

believe it is necessary to require only four-stroke engines.

34. We received a number of comments citing a variety of concerns over the noise associated with PWC use. In almost all cases this noise was characterized as "annoying". Specific concerns included the constant and repeated fluctuation in engine tone and pitch as PWCs enter and exit the water while jumping wakes, changing speed and performing other quick maneuvers along with the persistent noise associated with remaining in one general location rather than traveling from point-to-point.

NPS Response: National Park Service *Management Policies* for Soundscapes, as stated in *Management Policies 2001* (4.9), require superintendents to "identify what levels of human-caused sound can be accepted within the management purposes of parks. The sound considered acceptable will vary throughout the park, being generally greater in developed areas and generally lesser in undeveloped areas * * *. The service will take action to prevent or minimize all noise that * * * exceeds levels that have been identified as being acceptable to, or appropriate for, visitor uses at the sites being monitored." *Management Policies* for Visitor Use (8.2) indicate that unless mandated by statute, the National Park Service will not allow visitors to conduct activities that would unreasonably interfere with the atmosphere of peace and tranquility, or the natural soundscape maintained in wilderness and natural, historic, or commemorative locations within the park.

As written in the enabling legislation, the management purpose of Lake Mead is to provide public recreation, benefit, and use in a manner that will preserve, develop, and enhance, so far as practicable, the recreation potential and preserve the scenic, historic, scientific, and important features of the area. Recreational uses specifically listed in the act include bathing, boating, camping, and picnicking. Various levels of sound are associated with some of those uses, such as boating and PWC, and are consistent with the park's purpose as defined by the legislation.

To provide a "peaceful and tranquil" experience in some locations, PWC use would be prohibited within the primitive and semiprimitive recreational opportunity zones. These zones also place restrictions on wake speed and identify acceptable motor types, such as electric trolling motors in primitive zones. These prohibitions or restrictions in alternatives B and C (the preferred alternative) of the draft and final EIS and the modified preferred

alternative of the final EIS would provide for a peaceful and tranquil visitor experience. In areas such as Black Canyon, where a diverse range of visitors use a variety of nonmotorized and motorized watercraft, the National Park Service would temporally zone this unique area to accommodate all users and provide experiences that range from tranquil to more rural and mechanized. All alternatives include plans and policies for enforcement of noise regulations. These elements of the Environmental Impact Statement are consistent with NPS Management Policies.

35. One commenter stated, testing at the Glen Canyon National Recreation Area indicate that the maximum noise levels for PWC are lower than the maximum noise levels for other motorized vessels.

NPS Response: It is more appropriate to say that maximum noise levels for PWC were found to be similar to outboards and inboards of similar size and power. The Glen Canyon test data show that, except boats with V-8 engines (V-8 "muscle boats"), which were clearly louder than all other craft, at a given speed, the noise levels of PWC were sometimes greater and sometimes less than those of other watercraft.

36. One commenter stated, since 1998, PWC engine sound levels have been reduced by up to 70%.

NPS Response: NPS has acknowledged that the newer model PWC are quieter than the older models. One might interpret a reduction from 100 to 30 decibels (dBA) as a 70% reduction. A noise level reduction of 5.2 dBA results from a 70% reduction in noise sources, for example if one had 10 like machines running, and turned off 7 of them. It is commonly accepted that people perceive a 10 dBA reduction in noise as about half (50%) as loud, such that a 70% reduction by perception would be something greater than 10 dBA. However the NPS can not state the exact percentage of sound emissions between the various models.

37. The commenter notes opponents of PWC have claimed that the vessels emit noises as high as 102 decibels, without specifying distances or the method of sound measurement. These unsubstantiated claims are refuted by the National Park Service's recent testing at Glen Canyon, and cannot be reproduced under accepted sound measurement standards.

NPS Response: As noted in the comment, no distance was specified for the 102-decibel (dBA) measurement. A noise source of 76 dBA at 82 feet, which was measured for a PWC, would be 102

dBA at 4 feet. Other conditions that could contribute to PWC noise of 102 dBA at distances greater than 4 feet would be PWC operation without a muffler or with a faulty muffler, and if the noise was measured when the PWC was airborne. This response is not to imply that 102 dBA is a typical PWC noise, but to indicate that while a data point of 102 dBA without description is of little value.

38. One commenter stated, "The National Marine Manufacturers Association has published a Model Noise Act for use by state legislatures or other agencies with jurisdiction over the manufacture and operation of watercraft. The Model Noise Act promotes regulation or legislation that would prohibit the operation of watercraft in a manner to exceed 75 dBA at the shoreline. The model noise act would also promote regulation or legislation that would prohibit the manufacture of watercraft that could not operate in compliance with the 75 dBA standard."

NPS Response: The 75 dBA shoreline noise level limit is consistent with a relatively recent state of Nevada standard that will be enforced at Lake Mead (Nevada Administrative Code Section 488.460). The National Park Service is currently revising boating regulations and is proposing to adopt the 75 dBA standard and will encourage the state of Arizona to adopt a similar standard.

Drafting Information

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Compliance with Other Laws

Regulatory Planning and Review (Executive Order 12866)

This document is a significant rule and has been reviewed by the Office of Management and Budget under Executive Order 12866.

(1) This rule will not have an effect of \$100 million or more on the economy. It will not adversely affect in a material way the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities. This determination is based upon the findings in a report prepared by the National Park Service entitled