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REPORT NO. 00-143

ATTENTION: Natural Resources and Culture Committee
Agenda of July 19, 2000

SUBJECT: Personal Watercraft Use on Mission Bay

SUMMARY

THIS IS AN INFORMATION ITEM ONLY. NO ACTION IS REQUIRED ON THE PART OF THE CITY COUNCIL.

BACKGROUND

Mission Bay is considered to be one of the most desirable locations for personal watercraft (PWC) use along the Southern California coastline. This popular form of recreation is enjoyed on the waters of Mission Bay throughout the year. PWC, also commonly referred to as jet boats or jet skis, are classified as inboard motorboats by the U.S. Coast Guard and are also not differentiated from other motorized vessels under the California Harbors and Navigation Code. Operation of PWC on Mission Bay is regulated by relevant provisions of Federal, State, and local laws. These include the California Harbors and Navigation Code, California Vehicle Code, and City regulations regarding hours of operation, speed zones, and special use areas. PWC are typically powered by two stroke engines. This type of engine also powers most fishing boats, sailboats, and powerboats with outboard motors.

In Mission Bay, PWC are normally operated in three areas. These include the open speed areas of Fiesta Bay and the two special-use locations for PWC use only situated on either side of the Fiesta Island causeway at the east end of South Pacific Passage and at the south end of North Pacific Passage. If PWC operate in any other part of Mission Bay, the speed limit is five (5) miles per hour or less. In addition, all PWC that operate on Mission Bay must obey local and state basic speed laws prohibiting the operation of any vessel or other watercraft at a speed that is greater than is reasonable or prudent, and at no time at a speed that endangers life, limb, or property. (See Attachment)

A recent count of the number of vessels that operate on Mission Bay was taken by City Lifeguards over the recent July 4th holiday weekend. The number of vessels on Mission Bay were counted at 1:00 pm daily from Saturday July 1 through Tuesday July 4. The count totals included all vessel types as well as all beached and moored boats. The counts are summarized as follows:

Date	PWC	All Other Motorboats	Sailboats	Other Vessels	Total Vessels on Mission Bay
7/1/00	282	193	129	196	800

7/2/00	329	217	233	83	862
7/3/00	207	229	204	139	779
7/4/00	282	272	172	171	897

These counts are noticeably higher for all vessel types compared to the same weekend counted in 1999. However, the difference may be attributed to improved weather conditions we have enjoyed in the region this summer over that experienced in 1999. In addition, it is important to note that this value depicts a snapshot of vessel use on Mission Bay at the time the counts were taken and likely represents the high end of vessel operation on Mission Bay due to the favorable climate and the large number of visitors that enjoyed Mission Bay Park over the holiday weekend.

The 1994 Mission Bay Park Master Plan Update calls for the retention of both of the dedicated PWC areas and the proper management of Mission Bay to ensure the viable use of the Bay waters by all water sport enthusiasts. The management of Mission Bay water resources continues to evolve through the ongoing efforts of the Ad Hoc Citizen Committee on Mission Bay Water Use (Mission Bay Water Use Committee), Mission Bay Park Committee, Lifeguard Service, and Police Department.

The Mission Bay Water Use Committee meets biannually and is open to all interested users of Mission Bay. Committee size has varied from 50 to over 100. All participants are provided an opportunity to raise issues, to advocate, and to comment. All recommendations of the Mission Bay Water Use Committee are evaluated by staff and a report is issued to the Mission Bay Park Committee indicating any actions and changes that will be implemented as a result of the recommendations. Examples of Mission Bay Water Use Committee recommendations that have been implemented include the establishment of a counterclockwise traffic pattern in Fiesta Bay, an increase in enforcement of regulations during early morning and night hours, the targeting of illegal PWC rental activities, and the increase of public education with regard to safe vessel operation on Mission Bay.

