         | —         | —   |  |
| 0650-0700 |                    | 111+17+8<br>20+                                |         | E         | Circle around N. BW & land again<br>Fly into harbor |  |
| 0650-0700 |                    | 111111   |         | N         | Fly up coast / 40 gulls circle about N. BW          |  |
| 0704      | 21                 |  |         | S         | Fly S to ocean/ wind pickup ~4 mph                  |  |
| 0710      |                    |  |         |           | N BW 480<br>Total S BW 10 +(view blocked)           |  |

Appendix N - 122

Dawn – Great Blue Heron hunt @ end of middle jetty

APR 18 2000

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer M. Mersy, I Quon, J. Allen  
 2. Date 10/27-10/28  
 3. Observation Night 10  
 4. Location Marina Del Rey N. Jetty  
 5. Time on Site 1800-2200(MM)  
 US FWS FIELD OFFICE, CA  
 CABUSBAD FIELD OFFICE, CA  
 6. Sunset 1815 7. Sunrise ~0715  
 8. Tide Low  
 9. Moon Phase High 2415  
 10. General Weather Conditions/ Visibility 63°-58°F, 100%-80% cover, 5-0 mph  
 11. Dredge Distance from Breakwater (meters) ~70  
 12. Dredge Noise (dB) Distance/Time Barge between dredge & BW

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)                  |
|----------|--------------------|--|--------------|---|
| Arriving | Departing          | Arrival  | Departure    |   |
| 1800     |                    |  |              | 50 Pelicans S of flagpole<br>400 Pelicans N of flagpole |
| 1816     | 7                  | Unknown  | N            |   |
| 1818     |                    |  |              | 7 Pelicans flew NW from marina                          |
| 1823     | 3                  |  | N            |   |
| 1825     | 1+9                |  | E            | From marina   |
| 1826     | 11                 |  | S            | Landed N of flagpole                                    |
| 1829     | 7                  |  | N            | Landed N of flagpole                                    |
| 1833     | 4                  |  | W            | Landed N of flagpole                                    |
| 1834     | 6                  | 6 Unknown                                      | N            | Circled over BW and landed                              |
| 1836     | 2                  |  | N            | Landed N of flagpole                                    |
| 1838     | 5                  | 5 Unknown                                      | N            | Circled over BW and landed                              |
| 1838     | 2                  |  | E            | From marina   |

-Dredge just S of flagpole

-Camera crew @ E end of N. Jetty w/ bright lights

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer M. Mersy, I. Quon, J. Allen  
 4. Location N. Jetty, Marina Del Rey Harbor

2. Date 10/27-10/28      3. Observation Night 10

| Time      | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of                                |           | Notes (Total number of pelicans, etc.)   |
|-----------|--------------------|--|---|-----------|--|
|           |                    |  | Arrival                                     | Departure |  |
| 1844      | 9+6                |  | N   |           | Landed N of flagpole   |
| 1848      | 1                  |  | E   |           | From marina  |
| 1850      | 6                  |  | NW  |           | Landed N of flagpole   |
| 1850      | 4                  | 4  | Unknown                                     | S         | Flew from S of flagpole to N of flagpole   |
| 1852      | 4                  |  | E   |           | From marina  |
| Appendix  | 1+1                |  | E   |           | From marina  |
| 1900      | 2                  |  | N   |           | Land w/ other pelicans   |
| 1904      | 4                  |  | N   |           | Land w/other pelicans  |
| 1912      | 4                  | 4  | Unknown                                     | N         | Flew up and landed   |
| 1916      | 2                  | 2  | Unknown                                     | S         | Flew further N on BW   |
| 1919      | 2                  |  | N   |           | Landed near flagpole   |
| 1925      | 2                  |  | N   |           | Landed w/other pelicans  |
| 1931      | 1                  |  |   | E         | Toward marina  |
| 1933      | 15                 | 15   | Bright lights from camera crew on the beach |           | Circled over BW and landed   |
| 1933-1941 |                    |  |   |           | Bright lights from camera crew on beach lit up BW just W of N. Jetty. Large congregation of pelicans on BW |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer M. Mersy, I. Quon, J. Allen

2. Date 10/27-10/18/99

3. Observation Night

10

4. Location N. Jetty, Marina Del Rey Harbor

| Time       | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Arriving | Departing | Arrival | Departure | Direction of | Notes (Total number of pelicans, etc.)  |
|------------|--------------------|--|----------|-----------|---------|-----------|--------------|---|
| 1937       | 100                | Bright lights from the beach film crew         | 100      | 200       | S       | S         |              | ~100 Pelicans left flew S<br>~100 circled for a few minutes and landed                    |
| 1943       |                    |  |          |           |         |           |              | Pelicans congregated at N end of BW and land on BW near surface of water and on W side BW |
| 2017       | 15+3+4             | Unknown  |          |           |         |           |              | Pelicans on W side of BW fly S. 2 bright lights on the beach                              |
| 2029       | 1                  |  |          |           | N       |           |              | Landed on BW – W of jetty   |
| 2039       | 1                  |  |          |           | N       |           |              | Landed on W side of BW  |
| Appendix N | 1                  |  |          |           | N       |           |              | Landed just S of flagpole W side of BW  |
| 2054       | 1                  | Unknown  | 1        | 1         | S       | N         |              | Flew from S of flagpole to N of flagpole  |
| 2100       |                    |  |          |           |         |           |              | Film crew w/bright lights left the E end of the jetty                                     |
| 2120       | 1                  | Unknown  |          |           |         | S         |              | Flew S on W side of BW  |
| 2137       | 1                  | Unknown  | 1        | 1         | N       | S         |              | Flew S and landed   |
| 2156       | 1                  | Unknown  | 1        | 1         | N       | N         |              | Circled above BW & landed   |
| 2159       | 1                  |  |          |           | E       |           |              | From marina   |
| 2211 (IQ)  | 1                  | Unknown  | 1        | 1         | N       | S         |              | Flew S & landed   |
| 2220       |                    |  |          |           |         |           |              | ~170 N of flag  |
| 2238       | 2                  |  |          |           | NE      |           |              | Totals < 50 S of flag Dredging  |
|            |                    |  |          |           |         |           |              | Land N of flag  |
|            |                    |  |          |           |         |           |              | Windy from NW until ≤2200   |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer M, Mersy, I. Quon, J. Allen  
 4. Location N. Jetty, Marina Del Rey Harbor

