

# Proposed Rules

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This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

## DEPARTMENT OF AGRICULTURE

### Animal and Plant Health Inspection Service

#### 9 CFR Parts 1 and 3

[Docket No. APHIS-2006-0085]

RIN 0579-AB24

#### Animal Welfare; Marine Mammals

**AGENCY:** Animal and Plant Health Inspection Service, USDA.

**ACTION:** Proposed rule.

**SUMMARY:** We are proposing to amend the Animal Welfare Act regulations concerning the humane handling, care, treatment, and transportation of marine mammals in captivity. These proposed changes would affect sections in the regulations relating to variances and implementation dates, indoor facilities, outdoor facilities, space requirements, and water quality. We are also proposing to revise the regulations that relate to swim-with-the-dolphin programs. We believe these actions are necessary to ensure that the minimum standards for the humane handling, care, treatment, and transportation of marine mammals in captivity are based on current industry and scientific knowledge and experience.

**DATES:** We will consider all comments on this proposed rule that we receive on or before April 4, 2016. To be assured consideration, comments on the information collection requirements related to this proposal should be submitted on or before March 4, 2016.

**ADDRESSES:** You may submit comments by either of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov#!docketDetail;D=APHIS-2006-0085>.

- Postal Mail/Commercial Delivery: Send your comment to Docket No. APHIS-2006-0085, Regulatory Analysis and Development, PPD, APHIS, Station 3A-03.8, 4700 River Road, Unit 118, Riverdale, MD 20737-1238.

Supporting documents and any comments we receive on this docket

may be viewed at <http://www.regulations.gov#!docketDetail;D=APHIS-2006-0085> or in our reading room, which is located in Room 1141 of the USDA South Building, 14th Street and Independence Avenue SW., Washington, DC. Normal reading room hours are 8 a.m. to 4:30 p.m., Monday through Friday, except holidays. To be sure someone is there to help you, please call (202) 799-7039 before coming.

**FOR FURTHER INFORMATION CONTACT:** Dr. Barbara Kohn, Senior Staff Veterinarian, Animal Care, APHIS, 4700 River Road, Unit 84, Riverdale, MD 20737-1234; (301) 851-3751.

#### SUPPLEMENTARY INFORMATION:

#### Executive Summary

##### I. Purpose of Regulatory Action

This proposed rule would affect sections in the regulations for the protection of all marine mammals in the United States relating to interactive programs (e.g., swim-with-the-dolphin), space requirements, water quality, indoor facilities, outdoor facilities, implementation dates, and variances. The U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) established regulations for these mammals in 1998, based on the outcome of meetings of the Marine Mammal Negotiated Rulemaking Advisory Committee. When the original regulations were published, the provisions we are now amending were written in a very general way because APHIS had few relevant scientific studies or data available to help design the most effective practical regulatory approach for these areas. Over time, more relevant studies and data involving these sections and interactive programs have become available and APHIS has gained substantial experience working with regulated parties.

##### II. Legal Authority

The Animal Welfare Act (the Act) (7 U.S.C. 2131 *et seq.*) authorizes the Secretary of Agriculture to promulgate standards and other requirements governing the humane handling, care, treatment, and transportation of certain animals by dealers, research facilities, exhibitors, carriers, and other regulated entities. Under the Act, APHIS established regulations in 1979 for the humane handling, care, treatment, and

transportation of marine mammals used for research or exhibition purposes. The regulations contain standards for the humane handling, care, treatment, and transportation of marine mammals (part 3, subpart E, §§ 3.100 through 3.118).

##### III. Summary of Major Provisions

We propose to revise swim-with-the-dolphin program regulations, for which enforcement was suspended effective April 2, 1999. This proposal contains revised standards that we propose to enforce for these programs. The proposed standards address interactive program facility space requirements, layout, operations, staffing, recordkeeping, and related matters. We set forth the proposed standards as performance-based standards wherever we believe such an approach is feasible and supportable by current information and scientific documentation.

The current subpart E regulations include minimum space requirements for the primary enclosure for species of marine mammals. We do not propose substantive changes to any of the minimum space requirements (§ 3.104), but we do propose clarifying how such areas are measured, updating and correcting discrepancies between formal calculations and current entries into space tables, and other enclosure matters.

We also propose some changes to the regulations concerning water quality in facilities. These changes would implement the results of our review of recent studies of water quality and waterborne pathogens affecting marine mammals.

The current regulations include conditions and deadlines for variance requests for space. These deadlines are out of date, but the ability for APHIS to grant temporary variances is an important tool when assuring the welfare of marine mammals. Therefore, we propose to update the conditions that can be addressed by a variance and identify the factors we use to approve or disapprove a variance request.

The current regulations also provide standards for air and water temperatures, ventilation, and lighting at regulated indoor facilities that house marine mammals. We propose to revise these requirements to apply current best practices and recent scientific studies in order to ensure the welfare of the animals with respect to temperature,

ventilation, and lighting for indoor facilities.

We also propose to revise the regulations covering standards for outdoor facilities, to require that the air and water temperature ranges at outdoor facilities be in accordance with the currently accepted husbandry practices for the species housed.

#### Background

The Animal Welfare Act (the Act) (7 U.S.C. 2131 *et seq.*) authorizes the Secretary of Agriculture to promulgate standards and other requirements governing the humane handling, care, treatment, and transportation of certain animals by dealers, research facilities, exhibitors, carriers, and other regulated entities. The Secretary of Agriculture has delegated the responsibility for enforcing the Act to the Administrator of the Animal and Plant Health Inspection Service (APHIS). Regulations established under the Act are contained in 9 CFR parts 1, 2, and 3.