DISCUSSION

Safety Related Issues

Issues relating to the level of PWC compliance with boating regulations and boating safety in Mission Bay include the trends in overall number of citations and arrests as well as the number of injury accidents. These numbers are heavily influenced by the experience of the PWC rider, the availability of boating safety education and training, the knowledge of local PWC regulations, as well as the total number of vessels that use Mission Bay. A large number of individuals that are issued citations or are involved in accidents are inexperienced PWC riders or are unaware of the regulations that control PWC use on Mission Bay.

Boating safety enforcement continues to be a priority for lifeguards and police to help ensure compliance with all boating safety regulations. Police and lifeguards have been concentrating on hazardous violations such as speed within 100 feet of another vessel, underage operators, reckless and negligent operation, wake jumping, and spraying.

Citations

The number of citations and arrests have increased over the past few years. The total number of citations and arrests have increased from 651 in 1998 to 1227 in 1999. The total number of citations issued in 2000 will also be somewhat higher with 553 having been issued from January 1 through June 30 of this year. A majority of these citations were issued to PWC riders.

This increase can be attributed, in large part, to two factors; favorable climate and aggressive enforcement of boating safety regulations. In addition to the favorable climate that has attracted a larger number of water users to Mission Bay compared to 1998, lifeguards and police have stepped up enforcement of boating regulations and have issued a larger number of citations where previously a warning was given. This increased enforcement effort was recommended and supported by the Mission Bay Water Use Committee in an attempt to improve the safety and enjoyment of Mission Bay for all users.

Accidents

The number of reported accidents involving PWC in Mission Bay over the past five years has been in decline. This number has ranged from 43 in 1995 to 16 in 1999. However, there has been an observed increase in injury accidents through the first six months of 2000 with 12 injuries reported through June 30. As observed when discussing the increase in number of citations issued to PWC users in Mission Bay, the increase in injury accidents in 2000 may be the result of significantly more PWC users visiting Mission Bay this year due to the highly favorable weather conditions.

The following table summarizes reported Mission Bay boating accidents from 1995 through June 2000:

Year	PWC	Other Motorized Vessels	Sailboats	Total
1995	43	7	5	55
1996	40	10	2	52
1997	36	8	2	46
1998	23	10	2	35
1999	16	8	0	24
1/1 to 6/30 2000	12	3	0	15

When evaluating any trend in the numbers of reported accidents on Mission Bay, it is important to consider a number of factors that may have impacted these figures. In addition to the significant difference in the number of users on Mission Bay between the various years, accident reports were typically taken for any boating accident to which lifeguards or police responded prior to 1999. While there is no statutory requirement for a local enforcement agency to conduct a boating accident report, reports were taken primarily as a courtesy to boaters and in an effort to document the total number of accidents. In 1999, staff ceased conducting accident reports for

non-injury boating accidents, with few exceptions. This decision was made based upon the lack of a statutory mandate to take the reports and the level of effort required to complete the non-injury accident report that would take boating safety enforcement personnel away from regular patrol work. Current policy remains that in all accidents involving injuries, a boating accident report is taken by police officers in the Harbor Patrol Unit.

The numbers of injuries resulting from accidents involving PWC are also affected by the nature of the vessel itself. The likelihood of injury resulting from an accident involving a rider on a PWC is greater than that of an individual inside a boat involved in a similar accident.

Education

The efforts put forth by the City, other governmental agencies, and volunteer organizations such as the San Diego Jet Sports Club (SDJSC), and PWC manufacturers to provide safe boating training for PWC users have been substantial. A partial list of public education efforts follows:

- Personal Watercraft Pro Riders Clinic (San Diego Lifeguards)
- Operation Waterproof (San Diego Lifeguards)
 - Safety education booths located at launch ramps with eight scheduled for May through September (RSVP San Diego Police Harbor Unit)
- Monthly PWC safety classes (U.S. Coast Guard Auxiliary)
- Boat Smart classes (U.S. Coast Guard Auxiliary)
- PWC Safety & Demo Ride Day (SDJSC, AWA, Mission Bay Aquatic Center)
- Day in the Bay (AWA, PWC manufacturers, SDJSC, Mission Bay Aquatic Center)
- Sea Doo Boating Safety and Demo Day, including safety booth (SDJSC, SDPD Harbor Unit)
- Jet Jamboree, Fiesta Island (PWC manufacturers, SDJSC, IJSBA)