2. Date 10/27-10/28 3. Observation Night 10

| Time  | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)                       |
|-------|--------------------|--|--------------|--|
|       | Arriving           | Departing                                      | Arrival      | Departure  |
| 2250  | 1                  |  | NE           | Land N of flag   |
| 2300  | 4                  | Unknown, dredge a bit squeaky                  | E            | Into harbor from N of flag                                   |
| 2320  | 1                  | Unknown, dredge a bit squeaky                  | E            | Into harbor from N of flag                                   |
| 2325  |                    |  |              | Swing crane over barge full lights shine N – Birds ok        |
| 2327- |                    |  |              | Move to different area of N BW some land on ocean side of BW |
| 2330  | 2+1+14             | 2+1+14 Dredge Lights?                          | Move         |  |
| 23342 | 15?                | 15 Dredge Lights?                              | S            | From N of flag, fly S possibly to S BW                       |
| 23351 | 8+10               | Dredge Lights?                                 | N            | From N of flag   |
| 2355  |                    |  |              | Tugboat return – birds ok                                    |
| 2415  |                    |  |              | Start-up crane (swing)                                       |
| 2416  | 2                  |  | NE           | Land N of flag   |
| 2425  |                    |  |              | Remove barge   |
| 2430  | 3                  | 3 Dredge activity                              | Move         | Fly low N of flag and land                                   |
| 2440  |                    |  |              | Turn crane NE  |
| 0100  | 4+3+9              | Barge & tug nearby                             | 1 N, SE      | Barge brought in<br>=60 N of Flag                            |
| 0200  |                    |  |              | Total <50 S of Flag  |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer M. Mersy, I. Quon, J. Allen  
4. Location N. Jetty

2. Date 10/27-10/28 3. Observation Night 10

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

|  |                                       |                       |             |                      |                       |
|--|---------------------------------------|-----------------------|-------------|----------------------|-----------------------|
| 1. Name of Observer                          | Ingri Quon, Jeff Allen, Melissa Mersy | 2. Date               | 10/27-10/28 | 3. Observation Night | 10                    |
| 4. Location                                  | Barge - Coast Guard                   | 5. Time on Site       | 1735-0725   |                      |                       |
| 6. Sunset                                    | ~1800                                 | 7. Sunrise            | ~0715       | 8. Tide              | Low 6:15pm High 24:15 |
| 10. General Weather Conditions/ Visibility   |                                       |                       |             | 9. Moon Phase        | 3/4 Waxing            |
| 11. Dredge Distance from Breakwater (meters) | N/A                                   | 12. Dredge Noise (dB) |             | Distance/Time        | N/A                   |

| Time       | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)   |
|------------|--------------------|--|--------------|--|
|            | Arriving           | Departing                                      | Arrival      | Departure  |
| 1735       |                    |  |              | 1 Pelican in water in front of USCGC<br>1 Western Grebe in water in front of USCGC |
| 1745       | 1                  |  | W            | No birds on barge<br>Fly & land on sheriff's dock w/18 others                      |
| 1800       | 1                  |  | S            | 1 Pelican fly from S to W (BW/ocean)<br>380 gulls fly NW over harbor               |
| Appendix N | 8                  |  | W            | Thru channel toward BW from sheriff dock   |
| 1900       |                    |  |              | 10 Pelicans on sheriff's dock  |
| 2000       |                    |  |              | 1 Pelican on bait dock<br>11 Pelicans on sheriff's dock                            |
| 2100       |                    |  |              | 3 on bait dock<br>9 on Sheriff dock  |
| 2200       |                    |  |              | 3 on bait dock<br>2 on sheriff dock  |
| 2300       |                    |  |              | 2 at bait dock<br>3 at sheriff dock  |
| 2400       |                    |  |              | 2 flew toward Sheriff dock   |
| 0100       |                    |  |              | 2 at bait dock, 4 at Sheriff   |
| 0200       |                    |  |              | 2 at bait dock,<br>4 on Sheriff dock, 1 in the water                               |

USCGC= U.S. Coast Guard Cutter

BW= breakwater

WP 123 = UTM 11 S 0366334

3759763

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer I. Quon, J. Allen, M. Marsy  
 4. Location Barge-Coast Guard