Under the Act, APHIS established regulations in 1979 for the humane handling, care, treatment, and transportation of marine mammals used for research or exhibition purposes. The regulations contain standards for the humane handling, care, treatment, and transportation of marine mammals (part 3, subpart E, §§ 3.100 through 3.118). Some sections of these regulations have not been substantively amended since 1984.

#### Marine Mammal Regulations

In 1995, we established a Marine Mammal Negotiated Rulemaking Advisory Committee (the Committee) to advise the Department on revisions to the marine mammal regulations. The Committee met for three sessions between 1995 and 1996. Under the rules governing the negotiated rulemaking process, and in accordance with the organization protocols established by the Committee, APHIS agreed to publish as a proposed rule any consensus language developed during the meetings unless substantive changes were made as a result of authority exercised by another Federal Government entity. The Committee developed consensus language for changes to 13 of the 18 sections that comprise the 1979 regulations and for 1 paragraph in a 14th section.

On February 23, 1999, we published a proposed rule in the **Federal Register** (64 FR 8735–8755, Docket No. 93–076–11) that contained the language developed by the Committee for those sections of the regulations for which consensus had been reached. The rule was made final, with changes, on

January 3, 2001 (66 FR 239–257, Docket No. 93–076–15), and became effective on April 3, 2001 (66 FR 8744, Docket No. 93–076–16).

#### Remaining Issues

Although consensus language was developed by the Committee for 13 of the 18 sections of the regulations in their entirety, and for 1 paragraph of another section, the Committee conducted extensive discussions on all sections of the regulations. No consensus language was developed for four sections of the standards: § 3.100 on variances and implementation dates; § 3.102 on indoor facilities; § 3.103 on outdoor facilities; and § 3.106 on water quality. Consensus language was developed for general space requirements for the 14th section, but not on the specific space requirements for particular marine mammals. The Committee agreed that APHIS would develop and promulgate a proposed rule to address those parts of the regulations for which consensus language was not developed.

#### Interactive Programs

In addition to the 1979 regulation and the 2001 amendments, we published a proposed rule to establish standards for swim-with-the-dolphin programs in a new § 3.111 on January 23, 1995 (60 FR 4383–4389, Docket No. 93–076–2). The swim-with-the-dolphin rule was a new standard and not included in the goal of updating the existing standards in subpart E. After reviewing the comments for the swim-with-the-dolphin proposed rule and the results from a National Oceanic and Atmospheric Administration (NOAA)-sponsored study conducted between 1992–1994,<sup>1</sup> we published a final rule in the **Federal Register** on September 4, 1998 (63 FR 47128–47151, Docket No. 93–076–10), that made final some of the proposed provisions, along with changes we made based on the comments received. The final rule became effective October 5, 1998.

Following publication of the final rule, a number of parties affected by the rule contacted us and asserted that they did not fully understand the regulatory implications of the proposed and final rules for wading programs, encounter programs, and other interactive

programs. Specifically, these regulated parties stated that it had not been clear to them that we intended the provisions of the rule to apply to shallow-water interactive programs. Shallow-water interactive programs are programs in which members of the public enter the primary enclosure of a cetacean to interact with the animal, and in which the participants remain primarily stationary and nonbuoyant. The regulated parties stated that, because of this misunderstanding, they had not been able to participate fully in the rulemaking process.

In response to these concerns, on October 14, 1998 (63 FR 55012, Docket No. 9307612), we announced that, as of the effective date of the September 4, 1998, final rule, and until further notice, we would not enforce the standards relating to space for the interactive area and human participant/attendant ratio to shallow-water interactive programs. Subsequently, on April 2, 1999 (64 FR 15918–15920, Docket No. 93–076–13), we suspended enforcement of all of § 3.111. This meant that only the specific requirements of § 3.111 would be excluded from citation of noncompliant items. All interactive programs were and still are at AWA licensed facilities and thereby required to comply with all other regulations and standards appropriate for that facility. The facility and animals remained under AWA oversight by USDA.

#### Advance Notice of Proposed Rulemaking

On May 30, 2002 (67 FR 37731–37732, Docket No. 93–076–17), we published in the **Federal Register** an advance notice of proposed rulemaking (ANPR) in which we solicited comments regarding appropriate changes or additions to the marine mammal standards for which consensus language was not developed during the negotiated rulemaking, as well as the standards for interactive programs such as swim-with-the-dolphin programs. We solicited comments for 60 days ending on July 29, 2002. We received 365 comments by that date. They were from private citizens, exhibitors, and professional organizations. We have reviewed and considered all of the comments and any information submitted with the comments. The issues raised by the commenters are discussed below.

A commenter recommended that § 3.100, “Special considerations regarding compliance and/or variance,” should be deleted, stating that there is no good reason to grant a variance from the space requirements. Another commenter suggested that temporary

<sup>1</sup> Samuels, A. and T.R. Spradlin. 1994. Quantitative behavioral study of bottlenose dolphins in Swim-With-The-Dolphin programs in the United States. Final Report to the National Marine Fisheries Service, Office of Protected Resources. 25 April 1994. 57 pp. Samuels, A. and T.R. Spradlin. 1995. Quantitative behavioral study of bottlenose dolphins in Swim-With-Dolphin programs in the United States. *Marine Mammal Science*, 11(4): 520–544.

variances be granted for 6 months with only one extension and that lifetime variances be granted only when necessary. The commenter also stated that APHIS should confiscate animals at facilities that fail to comply with the regulations after the expiration of the variance.