In addition, PWC safety videos have been filmed utilizing City lifeguards and the SDPD Harbor Unit. One of these safety videos, produced by the United Safe Boating Institute, has been broadcast on the San Diego County Cable Channel. In addition, a recently completed video on PWC safety and proper operation in Mission Bay is intended for distribution to PWC rental outlets on the bay to provide safety information and training prior to rental of PWC for use on Mission Bay. San Diego police and lifeguard staff also patrol Mission Bay on City PWC and provide safety advice and instruction to PWC users.

Legislative Efforts

The City has been a leader in lobbying for legislative changes to enhance the safety of PWC operation in state and local waters. An important example of the effort to improve PWC safety through legislative change is the recent attempt to amend state law to require mandatory boater education and to increase the minimum operating age for PWC to 16.

Water Quality Issues

Isolating the actual impacts of PWC on Mission Bay water quality cannot practically be

addressed. The two stroke engines that typically power PWC also are used to power various types of vessels that are enjoyed throughout the bay. These include fishing boats, sailboats, and larger powerboats with outboard engines. In addition, four stroke internal combustion engines that power all other motorboats that operate on Mission Bay would impact the water quality in the same manner. Given the number and diversity of motorized vessels that use Mission Bay, identifying the impacts directly associated with PWC in Mission Bay would be unrealistic. Results from a study intended to isolate the impacts of PWC on Mission Bay water quality would be inconclusive due to the inability of separating these impacts from the impacts of any other motorized vessel that operates on Mission Bay.

However, various studies have taken place throughout Mission Bay which have measured constituents that would be released from engines that power motorized vessels, including PWC. The results of these studies indicate that petroleum hydrocarbons, as well as the levels of MTBE, are only detected in Mission Bay at very low levels. The studies also indicate that these constituents are measured at levels far below what would be detrimental to marine life. Results from some of these studies are briefly summarized as follows:

1999 Thunderboat Races Water Quality Testing Program

A water quality testing program was conducted in conjunction with the Thunderboat Races held in Mission Bay in September 1999. This program sampled waters both inside and outside the race course prior to, during, and after the races. The race course is located in Fiesta Bay. A total of 80 water samples were analyzed. Results of these tests indicated that total petroleum hydrocarbons in the gasoline range were not detected in any of the samples collected over the sampling period. All other petroleum related compounds were detected at low part per billion levels and none exceeded the water quality objectives contained in the California Ocean Plan. The gasoline additive Methyl tertiary butyl ether, commonly referred to as MTBE, was detected in nearly all the samples collected. However, the values were in the low part per billion levels and ranged from 1/1000 to 1/50 of the level determined to be toxic to marine life.

Sea World Water Quality Testing Program

Sea World has tested the intake water as part of its water quality testing program for the presence of MTBE. Results of testing conducted in June 1999 indicated the presence of MTBE at very low levels. The levels ranged from 1/70 to 1/50 of the level determined to be toxic to marine life.

Mission Bay Landfill Sampling Program

Ongoing water quality sampling is conducted in the surface waters adjacent to the location of the south shores landfill operated by the City in the 1950's. Results of this testing program do not detect petroleum hydrocarbons. MTBE was detected in the surface water samples at levels that ranged from 1/1000 to 1/50 of the level determined to be toxic to marine life.

Southern California Coastal Water Research Project (SCCWRP) MTBE Studies

SCCWRP conducted a study to examine the levels of MTBE in the coastal waters and to determine whether the levels are toxic to marine life. A total of four samples were collected near the boat ramp locations in Mission Bay. The level of MTBE detected in these samples was higher than those found in offshore receiving waters, however, the highest level measured in Mission Bay was less than 0.01% of the threshold effect level for amphipod survival, the most sensitive California species tested. The study indicated that concentrations of MTBE in the marine environment are unlikely to pose a significant risk to marine life.