2. Date 10/27-10/28      3. Observation Night 10

| Time | Number of Pelicans |          |           | Direction of                                      |         | Notes (Total number of pelicans, etc.)                           |
|------|--------------------|----------|-----------|---|---------|--|
|      |                    | Arriving | Departing | Reason for Flushing or<br>Avoidance of Breakwater | Arrival |  |
| 0300 |                    |          |           |   |         | 2 on bait dock<br>5 on sheriff dock                              |
| 0400 |                    |          |           |   |         | 2 on bait dock<br>5 on sheriff dock                              |
| 0500 |                    |          |           |   |         | 2 on bait dock<br>4 on sheriff dock                              |
| 0600 |                    |          |           |   |         | 5 on sheriff dock  |
| 0641 |                    |          |           |   |         | 4 Pelicans flew E thru channel                                   |
| 0646 |                    |          |           |   |         | 2 Pelicans flew E thru channel                                   |
| 0652 | 1                  |          |           |   | W       | Flew toward BW   |
| 0701 |                    |          |           |   |         | 3 Pelicans flew E thru channel                                   |
| 0704 |                    |          |           |   |         | 2 Pelicans flew E thru channel                                   |
| 0708 | 4                  | 4        |           |   |         | 4 Pelicans left sheriff dock and landed in water by<br>bait dock |
| 0711 |                    | 1        |           |   | W       | 7 on sheriff dock<br>1 left and flew toward BW                   |
| 0719 |                    |          |           |   |         | 4 Pelicans flew E thru channel                                   |
| 0723 |                    |          |           |   |         | 5 Pelicans flew E thru channel                                   |
| 0725 |                    |          |           |   |         | No birds on barge  |

APR 18 2000

US FWS  
CARLSBAD FIELD OFFICE, CA

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen  
 2. Date 11/10-11/11  
 4. Location N. Jetty  
 5. Time on Site 1700-2345 2345-0700  
 6. Sunset 1700 7. Sunrise 0630 8. Tide 0.12 low @1636/3.71 high @2305 9. Moon Phase ~ New moon  
 10. General Weather Conditions/ Visibility Clear, 59°F; 5-7 mph/E @ 2400 / Clear, 54°F,<2 mph/NE  
 11. Dredge Distance from Breakwater (meters) ~60 12. Dredge Noise (dB) Distance/Time Average dB+2/ Range 60/0045

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of            | Notes (Total number of pelicans, etc.)   |
|----------|--------------------|--|-------------------------|--|
| Arriving | Departing          |  | Arrival                 | Departure  |
| 1700     | *                  |  |                         | Sunset   |
| 1715     | —                  | —  |                         | Arrive at end of Jetty   |
| 1725     |                    |  |                         | ~650 N of flag At least 5 flying above area at<br>~200 S of flag any given time<br>3 land in south, 4 in north +3 from E<br>7 from S |
| 1728     | 7+12+3             |  | S,N,E                   |  |
| 1730     | 27                 | 27   | -No dredge activity     | S N Move from S to N   |
| 1731     | 20+10              | 20   | Dredge begins operation | N 20 move S→N<br>10 land in N after circling south   |
| 1733     | 17+7               | 17+7   | Scooping and dumping    | S N Move N   |
| 1738     | 24+10              | 24   | Scooping and dumping    | N 24 S Land in N, some move  |
| 1742     | 10+5               | 10   | Scooping and dumping    | N S,N 10 move S→N 5 from N   |
| 1747     | 6                  | 6  | Scooping and dumping    | N S Move S→N   |
| 1752     | 25                 |  |                         | W To N   |
| 1755     | 80                 | 80   |                         | N N Stir, circle, then land  |

Appendix N - 130  
 \*Upon arrival, → lots of activity, birds arriving mainly from N and S  
 → Dredge at idle – No Activity  
 → Tide VERY low

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen  
 4. Location N. Jetty, Marina Del Rey Harbor

2. Date 11/10-11/11      3. Observation Night 11

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of |           | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|--------------|-----------|--|
|      |                    |  | Arrival      | Departure |  |
| 1805 | 150                | Crane under normal operations                  | S            | S         | 20 from W, ~130 from N move to S       |
| 1808 | —                  | —  |              |           | Birds still settling                   |
| 1812 | 55                 | Bad crane squeaking                            | S            | S         | From S to N - back to S                |
| 1816 | 30                 | Bad crane squeaking                            | S            | N         | Move S→N                               |
| 1828 | 5                  | Normal operation                               | N            | N         | 5 circle N, land again                 |
| 1840 | 5                  |  | N            |           | Land in N                              |
| 1910 | 5                  | Normal operation                               | N            | N         | Circle north, land                     |
| 1948 | 3                  |  | N            |           | Land in N                              |
| 1956 | 3                  | No obvious cause                               | N            |           | Move from N to S                       |
| 2022 | 2                  | No obvious cause                               | N            |           | Move N to S                            |
| 2045 | 4                  | No obvious cause                               | N            |           | Move N to S                            |
| 2031 | 1                  |  | E            |           | Land in N                              |
| 2139 | 50                 | Towboat Light                                  | N            | N         | Boat close to BW, N end                |
| 2155 | 1                  | None known                                     | E            |           | Toward marina from N                   |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen, Tom Myers  
 4. Location N. Jetty, Marina Del Rey Harbor