Several commenters asserted that rigid standards for air and water temperatures would be counterproductive and would not guarantee the health and well-being of the marine mammals. These commenters said that animals may be acclimated to temperatures outside of any ranges that APHIS may establish. On the other hand, another commenter said that water temperature requirements are necessary because water that is too warm is stressful to the animal and facilitates the spread of disease. Another commenter stated that APHIS should prohibit polar bear exhibits in tropical locales.

One commenter recommended that APHIS establish standards for sound that address decibel levels as well as the type of sound. Another commenter suggested that pools be required to have sloping walls in order to lessen underwater echoes.

A number of commenters stated that the regulations for ventilation and lighting were adequate; however, these commenters also stated that it wasn't unreasonable to require 6 hours of uninterrupted darkness per day.

Several commenters stated that some portion of an outdoor pool must be shaded. Other commenters suggested that the regulations concerning shade be amended to require that shade be provided if deemed necessary by a veterinarian.

One commenter recommended that seagull harassment of marine mammals be specifically addressed in the regulations. The commenter also recommended that pools be cleaned daily by a qualified diver.

A commenter asked APHIS to explore alternatives to chlorine to improve water quality. Several commenters suggested that requirements for water quality be established for each species based on the conditions the animal may encounter in the wild. Similarly, a commenter stated that marine species should be housed in saltwater tanks and freshwater species housed in freshwater tanks.

Some commenters recommended that enclosures resemble an animal's natural habitat. One commenter suggested that marine mammals should be moved from concrete enclosures to manmade lakes.

A number of commenters supported an increase in the space requirements

for marine mammals. Several commenters stated that pool depth and volume should be used to determine the space requirements. These commenters stated that the average adult length of a species should be used to determine the minimum depth requirements and that the tables setting out the average adult length for each species should be updated. Finally, these same commenters stated that the space requirements should not take into account minimum width or longest straight-line swimming distance.

A commenter recommended that space requirements should be based on the maximum adult length of an animal instead of the average adult length. Several commenters suggested that APHIS match or exceed the minimum space requirements used in the United Kingdom, Brazil, and Italy. Some commenters recommended that pools be at least 300 feet wide and 60 feet deep. One commenter recommended that pools be at least 25 meters deep. One commenter suggested that the current space requirements be doubled within the next 5 years, while another commenter suggested a tenfold increase in the current space requirements.

A number of commenters claimed that it would be unfair and costly to require facilities to retrofit their marine mammal enclosures to comply with new space requirements. Several commenters stated that it would be financially unfeasible to retrofit facilities.

Some commenters stated that the regulations for interactive programs should be flexible enough to accommodate the wide variety of interactive programs in the United States. These commenters went on to state that the current regulations provide the necessary protection for marine mammals used in interactive programs.

One commenter asserted that APHIS should require that dolphins and humans participating in an interactive program be free of disease. The commenter noted that certain human diseases pose a threat to dolphins (e.g., influenza, chicken pox). The commenter also stated that feeding a dolphin and grasping or holding a dolphin should be prohibited during interactive programs.

Several commenters argued that petting pools and dolphin-assisted therapy should be regulated as interactive programs. Another commenter stated that feeding and petting pools should be eliminated.

One commenter stated that interactive programs should be allowed only if the interactions are tightly controlled at all times by professional trainers and the

animals are allowed to choose whether or not to participate.

A commenter stated that any release of a marine mammal into the wild should be authorized by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service prior to the release. Finally, a number of commenters asked APHIS to free or retire a killer whale named Lolita.

Based on our review of the ANPR comments, information submitted by exhibitors and professional organizations, a review of published scientific studies and current standards for lighting, ventilation, water quality, etc., and our experience with the marine mammal standards, we are now proposing to amend the regulations concerning the humane handling, care, treatment, and transportation of marine mammals in captivity. These proposed changes would affect sections in the regulations relating to variances, indoor facilities, outdoor facilities, space requirements, and water quality. We are also proposing to revise the regulations that relate to swim-with-the-dolphin programs. Each of these changes is discussed in detail below.

#### Definitions

We are proposing to amend § 1.1 of the regulations, "Definitions," by revising the terms *interactive area*, *interactive session*, *primary enclosure*, and *sanctuary area*. Section 1.1 defines an *interactive area* as "that area in a primary enclosure for a swim-with-the-dolphin program where an interactive session takes place." We are proposing to redefine *interactive area* to mean "that area of a marine mammal primary enclosure where an interactive program takes place." Use of the term "marine mammal" is necessary because facilities may use marine mammals other than cetaceans in interactive programs. It is also consistent with our use of the term throughout proposed § 3.111, as well as elsewhere, unless reference to a specific species is necessary. The term "interactive program" replaces "swim-with-the-dolphin program" since we are proposing to no longer use the term "swim-with-the-dolphin program," as discussed below.

Section 1.1 defines an *interactive session* to mean a "swim-with-the-dolphin program session where members of the public enter a primary enclosure to interact with cetaceans." For the reasons given above for our changes to the definition of *interactive area*, we are proposing to redefine *interactive session* to mean "the time during which a marine mammal and a member of the public are in the interactive area."

Section 1.1 defines a *primary enclosure* to mean “any structure or device used to restrict an animal or animals to a limited amount of space, such as a room, pen, run, cage, compartment, pool, or hutch.” We are proposing to add additional examples of structures and devices that qualify as *primary enclosures*. Specifically, we are proposing to add that primary enclosures, which may also be referred to as “enclosures” in the regulations and standards, include, but are not limited to, display enclosures, holding enclosures, night enclosures, off-exhibit enclosures, and medical enclosures. This proposed change is nonsubstantive because the listed examples already qualify as *primary enclosures* under the existing definition of that term, but it is necessary because there has been some confusion over the years about what constitutes a primary enclosure. This proposed clarification would ensure that regulated entities apply all appropriate requirements, such as space, safety, sanitation, and protection from the elements, to all areas where regulated animals are kept, unless otherwise provided in the regulations or standards.