Review of the various studies conducted on in Mission Bay indicate that gasoline and oil are not measured at levels of concern and that existing numbers of gasoline powered watercraft operating on Mission Bay are not currently having a measurable impact on the bay's water quality.

Furthermore, the PWC industry is under strict regulations to decrease the amount of emissions in newly manufactured vessels. The 2000 model year PWC, inclusive of all manufacturers, is 25% cleaner than that of the 1997 model year fleet, in compliance with U.S. EPA emissions reduction requirements. U.S. EPA requires that all marine engines, including PWC and outboard motors, continue to achieve emission reductions of 8.5% per year until 2006. This represents a 75% reduction in emissions from the preregulated baseline year of 1997. All PWC manufacturer have agreed to fully comply with these requirements. In California, the California Air Resources Board (CARB) has accelerated the emissions reduction schedule to achieve the 75% reduction by the 2001 model year. The CARB rule provides for further reductions thereafter. In addition, MTBE will be phased out of California fuel by 2002 according to the Governor's executive order.

CONCLUSION

PWC use on Mission Bay is an integral recreational element of the park. Mission Bay is widely recognized as one of the finest venues for PWC enjoyment on the Southern California coastline. The Mission Bay Park Master Plan recognizes the need to safely integrate all forms of water use on the bay and includes the two special-use areas designated for PWC use only as well as the open speed area for powerboats and PWC in the Fiesta Bay portion off of Fiesta Island.

Effective management of PWC operation on Mission Bay is enhanced through the efforts of the Mission Bay Water Users Committee. This committee, through its biannual meetings, provides staff with recommendations for improving the ability of the bay to meet the demands of all water users in light of the growing population, the increasing diversity of water recreation activities, and the growing popularity of Mission Bay Park for water recreation by residents and tourists alike. The current regulations that control the operation of all vessels, including PWC, on Mission Bay have evolved as a result of the ongoing efforts and recommendations of this committee.

The use of PWC on Mission Bay is currently regulated under Federal, State, and Local laws. California Harbors and Navigation Code Section 268 permits the City to adopt restrictions concerning the navigation and operation of vessels subject to the provisions of Section 660(a). Section 660(a) provides that the City can only regulate the use of vessels if the regulations involve time-of-day restrictions, speed zones, special-use areas, and sanitation and pollution

control.

The number of citations have increased over the past few years with lifeguard and police department staff continuing to aggressively enforce all safe boating regulations for PWC as well as for all other vessels that operate on Mission Bay. There are presently restrictions in place for PWC with regard to time-of-day restrictions, speed zones, special-use areas. These regulations are reasonable and enforceable by the lifeguards and police that patrol Mission Bay.

There is no evidence that PWC use significantly impacts Mission Bay water quality. The impacts of PWC would be similar to all other motorized vessels using the bay. No study has indicated that there is a significant pollution problem in Mission Bay due to gasoline powered motorized vessels. In addition, CARB has mandated that all marine engines, including those powering PWC, must meet the 75% reduction in emission standards by the 2001 model year. Furthermore, MTBE will be phased out of California fuel by 2002 according to the Governor's executive order.

Staff will continue to search for ways to improve the safety and water quality of Mission Bay. As future recommendations are developed regarding PWC safety, as well as the safe operation of all other vessels that use Mission Bay, staff will evaluate all recommendations and develop plans to implement any changes that will lead to ensuring the safe use of Mission Bay by all recreational water users.

Respectfully submitted,

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Attachment: City of San Diego Mission Bay Park Rules and Regulations

Note: Attachment was distributed to Council only. Copies are available for review in the Office of the City Clerk. (Attachment not available in electronic format.)