2. Date 11/10-11/11      3. Observation Night 11

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)                                 |
|----------|--------------------|--|--------------|--|
| Arriving | Departing          |  | Arrival      | Departure  |
| 2217     | 2                  | Unk.   |              | E<br>Left N to N   |
| 2224     | 31                 | Barge moving operation                         | S            | N<br>Crane stops - container moved away                                |
| 2255     | ~500               | Jenny and Rockport near BW from N              | S            | Fly to S   |
| 2259     | ~600               |  | S            | About 400 land in S 200 in N   |
| 2335     | 5                  | Usual operation                                | S            | N<br>Move S→N  |
| 2345     | 7                  | 7  | S            | N<br>Move S→N  |
| 2345     | 1                  |  | E            | From marina to N   |
| 2400     |                    |  |              | Shift change on dredge   |
| 0015     |                    |  |              | Dredge starts operating  |
| 0030     |                    |  | SE           | ~700 S of flag<br>~100 N of flag                                       |
| 0040     | 1                  |  |              | Fly to S   |
| 0120     |                    |  |              | Sheriff patrol car came to end of N. Jetty                             |
| 0125     | 1                  |  | E            | Fly to N   |
| 0145     | 50                 | Tugboat close to south BW                      | S            | Fly in circle ~5 minutes   |
| 0200     | ~20                | ~20  | S            | Fly in circles following tugboat and debris dredged up, then landing S |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Thomas Myers  
 2. Date 11/10-11/11  
 3. Observation Night 11  
 4. Location N. Jetty, Marina Del Rey Harbor

| Time      | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of                 | Notes (Total number of pelicans, etc.) |
|-----------|--------------------|--|------------------------------|--|
| Time      | Arriving           | Departing                                      | Arrival                      | Departure                              |
| 0305      | 1                  | None   |                              | E                                      |
| 0310      | 2                  | Possibly crane being too squeaky               | S                            | S                                      |
| 0330-0700 |                    |  |                              | Both flew in circles at south tip      |
| 0439      | 10+5               | 10+5   | Crane lights shining on S BW | S                                      |
| 0445      | 5+5                | 5+5  | Crane lights shining on S BW | S                                      |
| 0457      | 10                 | 10   | Crane lights shining on S BW | S                                      |
| 0503      | 1                  | None   | E                            | From marina to N of flag               |
| 0510      |                    |  |                              | Dredge lights dimmed/shut off          |
| 0539      | 2+1                | No obvious reason                              |                              | E                                      |
| 0545      | 1                  | No obvious reason                              |                              | E                                      |
| 0549      | 8                  | No obvious reason                              | N                            | Toward marina from N                   |
| 0551      | 1                  | No obvious reason                              | E                            | Toward marina from N                   |
| 0558      | 4                  | No obvious reason                              | E                            | Toward marina from N                   |
| 0600      | 1+2                | No obvious reason                              | E                            | Toward marina from S                   |
| 0603      | 2                  | No obvious reason                              | S N                          | N→S                                    |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

| 1. Name of Observer | Thomas Myers                    | 2. Date  | 11/10-11/11  | 3. Observation Night  | 11   |
|---------------------|---------------------------------|--|--------------|---|------|
| 4. Location         | N. Jetty, Marina Del Rey Harbor |  |              |   |      |
| Time                | Number of Pelicans              | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)                            |      |
|                     | Arriving                        | Departing                                      | Arrival      | Departure   |      |
| 0606                | 3+3                             | No obvious reason                              | E            | Toward marina from N+S  |      |
| 0608                | 1                               | No obvious reason                              | E            | Toward marina from S<br>~600 S of flag<br>~200 N of flag          |      |
| 0615                |                                 | No obvious reason                              |              |   |      |
| 0616                | 1+2+8                           | No obvious reason                              | E            | Toward marina from S  |      |
| 0618                | 1+1+2                           | No obvious reason                              | E            | Toward marina from N  |      |
| 0618                | 2                               | 2  | N            | From S→N  |      |
| 0621                | 3                               | No obvious reason                              | N            | From N to N beaches   |      |
| 0622                | 3                               | No obvious reason                              | S            | From N beaches to S BW  |      |
| 0623                | 1                               | No obvious reason                              | E            | Toward marina from N  |      |
| 0624                | 1                               | No obvious reason                              | W            | To N BW from marina   |      |
| 0630                | 2                               | No obvious reason                              | E            | Toward marina from S  |      |
| 0631                | 8                               | No obvious reason                              | E            | Into water just E of N BW   |      |
| 0639                | 20                              | No obvious reason                              | W            | Into open ocean NW of BW fishing and flying in circle             |      |
| 0645                | 10                              | 10   | N            | From N→S  |      |
| 0650                | 20                              | 20   | S            | Going up and down: area S of flag<br>~200 S of flag ~50 N of flag |      |
|                     |                                 |  |              |   | 0700 |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

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1. Name of Observer Jeff Allen, Thomas Myers
2. Date 11/11-11/12
3. Observation Night 12
4. Location North Jetty
5. Time on Site 165-2300; 2315-0700
6. Sunset 1655
7. Sunrise 0633
8. Tide Low
9. Moon Phase new moon
10. General Weather Conditions/ Visibility Clear, 5-7 mph/E; 57°F @2400
11. Dredge Distance from Breakwater (meters) 60
12. Dredge Noise (dB) Distance/Time DBo/60 range/2400