Section 1.1 defines a *sanctuary area* to mean “that area in a primary enclosure for a swim-with-the-dolphin program that is off-limits to the public and that directly abuts the buffer area.” We are proposing to redefine this term to mean “that area in a primary enclosure for marine mammals that abuts the interactive area and is off-limits to the public.” These changes are consistent with the reasons given above for our changes to the definition of *interactive area* and our intent to no longer use the term “buffer area,” as discussed below.

Section 1.1 defines *swim-with-the-dolphin (SWTD) program* to mean “any human-cetacean interactive program in which a member of the public enters the primary enclosure in which an SWTD designated cetacean is housed to interact with the animal. This interaction includes, but such inclusions are not limited to, wading, swimming, snorkeling, or scuba diving in the enclosure.<sup>2</sup> This interaction excludes, but such exclusions are not limited to, feeding and petting pools, and the participation of any member(s) of the public audience as a minor

segment of an educational presentation or performance of a show.”

We would remove the definition of *swim-with-the-dolphin (SWTD) program* and add in its place the term *interactive program*. We would define *interactive program* as “any human-marine mammal interactive program where a member of the public enters a primary enclosure for a marine mammal with the intent of interacting with the marine mammal(s), except for potentially dangerous marine mammals, such as, but not limited to, polar bears. Such programs include, but are not limited to, sessions in which the human participants swim, snorkel, scuba dive, or wade in the enclosure and sessions in which the human participants sit on a dock or ledge, including therapeutic sessions. Such programs exclude, but such exclusions are not limited to, feeding or petting pools where the members of the public are not allowed to enter the enclosure, and the participation of an audience member at what has been traditionally known as a performance or show involving the exhibition of marine mammals.”<sup>3</sup>

The proposed definition of *interactive program* differs from the definition of *swim-with-the-dolphin program* in several ways. It uses the term “marine mammal” in place of “cetacean” and clarifies that interactive programs are inappropriate for potentially dangerous marine mammals, such as, but not limited to, polar bears. This new definition also provides additional examples of interaction including “sessions in which participants sit on a dock or ledge, including therapeutic sessions.” However, the term *interactive program* would continue to exclude programs such as feeding or petting pools, or any other programs “where members of the public are not allowed to enter the primary enclosure.” The proposed definition of *interactive program* would also exclude participation of an audience member at what is traditionally known as a performance or show involving the exhibition of marine mammals. This would simplify the current requirement which excludes from consideration the participation of the public “as a minor segment of an educational presentation or performance of a show.”

Finally, we would remove from § 1.1 the definition of *buffer area*, which is defined as “that area in a primary

enclosure for a swim-with-the-dolphin program that is off-limits to members of the public and that directly abuts the interactive area.” This definition would no longer be necessary based upon our intention to remove the requirement in proposed § 3.111 that interactive programs must contain a buffer area for animals. We have found that it is redundant and not necessary to require both a buffer area and a sanctuary area as long as the animal has unrestricted access to a sanctuary area.

#### Variations

Section 3.100 contains the conditions under which a regulated facility may request and qualify for a variance for a limited period of time from one or more of the space requirements in § 3.104. The provisions were put into place to allow regulated facilities time to come into compliance with the space requirements made in 1984. These provisions are no longer applicable because we are not increasing the space requirements.

There were few recommendations on the implementation dates and variances in the comments on the ANPR. One commenter recommended that § 3.100, “Special considerations regarding compliance and/or variance,” be deleted because there is no good reason to grant a variance from the space requirements. Another commenter suggested that temporary variances be granted for 6 months with only one extension and that lifetime variances be granted only when necessary. The commenter also stated that APHIS should confiscate animals at facilities that fail to comply with the regulations after the expiration of the variance.

We propose to revise § 3.100 to make it operative once again with respect to exhibition and research facilities covered by the regulations. This will provide regulated facilities greater flexibility in complying with the regulations and standards. Regarding the comment about animal confiscation, APHIS’ confiscation authority under the AWA is outlined in § 2.129 of the AWA regulations and standards. The animal must be found to be suffering as a result of noncompliance with the regulations and standards and the licensee fails to provide the remedy required by APHIS.

#### Indoor Facilities

Section 3.102 provides the standards for air and water temperatures, ventilation, and lighting at regulated facilities that house marine mammals.

Paragraph (a) of § 3.102 provides that the air and water temperatures in indoor facilities shall be sufficiently regulated by heating or cooling to protect the

<sup>2</sup> We note that interactive programs have been operating for over 20 years without any indications of health problems or incidents of aggression in marine mammals, as evidenced by medical records maintained by licensed facilities and observations by experienced APHIS inspectors.

<sup>3</sup> During such performances, 1 or 2 persons are typically brought from the audience to stand near and perhaps touch or signal the animal under the monitoring or control of a trainer. We do not consider animal performances that include brief participation by a few audience members to be interactive programs.

marine mammals from extremes of temperature, to provide for their good health and well-being and to prevent discomfort, in accordance with the currently accepted practices as cited in appropriate professional journals or reference guides. The section also states that rapid changes in air and water temperatures shall be avoided.

Animals kept in a temperature range appropriate to their species benefit from improved health and welfare.<sup>4</sup> While animals may be able to survive warmer or colder temperatures, animal metabolism has developed to function best within a particular temperature range for both air and water (thermoneutral zone). The animal may be able to survive outside this range, but the added stress can negatively affect the animal's metabolism as it tries to maintain internal temperatures and other metabolic processes<sup>5</sup> in non-ideal environmental conditions.