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of           | Notes (Total number of pelicans, etc.)   |
|------|--------------------|--|------------------------|--|
|      | Arriving           | Departing                                      | Arrival                | Departure  |
| 1655 |                    | Crane not operating                            |                        | 350 - North<br>300 - South<br>Sunset   |
| 1703 | 4+15               | Crane not operating                            | E/W                    | 4 from east, 15 from west, All to north  |
| 1710 | 5+3                | Crane not operating                            | N/S                    | S from N, 3 from S   |
| 1715 | 5                  | Crane not operating                            | E                      | Land in west / 4 also swimming just off N Jetty                                    |
| 1718 | 5                  | Crane not operating                            | W                      | Land in N / 10 fishing in channel  |
| 1722 | 12                 | Crane not operating                            | N                      | Land S of flag pole / Now 14 fishing in channel                                    |
| 1726 | 28                 | Crane not operating                            | N                      | Move N→S   |
| 1730 | 30                 |  | N                      | Land near flag   |
| 1733 | 3+8                |  | E/N                    | 3 from E, 8 from N   |
| 1738 | 8+6                |  | S/N                    | 8 from S, 6 from N All land near pole  |
| 1806 | —                  | —  | Crane still not moving | Highly infrequent movement. All calm   |
| 1810 | 160                | 160  | Jenny VERY close to BW | Move N from S after Jenny scares them<br>Most land N of flag after several minutes |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen, Thomas Myers  
 4. Location North Jetty

2. Date 11/11-11/12    3. Observation Night 12

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of                       | Notes (Total number of pelicans, etc.)    |
|------|--------------------|--|------------------------------------|---|
|      | Arriving           | Departing                                      | Arrival                            | Departure                                 |
| 1822 | 4                  | 4  | Jenny passes again                 | \$ N More move to N                       |
| 1830 | 8                  | 8  | Crane begins operation             | \$ N More move to N                       |
| 1834 | 10                 | 10   | Crane Squeaks                      | \$ N More move to N                       |
| 1845 |                    | 70   | Crane Squeaks                      |   |
| 1912 | —                  | —  | Crane not running                  | Jenny bringing new container in           |
| 1921 | —                  | —  |                                    | Rockport arrives – Pelicans not disturbed |
| 1925 | 7                  | 7  | Loud noises as Rockport is stopped | \$ N 7 move to N                          |
| 2004 | 1                  |  | E                                  | Lands in N                                |
| 2032 | 1                  | 1  | No obvious cause                   | N \$ Flies to south                       |
| 2048 | 1                  | 1  | No obvious cause                   | N \$ Flies to south                       |
| 2111 | 3                  | 3  | No obvious cause                   | N Circle over north, land again           |
| 2132 | 4                  | 4  | No obvious cause                   | \$ N Move N to S                          |
| 2146 | 2                  | 2  | No obvious cause                   | \$ N Move N to S                          |
| 2149 | 1                  | Unknown  |                                    | E To marina                               |
| 2157 | 1                  | Unknown  |                                    | E To marina                               |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen, Thomas Myers  
 4. Location North Jetty, Marina Del Rey Harbor

2. Date 11/11-11/12      3. Observation Night 12

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of                           |           | Notes (Total number of pelicans, etc.)                          |
|------|--------------------|--|--|-----------|---|
|      |                    |  | Arrival                                | Departure |   |
| 2205 | 1                  | 1  | Crane not operating                    | N         | S   |
| 2234 | 5                  | 5  | Crane operating                        | N         | S   |
| 2242 | 25                 | 25   | Boat at N end of BW                    | S         | N   |
| 2255 | 45                 | 45   | Crane not running                      | S         | S, N  |
|      |                    |  | Fishing boat ~10 ft from BW            |           | 30 to north, 15 land in S again                                 |
| 2309 | 8                  | 8  |  |           | Various activity, moving, circling                              |
| 2320 | 4                  | 4  | Crane begins operating                 | S         | S   |
| 2330 |                    |  |  |           | Moving in south<br>~ 500 S of flag<br>~ 300 N of flag           |
| 2344 | 1                  | 1  | Crane lights shining toward BW         | S         | S   |
| 2400 |                    |  |  |           | Moving more south<br>Tugboat came in for shift change then left |
| 0011 | 1                  | 1  | No obvious cause                       | S         | N   |
| 0017 |                    | 1  | No obvious cause                       | E         | Move N to S   |
| 0028 | 3                  | 3  | Fishing boat too close to NBW too fast | S         | N   |
| 0100 |                    |  |  |           | Toward marina<br>Move N to S<br>Crane not running               |
| 0140 | 2                  | 2  | No obvious cause                       | N         | N   |
| 0141 | 1                  | 1  | No obvious cause                       | S         | N   |
|      |                    |  |  |           | Move N to S   |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen, Thomas Myers      2. Date 11/11/12      3. Observation Night 12  
 4. Location North Jetty, Marina Del Rey Harbor

| Time     | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)                                  |
|----------|--------------------|--|--------------|---|
| Arriving | Departing          | Arrival  | Departure    |   |
| 0154     | 1                  | No obvious cause                               | E            | Toward marina from N  |
| 0215     |                    |  |              | Crane still not operating<br>Now lights off                             |
| 0248     | 1                  | No obvious cause                               | E            | Toward marina from N  |
| 0411     | 20                 | Returning fishing boat                         | N            | Disturbed by boat, fly in circles and near boat, ~50 mixed birds follow |
|          |                    |  |              | Boat into marina  |
| 0455     | —                  | —  | —            | Jenny taking out full container   |
| 0512     | 1                  | No obvious cause                               | E            | Toward marina from N  |
| 0541     | —                  | Crane still not running                        | —            | Jenny brings in new container   |
| 0544     | 1                  | No obvious cause                               | E            | Toward marina from N  |
| 0547     | —                  | Crane now operating                            | —            | Jenny going into marina for shift change                                |
| 0548     | 1                  | No obvious cause                               | SE           | Toward S beaches from N   |
| 0549     | 4                  | No obvious cause                               | E            | Toward marina from N + S  |
| 0552     | 1+1                | No obvious cause                               | E            | Toward marina from N  |
| 0558     | 2+1                | No obvious cause                               | E            | Toward marina from N  |
| 0601     | 4                  | No obvious cause                               | E            | Toward marina from N  |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen, Thomas Myers  
 4. Location North Jetty, Marina Del Rey Harbor

2. Date 11/11-11/12      3. Observation Night 12

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure                              |
| 0602 | 5                  | No obvious cause                               | E            | Toward marina from N                   |
| 0603 | 1                  | No obvious cause                               | N            | Toward N beaches from S                |
| 0604 | 30                 | No obvious cause                               | S            | Moving from S to N                     |
| 0608 | 1+1                | No obvious cause                               | E            | Toward marina from N                   |
| 0614 | 2+1+1              | No obvious cause                               | E            | Toward marina from N                   |
| 0617 | 3+1                | No obvious cause                               | E            | Toward marina from N                   |
| 0617 | 20                 | No obvious cause                               | N            | Moving further N                       |
| 0620 | 30                 | No obvious cause                               | N            | Flying in circles N of BW feeding      |
| 0622 | 1                  | No obvious cause                               | E            | Toward marina from S                   |
| 0623 | 3                  | No obvious cause                               | E            | Toward marina from N                   |
| 0625 | 1+2                | No obvious cause                               | E            | Toward marina 1 from S, 2 from N       |
| 0627 | 1+1                | No obvious cause                               | E            | Toward marina from N+S                 |
| 0628 | 1                  | No obvious cause                               | E            | Toward marina from N                   |
| 0633 | 1                  | No obvious cause                               | S            | Toward marina from N; Sunrise          |
| 0637 | 30                 | No obvious cause                               | S            | Flying in circles off S BW feeding     |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeff Allen, Thomas Myers
4. Location North Jetty, Marina Del Rey Harbor

2. Date 11/11-11/12      3. Observation Night 12

8 Seaside Hwy  
N8th Jetty, Marina Del Rey Harbor

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Thomas Myers, Jeff Allen  
 2. Date 11/12-11/13  
 4. Location North Jetty  
 5. Time on Site 1645-0645  
 6. Sunset 1647  
 7. Sunrise 0622  
 8. Tide Low @ 1645; High @0117  
 9. Moon Phase  $\frac{1}{4}$  Moon  
 10. General Weather Conditions/ Visibility @1645 - clear, 2mph/W; 61°F  
 11. Dredge Distance from Breakwater (meters) 40-S Jetty  
 12. Dredge Noise (dB) Distance/Time

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)               |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure  |
| 1645 |                    |  |              | $\sim 100$ S of flag }<br>$\sim 300$ N of flag }     |
| 1647 | 1                  | No obvious cause                               | W            | Toward marina from N, Sunset                         |
| 1650 | 4+1                | 4+1<br>No obvious cause                        | W            | To N from marina                                     |
| 1653 | 2                  | No obvious cause                               | E            | To N from marina                                     |
| 1655 | 10                 | 10<br>No obvious cause                         | N            | S<br>From N to S                                     |
| 1659 | 1                  | No obvious cause                               | E            | To N from marina                                     |
| 1659 | 1                  | No obvious cause                               | W            | To channel from N                                    |
| 1702 | 1+1                | No obvious cause                               | W            | To marina from N                                     |
| 1709 | 3                  | No obvious cause                               | E            | To N from marina                                     |
| 1715 | 100                | No obvious cause                               | W            | On water right side middle BW<br>from N + S(feeding) |
| 1725 | 3                  | No obvious cause                               | W            | To marina from channel                               |
| 1736 | 3                  | No obvious cause                               | E            | To N of flag from marina                             |

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# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Thomas Myers, Jeff Allen  
 4. Location North Jetty, Marina Del Rey

2. Date 11/12-11/13      3. Observation Night 13

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater     | Direction of |           | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|--------------|-----------|--|
|      |                    |  | Arrival      | Departure |  |
| 1749 | 1                  | No apparent reason                                 | E            |           |  |
|      |                    | 2 Boats coming into marina thru N jetty            | N            | S         | From marina to N                       |
| 1754 | 2                  |  |              |           | From N to S                            |
| 1806 | 1                  | No obvious cause                                   | E            |           |  |
| 1817 | 1                  | No obvious cause                                   | E            |           |  |
|      |                    | No obvious cause                                   | E            |           | From marina to S                       |
| 1821 | 1                  |  |              |           | From marina to N                       |
| 1842 | 30                 | Small boat shining light inside BW N of flag       | N            | S         | From N to S                            |
| 1850 | 2                  | No obvious cause                                   | E            |           |  |
|      |                    | Small same boat shining light on inside BW         | N            | S         | From marina to N                       |
| 1906 | 100                |  |              |           | From N to S                            |
| 1917 | 1                  | No obvious cause                                   | E            |           |  |
|      |                    | Kimberly making small boat w/light go away from BW | N            | S         | From marina to N                       |
| 1950 | 2                  | No obvious cause                                   | E            |           |  |
|      |                    | No obvious cause                                   | W            |           | From N to marina                       |
| 2019 | 2                  | No obvious cause                                   |              |           |  |
| 2030 |                    |  |              |           | Crane not operating                    |
| 2127 | 1                  | No obvious cause                                   |              |           | From N to marina                       |
| 2130 | 100                |  | N            | S         | From N to S                            |
| 2131 | 50                 |  | N            | S         | From N to S                            |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Thomas Myers, Jeff Allen  
 4. Location North Jetty, Marina Del Rey