We are proposing no substantive changes to § 3.102(a). The question of ambient and environmental temperatures was discussed in depth during the negotiated rulemaking process. While the members of the Committee acknowledged the importance of maintaining marine mammals within their optimum temperature range, there was not enough published scientific data available to develop a list of acceptable temperature ranges for each marine mammal species. We are unaware of any definitive publications that combine the habitat ranges of marine mammals with the environmental temperature ranges in that habitat. This information would be beneficial to USDA and our licensees and we request any and all such data appropriate to marine mammal species during the comment period. That may not be possible, though, as we think it would require using diverse sources from fisheries data, biological oceanography species distributions, and physical oceanography sources on temperatures and salinity. Habitat usage budgets would also be needed in order to determine the most appropriate temperature range for the marine mammal. Since this information is not readily tabulated, we will continue to use the health and behavior of the marine mammals in assessing the adequacy and appropriateness of the pools and enclosure temperatures.

<sup>4</sup> "Marine Mammals Ashore," Joseph R. Geraci and Valerie J. Lounsbury, Texas A&M Sea Grant Publication, 1993, outlines habitat ranges for many marine mammals.

<sup>5</sup> Akin, J. A. (2011) Homeostatic Processes for Thermoregulation. *Nature Education Knowledge* 3(10):7.

Several commenters on the ANPR asserted that rigid standards for air and water temperatures would be counterproductive and would not guarantee the health and well-being of the marine mammals. These commenters said that animals may be acclimated to temperatures outside of any ranges that APHIS may establish. On the other hand, another commenter said that water temperature requirements are necessary because water that is too warm is stressful to the animal and facilitates the spread of disease. As noted earlier, another commenter stated that APHIS should prohibit polar bear exhibits in tropical locales.

Taking into account the discussions regarding air and water temperatures during the negotiated rulemaking process and in the ANPR comments, we are retaining the performance-based standards of the current regulations and, as needed, will develop guidelines for appropriate temperature ranges for marine mammal species based on scientific and published data when, and if, it becomes available. We request any and all such data appropriate to marine mammal species during the comment period.

Paragraph (b) of § 3.102 contains the ventilation standards for indoor facilities housing marine mammals. It provides that facilities shall be ventilated by natural or artificial means to provide a flow of fresh air for the marine mammals and to minimize the accumulation of chlorine fumes, other gases, and objectionable odors.

The benefit of providing adequate ventilation for indoor marine mammal enclosures is improved animal welfare. Improved ventilation can reduce the effects of skin and mucous membrane irritation in marine mammals. Improvements in ventilation can also result in less accumulation of moisture and potential trapping of bacteria and particles on walls. Excessive moisture may allow for bacterial and mold growth in the enclosure area, risking the health and well-being of the marine mammals. These same considerations apply to personnel working in enclosure and exhibit areas, and potentially to the general public.

Few comments on the ANPR addressed the current ventilation requirements. Those commenters who did address the ventilation standards stated that the current performance-based standard was sufficient. However, based on our experience regulating marine mammal facilities and on commonly accepted human standards for ventilation followed by engineers and architects for buildings throughout

the United States, we are proposing to modify the ventilation standards in several ways. The majority of the changes are performance-based in nature. Instead of stating that the ventilation shall minimize the accumulation of chlorine fumes, other gases, and objectionable odors, we are proposing that the ventilation would have to prevent the accumulation of chlorine/chloramine fumes, ammonia fumes, ozone, other gases, or odors at levels that would be objectionable or harmful to a person of average sensitivity. We would also add that the ventilation would have to maintain relative humidity at a level that prevents condensation in order to minimize the potential for bacterial, fungal, or viral contamination from condensation. Relative humidity can be controlled by a variety of methods, including increased ventilation with drier air or the use of dehumidifiers. Furthermore, we would provide that the average ventilation rate should exceed 0.2 cubic feet per minute per kilogram (cfm/kg) of animal. An average ventilation rate is the rate at which indoor air enters and leaves a building. We are proposing to require that the average ventilation rate should exceed 0.2 cfm/kg of animal in facilities with marine mammals because that is the rate necessary to dilute odors and limit the concentration of carbon dioxide and airborne pollutants harmful to marine mammals and humans.<sup>6</sup> These proposed requirements are based on commonly accepted standards for ventilation used by engineers, architects, and government agencies for buildings with human occupants.<sup>7</sup>

#### Lighting

Paragraph (c) of § 3.102 contains performance-based standards for lighting in indoor housing facilities, providing that the lighting shall: (1) Be of a quality, distribution, and duration that is appropriate for the species involved; (2) allow for routine inspections, observations, and cleaning; and (3) prevent exposure of the marine mammals to excessive illumination.

<sup>6</sup> See ASHRAE recommendations cited in footnote 7.

<sup>7</sup> ASHRAE recommendations minimize the accumulation of noxious and potentially toxic gases, such as chlorine, chloramines, methyl bromide, and ammonia: *2013 ASHRAE Handbook—Fundamentals (SI)*. OSHA investigates reported incidents of potentially hazardous air quality conditions: <https://www.osha.gov/SLTC/ventilation/index.html>. NIH provides ventilation guidance for laboratory animals that can be used in general animal housing as well: <http://www.orf.od.nih.gov/PoliciesAndGuidelines/BiomedicalandAnimalResearchFacilitiesDesignPoliciesandGuidelines/DRMHTMLver/Chapter2/Pages/Section2-4AnimalResearchFacilities.aspx>.