2. Date 11/12-11/13      3. Observation Night 13

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)                               |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure  |
| 2145 | 1                  | No apparent reason                             |              | W  |
| 2156 | 1                  | No apparent reason                             |              | W  |
| 2230 | 10                 | Kimberly towing out full container             | S            | N  |
| 2258 |                    |  |              | Other tugboat brings in empty container                              |
| 2303 |                    |  |              | Thick fog bank came in from marina then from ocean; visibility ~ 50' |
| 2310 |                    |  |              | Fog clears mostly<br>Crane begins operating again                    |
| 2333 | 1                  | No apparent reason                             | W            | Toward marina from N   |
| 2345 |                    |  |              | Thick fog bank moves in from ocean<br>Visibility ~100'               |
| 2400 |                    |  |              | Very thick fog/heavy mist; 60°F, 3-5 mph/W;<br><50' visibility       |
| 0210 | 1                  | Crane not operating                            | E            | Dense fog  |
| 0427 | 2                  |  | E            | From marina to N BW  |
| 0528 | 1                  |  | E            | To BW from marina  |
| 0538 | 1                  | No cause seen                                  | E            | To marina from BW  |
| 0604 | 4                  | No cause seen                                  | E            | From BW to Marina  |
| 0611 | 6+5                | No cause seen                                  | E            | From BW to Marina  |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Thomas Myers, Jeff Allen
4. Location North Jetty

2. Date 11/12-11/13 3. Observation Night 13

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen/ Thomas Myers 2. Date 11-13/11-14 3. Observation Night 14  
 4. Location Marina Del Rey, N. Jetty 5. Time on Site 1645-2400; 2400-0700  
 6. Sunset 1655 7. Sunrise 0625 8. Tide High @ 0307/3.5; low @ 0538/3.4 9. Moon Phase Crescent  
 10. General Weather Conditions/ Visibility Clear, 60°F, Ø wind @ 2400  
 11. Dredge Distance from Breakwater (meters) 20/60 12. Dredge Noise (dB) Distance/Time 4 db/60m/2400

| Time                          | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.)         |
|-------------------------------|--------------------|--|--------------|--|
| Arriving                      | Departing          | Arrival  | Departure    |  |
| 1655                          | —                  | —  | —            | 350 in N<br>300 in S                           |
| 1705                          | 6+4                | —  | E            | Land in N                                      |
| 1715                          | 15                 | 15 Kimberly near BW                            | S            | Move to N                                      |
| 1717                          | 4                  | 4 Unknown                                      | N            | Move back to S                                 |
| 1720-<br>- 1725<br>Appendix N | —                  | — Unknown                                      | —            | Usually 10 to 15 over BW flying back and forth |
| 1725                          | 10,13              | —  | S,N          | 10 from S, 15 from N arrive                    |
| 1726                          | 50                 | 50 Unseen disturbance                          | N            | Move to S from N end                           |
| 1727                          | 7                  | 7 Boats near BW                                | N            | Move south                                     |
| 1728                          | 8                  | 8 Boats near BW                                | N            | Move south                                     |
| 1730                          | 6                  | —  | E            | Land in N                                      |
| 1739                          | —                  | Dredge moves N                                 | N            | No disturbance                                 |
| 1752                          | 3                  | —  | N            | Land in N                                      |

# 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen/ Thomas Myers  
 2. Date 11-13/11-14  
 4. Location Marina Del Rey, N. Jetty  
 3. Observation Night 14

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of             | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|--------------------------|--|
|      | Arriving           | Departing                                      | Arrival                  | Departure                              |
| 1805 | 1                  |  | E                        | Lands N of flag                        |
| 1809 | —                  | —  |                          | Dredge moved close to N jetty          |
| 1814 | 2                  |  | E                        | Land in north                          |
| 1818 | 2                  |  | E                        | Lands in North<br>Crane not running    |
| 1851 | 3                  | 3  | 2 boats near BW          | N<br>N<br>Stir, land again             |
| 1914 | 1,3                | 3  | None obvious             | N<br>S<br>One from marina/ 3 move N→ S |
| 1948 | 2                  | 2  | Boat near BW             | N<br>N<br>Moves in north               |
| 1959 | 2                  | No activity on Viking                          | N                        | Fly to N                               |
| 2022 | —                  | —  | Crane begins operation   |  |
| 2031 | 1                  | Crane operating normally                       | E                        | Flys to marina                         |
| 2039 | 1                  | 1  | Crane operating normally | S<br>N<br>From S to N                  |
| 2116 | —                  | —  | —                        | —<br>Container swap begins             |
| 2138 | 1                  | Crane not operating                            | E                        | To marina                              |
| 2146 | 2                  | Crane not operating                            | E                        | To marina                              |
| 2153 | 2                  | 2  | Crane not operating      | —<br>Circle N, land                    |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen/ Thomas Myers  
 2. Date 11-13/11-14  
 4. Location Marina Del Rey, N. Jetty