The ANPR commenters that addressed this issue stated that the current requirements for lighting were adequate; however, the commenters also stated that it was not unreasonable to require 6 hours of uninterrupted darkness per day for marine mammals.

Ensuring the health and normal functioning of metabolic systems for animals used to a diurnal light pattern (day and night periods) can be impacted by the use of artificial lighting and changes to the normal pattern of diurnal fluctuations in the day and night light patterns. Natural light sources, such as large windows and skylights for indoor enclosures, provide marine mammals with both natural light variations and full-spectrum lighting. Full spectrum lighting approximates natural sunlight by providing all natural wavelengths of light from an artificial light source. Studies in animals suggest that natural and full spectrum lighting may be beneficial for animal welfare, behavior, physiology, and regulating diurnal cycles. When natural light sources are not available or light patterns do not closely mimic natural patterns of light and dark provided by the sun, there can be negative impacts on the health and metabolism of terrestrial and aquatic animals.<sup>8</sup>

In addition, sufficient light is needed to allow observation of the animals by the caretakers and the APHIS inspectors. This requirement is not

changed in this docket, but the level of light recommended assures the ability to adequately observe the animals in the enclosure.

To better provide for the well-being of marine mammals, we believe the lighting standards need to be more specific. Accordingly, we propose to amend § 3.102(c) to state that, in addition to the general standards already provided, artificial lighting must provide full spectrum lighting. We are proposing this change so that the environment these mammals are housed in more closely resembles the natural world. We would also require that artificial light levels measured 1 meter above pools or decks should not exceed 500 lux, which is the minimum unit of measure of light sufficient to provide proper illumination for marine mammal primary enclosures.<sup>9</sup> This minimum level was developed to provide persons in the space sufficient light to see everything needed to operate safely within that area. In addition, the light levels that provide for the safety of the people in the space also allow for sufficient light to observe the animals. Employees must be able to observe the animals in order to assess their behavior and health, as well as to determine if the animals are interacting with portions of the enclosure, such as drains and pipes, that would present a potential health risk. The minimum light levels must be over all parts of the pool/enclosure. This requirement is compatible with the standards required by the Association of Zoos and Aquariums (AZA) in the reference material for accreditation.<sup>10</sup>

Facilities would be required to provide at least 6 hours of uninterrupted darkness during each 24-hour period, which mimics the normal diurnal cycles of light and dark that marine mammals are adapted to. When possible, the lighting should approximate the lighting conditions encountered by the animal in its natural environment. For example, if a species of marine mammal is primarily tropical, the lighting conditions for that animal should be as close to 12 hours of light and 12 hours of dark as possible, whereas the lighting conditions for other species of marine mammals may be closer to 10 hours of light and 14 hours of dark. Whatever the facilities' hours are, a minimum of 6 hours of dark must be provided to give all animals some period of night. We request comment on information on this minimum period of darkness, and whether it should be shorter or longer. We chose 6 hours as a reasonable

minimum, since we think it may correspond with typical work hours at a facility. The lighting must not cause overexposure, discomfort, or trauma.

The standards for lighting that we are proposing are based on our review of findings and recommendations in scientific literature for lighting animal enclosures.<sup>11</sup> We reviewed general published articles and books, as well as those specific to marine mammals. We believe the proposed changes to § 3.102(c) are necessary to ensure that the lighting provided is of a quality, quantity, and duration that approximates the lighting conditions found in the animal's natural environment, a practice recognized by experts in the field of animal husbandry and behavior to be beneficial in maintaining the overall health of all animals.

#### Outdoor Facilities

Section 3.103 of the regulations provides the standards for air and water temperature, shelter, and perimeter fencing at outdoor facilities housing marine mammals. Paragraph (a) of § 3.103 provides that marine mammals shall not be housed in outdoor facilities unless the air and water temperature ranges they may encounter do not adversely affect their health and comfort. Paragraph (a) further provides that marine mammals shall not be introduced to an outdoor housing facility until they are acclimated to the air and water temperature ranges that they will encounter there.

We are proposing to make several changes to § 3.103(a). We are proposing to require that the air and water temperature ranges at outdoor facilities be in accordance with the currently accepted husbandry practices for the species housed.

Paragraph (a)(3) of § 3.103 provides that no sirenian or warm water dwelling species of pinnipeds or cetaceans shall be housed in outdoor pools where water temperature cannot be maintained within the temperature range to meet their needs. To clarify what we mean by the "needs" of marine mammals, we would revise this standard by specifying instead that the water temperature for these particular marine mammals be maintained within the temperature range needed to maintain their good health and to prevent discomfort in accordance with currently accepted practices as cited in appropriate professional journals or reference guides.<sup>12</sup>