3. Observation Night 14

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure                              |
| 2157 | 8                  | Crane moved                                    | S            | N                                      |
| 2210 | 3                  | Unknown  | N            | N                                      |
| 2214 | 6                  | Kimberly passes close to BW                    | —            | —                                      |
| 2232 | 1                  | Crane operating                                | E            | From N to E, north of Jetty            |
| 2247 | 1                  | Crane operating                                | E            | From marina                            |
| 2257 | 2                  | Crane operating                                | E            | To E, one from N end, on from S        |
| 2311 | 2                  | Crane operating                                | E            | From marina                            |
| 2312 | 4                  | Crane operating                                | S            | E, N                                   |
| 2330 | 1                  | Crane not moving                               | E            | Along S jetty to marina                |
| 2348 | —                  | Scoop brought in                               | —            | Shift change                           |
| 2350 | ~80                | ~100   | N            | N                                      |
| 2355 | 2                  | Reason unknown                                 | E            | Fly to east, north of Jetty            |
| 2400 | —                  |  |              | ~200 N of flag<br>~100 S of flag       |
| 0005 | 1                  | Unknown  | E            | To marina from N of flag               |
| 0030 | 1                  | Unknown  | E            | To marina from N of flag               |

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## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen/ Thomas Myers  
 2. Date 11-13/11-14  
 4. Location Marina Del Rey, N. Jetty  
 3. Observation Night 14

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure                              |
| 0200 |                    |  |              | Lights dimmed on Viking, crane off     |
| 0300 |                    |  |              | Lights dimmed on Viking, crane off     |
| 0400 |                    |  |              | Lights dimmed on Viking, crane off     |
| 0417 | 2                  | Unknown  | E            | From marina to N of flag               |
| 0434 | 1                  | Unknown  | W            | To marina from N of flag               |
| 0450 | 1                  | Unknown  | W            | To marina from N of flag               |
| 0503 | 1                  | Unknown  | W            | To marina from N of flag               |
| 0553 | 1                  | Unknown  | W            | To marina from N of flag               |
| 0555 | 1+2+1              | Unknown  | W            | To marina from N of flag               |
| 0556 | 3                  | Unknown  | W            | To marina from S of flag               |
| 0601 | 3                  | Unknown  | W            | To marina from S of flag               |
| 0604 | 3                  | Unknown  | W            | To marina from S of flag               |
| 0605 | 1                  | Unknown  | W            | To marina from N of flag               |
| 0607 | 6                  | Unknown  | W            | To marina from N of flag               |
| 0608 | 2+2                | Unknown  | W            | To marina 1 N of flag, 3 S of flag     |

## 1999 Marina del Rey Harbor Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen/ Thomas Myers  
 2. Date 11-13/11-14  
 4. Location Marina Del Rey, N. Jetty

3. Observation Night 14

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure                              |
| 0609 | 4                  | Unknown  |              | W To marina from N of flag             |
| 0610 | 1                  | Unknown  |              | W To marina from S of flag             |
| 0611 | 1                  | Unknown  | E            | From marina to N                       |
| 0611 | 3                  | Unknown  |              | W To marina from S                     |
| 0613 | 1                  | Unknown  |              | W To marina from N                     |
| 0614 | 2+4+1              | Unknown  |              | W To marina 2 from N and 5 from S      |
| 0615 | 4+2                | Unknown  |              | W To marina 2 from n and 4 from S      |
| 0617 | 3                  | Unknown  |              | W To marina from N                     |
| 0618 | 1                  | Unknown  |              | W To marina from N                     |
| 0620 | 1                  | Unknown  |              | W To marina from N                     |
| 0624 | 10                 | Unknown  | N            | N From N point to just north of flag   |
| 0624 | 2                  | Unknown  |              | W To marina from N; sunrise            |
| 0629 | 1                  | Unknown  |              | W To marina from N                     |
| 0632 | 2                  | Unknown  |              | W Towards south beaches                |
| 0634 | 5                  | Unknown  |              | W Towards north beaches                |

## 1999 Marina del Rey Pelican Monitoring Data Sheet

1. Name of Observer Jeffrey Allen/ Thomas Myers  
4. Location Marina Del Rey, N. Jetty

Jeffrey Allen/ Thomas Myers  
Name of Observer  
1. Name of Observer  
2. Date 11-13/11-14  
3. Observation Night 14

| Location | Marina Del Rey | N. Jetty |
|----------|----------------|----------|
|----------|----------------|----------|

THE JOURNAL OF CLIMATE

| Time | Number of Pelicans | Reason for Flushing or<br>Direction of Flight | Notes (Total number of pelicans, etc.) |
|------|--------------------|---|--|
|------|--------------------|---|--|

| Time | Number of Pelicans | Reason for Flushing or Avoidance of Breakwater | Direction of | Notes (Total number of pelicans, etc.) |
|------|--------------------|--|--------------|--|
|      | Arriving           | Departing                                      | Arrival      | Departure                              |
| 0635 | 2                  | Unknown  | W            | Toward marina from N of flag           |
| 0638 |                    |  |              | Kimberly taking out full container     |
| 0644 | 1                  | Unknown  | N            | S From N to S                          |
| 0645 | 1                  | Unknown  | E            | From marina to N                       |
| 0645 | 2                  | Unknown  | W            | From N to North beaches                |
| 0651 | 1                  | Unknown  | E            | From marina from N                     |
| 0656 | 1                  | Unknown  | W            | To marina from S                       |
| 0656 | 2                  | Unknown  | W            | To water N of N jetty                  |
| 0657 | 1                  | Unknown  | W            | To marina from S                       |
| 0700 |                    |  |              | ~400 S of flag<br>~300 N of flag       |