<sup>8</sup> Gaston, Kevin J.; Duffy, James P.; Gaston, Sian; Bennie, Jonathan; Davies, Thomas W.; "Human alteration of natural light cycles: causes and ecological consequences," *Oecologia* (2014) 176:917–931. Gaston, Kevin J.; Bennie, Jonathan; "Demographic effects of artificial lighting on animal populations," *Environ. Rev.* (2014), 22:323–330. Edwards, L. and Torcellini, P., 2002, "A Literature Review of the Effects of Natural Light on Building Occupants," (NREL/TP-550-30769), National Renewable Energy Laboratory, 58 pp. Rich, Catherine and Longcore, Travis (eds), 2006, "Ecological Consequences of Artificial Night Lighting," Island Press, Covelo, CA. Pages 15–42. Kane, Lisa, Forthman, Debra, and Hancock, David (eds.), 2005, "Best Practices by the Coalition for Captive Elephant Well-Being," 33 pp., [http://www.elephantcare.org/protodoc\\_files/2008/CCEWBCoreBestPractices.2.pdf](http://www.elephantcare.org/protodoc_files/2008/CCEWBCoreBestPractices.2.pdf). Gage, Laurie (author), and Whaley, Janet E. (ed.), 2006, "Interim Policies and Best Practices Marine Mammal Stranding Response, Rehabilitation, and Release Standards for Rehabilitation Facilities," NOAA National Marine Fisheries Service Marine Mammal Health and Stranding Response Program, 50 pp., [http://www.nmfs.noaa.gov/pr/pdfs/health/rehab\\_facilities.pdf](http://www.nmfs.noaa.gov/pr/pdfs/health/rehab_facilities.pdf). Anderson, Kevin, 2013, "Are the Lights On or Off?" 12 pp., <http://www.alnmag.com/articles/2013/11/are-lights-or>. Hotz, Vitaterna, Martha, Takahashi, Joseph S., and Turek, Fred W., "Overview of Circadian Rhythms," <http://pubs.niaaa.nih.gov/publications/arh25-2/85-93.htm>. Penev, Toncho, Radev, Veselin, Slavov, Todor, Kirov, Veselin, Dimov, Dimo, Atanassov, Alexandar and Marinov, Ivaylo, (2014), "Effect of lighting on the growth, development, behaviour, production and reproduction traits in dairy cows," *Int. J. Curr. Microbiol. App. Sci* 3(11) 798–810.

<sup>9</sup> <http://www.gsa.gov/portal/content/101308>.

<sup>10</sup> <http://www.aza.org/uploadedFiles/Accreditation/AZA-Accreditation-Standards.pdf>.

<sup>11</sup> See footnote 8.

<sup>12</sup> Industry groups that have developed such practices include, but are not limited to, the

Paragraph (b) of § 3.103 contains the standards for providing shelter for marine mammals housed in outdoor facilities. It provides that natural or artificial shelter, as appropriate for the particular species when local climatic conditions are taken into consideration, shall be provided for all marine mammals kept outdoors to afford them protection from the weather or from direct sunlight.

Several commenters on the ANPR stated that some portion of an outdoor pool must be shaded. Other commenters suggested that the regulations concerning shade be amended to require that shade be provided if deemed necessary by a veterinarian.

Because marine mammals are susceptible to overheating and sunburn and/or eye damage from direct and/or reflected sunlight, and UV light reflections can cause or exacerbate damage to marine mammal eyes,<sup>13</sup> we are proposing to amend § 3.103(b) by adding that the shade must be accessible and must cover sufficient area to afford all the animals within the enclosure protection from direct sunlight while not limiting their ability to move or not be too close to another animal. The shaded areas need not be contiguous. In addition, feeding and training of animals must be performed so that the animals are not required to look directly into the sun. Shade requirements are compatible with published AZA standards. Shade structures may be permanent or temporary (easily moved or deployed). We believe the performance-based standard we are proposing will allow facilities to provide the required amount of shade according to the unique conditions of each enclosure. This standard expands the requirement in current § 3.103(b) that natural and artificial shelter must be provided to afford protection from direct sunlight.

#### Space Requirements

Section 3.104 contains the minimum space requirements for primary enclosures, including pools of water, housing marine mammals. These space requirements are based on standards and scientific information available at

the time the regulations were promulgated in 1979, and amended in 1984. The current space requirements are based on circular pools which, while prevalent 30 years ago, have been largely replaced by more intricately shaped pools.

As discussed previously, some commenters on the ANPR recommended that enclosures resemble an animal's natural habitat. A number of commenters supported an increase in the space requirements for marine mammals, although the majority of commenters focused on the space requirements for cetaceans. A number of commenters claimed that it would be unfair and costly to require facilities to retrofit their marine mammal enclosures to comply with new space requirements. Several commenters stated that it would be financially unfeasible to retrofit facilities.

We are proposing to make a number of changes to § 3.104, as discussed in detail below. However, we are not proposing changes to the minimum space requirements (*i.e.*, minimum horizontal dimension (MHD), depth, volume, and surface area) at this time. In light of the disparate recommendations by the ANPR commenters (2002) and the limited scientific data available on this issue, we do not have sufficient scientific or other supporting data to propose space requirements changes at this time. We would appreciate any published literature, science-based data or other studies that would support changes in the space requirements for any marine mammals.

#### Space Requirements—General

Paragraph (a) of § 3.104 provides a general description of the space requirements for primary enclosures, including pools, that house marine mammals and sets out some of the requirements for temporary use of smaller enclosures. The general standards provided in § 3.104(a) reflect the consensus language that was developed by the Committee during the negotiated rulemaking sessions. We are proposing no substantive changes to the minimum space requirements (*i.e.*, minimum horizontal dimension, depth, volume, and surface area) for marine mammals in § 3.104(a) at this time. However, we propose to redesignate § 3.104(a) as § 3.104(a)(1) and to add a new paragraph (a)(2), which is discussed below.

In proposed § 3.104(a)(2), we would provide that only those areas that meet or exceed the minimum depth requirement could be used in determining whether the other

parameters of MHD, volume, and surface area meet the space requirements. This requirement already appears elsewhere in § 3.104 when referring to the minimum depth requirements for primary enclosures housing particular species of marine mammals. We would include this standard in § 3.104(a) since it is a general requirement applicable to all enclosures housing marine mammals. Indeed, this standard is the basis for determining whether naturalistic or irregularly shaped pools meet the space requirements. In addition, we would provide that APHIS would be authorized to determine if partial obstructions of a horizontal dimension compromise the intent of the regulations and/or significantly restrict the freedom of movement of the animal(s) in the enclosure.

#### Space Requirements—Cetaceans

Paragraph (b) of § 3.104 provides that primary enclosures housing cetaceans shall contain a pool of water and may consist entirely of a pool of water. It further provides that, in determining the minimum space required in a pool holding cetaceans, requirements relating to MHD, depth, volume, and surface area must be satisfied.

We propose to remove the statement in current § 3.104(b), "Primary enclosures housing cetaceans shall contain a pool of water and may consist entirely of a pool of water." This statement is unnecessary because cetaceans only need a pool of water.

In addition, we propose to amend § 3.104(b) by removing Tables I through IV and by adding a new Table 1 that sets out the average adult length and corresponding minimum space requirements for Group I and Group II cetaceans. We have also corrected a longstanding discrepancy between the figures in tables for volume required for additional animals and the actual calculated volume required. The proposed tables correct these entries, which have been included in the tables since 1984. In the last 30 years, however, this error has not presented any welfare issues, as the written formulas have been used only for calculations.

We would also remove paragraph (b)(2) of § 3.104, which provides that those parts of the primary enclosure pool which do not meet the minimum depth requirements cannot be included when calculating space requirements. As discussed previously, we would make this provision applicable to all marine mammal primary enclosures (proposed § 3.104(a)(2)) so it is unnecessary to include it here.

Association for Zoos and Aquariums (<https://www.aza.org>) and the Alliance of Marine Mammal Parks and Aquariums (<http://www.ammpa.org>).

<sup>13</sup>Gage, Laurie, "Risk factors associated with cataracts and lens luxations in captive pinnipeds in the United States and the Bahamas," *Journal of the American Veterinary Medical Association*, August 15, 2010, Vol. 237, No. 4 (429–436) <http://www.ncbi.nlm.nih.gov/pubmed/20707754>. Gage, Laurie, "Captive pinniped eye problems, we can do better," *Journal of Marine Animals and Their Ecology* (2011): [http://www.oers.ca/journal/volume4/issue2/Gage\\_Galley.pdf](http://www.oers.ca/journal/volume4/issue2/Gage_Galley.pdf).

We have been requested to consider updating the average adult lengths of certain cetaceans ((the Beluga whale (*Delphinapterus leucas*), the killer whale (*Orcinus orca*), and the Atlantic bottlenose dolphin (*Tursiops truncatus* (Atlantic)) based on empirical information that was compiled by the Alliance of Marine Mammal Parks and Aquariums (AMMPA) and the AZA and provided to APHIS. This proposed update would reflect the average adult lengths based on the actual sizes of certain species of marine mammals in exhibition facilities. These are the only three species for which data was submitted by the commenter. If used, the empirical lengths would result in decreased calculated minimum space requirements for these animals. The data provided by AMMPA and AZA reflect measurements from all killer whales at U.S. facilities, most of the beluga whales, and about 25 percent of the bottlenose dolphin population in the United States in 2002. It has been brought to our attention by NOAA that these figures do not take into account animals potentially added from the wild (stranded or taken by AMMPA permit), nor does it provide information on morphometrics that may have been published more recently. Taking this into account, APHIS is open to submission of all scientific data that may clarify the size of marine mammals. In updating Table 1, we have chosen to not include hybrid animals here, such as offspring of Atlantic and Pacific bottlenose dolphins. Space requirements for hybrid cetaceans would be handled on a case-by-case basis, as they are rare and reliable information is not generally available.

We welcome comments and data addressing this approach, including comments on the reliability and utility of the empirical average adult length data that is the basis for this proposed change.

#### Space Requirements—Sirenians

Paragraph (c) of § 3.104 provides that primary enclosures housing sirenians shall contain a pool of water and may consist entirely of a pool of water. Space requirements are based on meeting MHD and depth parameters.

We propose to remove the statement in current § 3.104(c), “Primary enclosures housing sirenians shall contain a pool of water and may consist entirely of a pool of water.” This statement is unnecessary since sirenians only need a pool of water. We would also add a new Table 2 which would provide average adult lengths for different sirenian species that are currently held by exhibitors on public

display. Finally, we propose to remove the statement that those parts of the primary enclosure pool which do not meet the minimum depth requirement cannot be included when calculating space requirements for sirenians. As discussed previously, we propose to include this requirement in proposed § 3.104(a)(2) since it is a general requirement applicable to all enclosures housing marine mammals.

#### Space Requirements—Pinnipeds

Paragraph (d) of § 3.104 provides that primary enclosures housing pinnipeds shall contain a pool of water and a dry resting or social activity area that must be close enough to the water to allow easy access for entering or leaving the pool. Despite this requirement, APHIS is aware of instances where animals have shown difficulties getting in and out of pools when the distance between the water and the dry resting area has been too much for them to easily negotiate, either due to the size and strength of the animal, such as young animals, or health, such as older animals or those animals with injuries or infirmities such as arthritis.<sup>14</sup> Some facilities, due to the filtering systems on the pools, do not have the ability to easily raise the water level. As a result, other means of safe ingress and egress are needed to prevent further injury or death of such marine mammals. Many of the newer pinniped pools at a number of zoological facilities have a gradually sloping floor that is suitable for pinnipeds of all sizes and capacities to exit the pool. As more institutions commit to making improvements to their pinniped exhibits, the pools with an edge or “lip” that make exiting difficult for the very young or very old are becoming obsolete. However, many such pools remain in use.

Therefore, we propose to require that pool exit and entry areas be of a depth and grade that allows for easy access and exit for pinnipeds of all ages and infirmities. These changes would ensure that young, elderly, and ill or infirm pinnipeds are able to get out of the water to access their dry resting or social activity area. As a ramp or platform may cut down on the swimming space in a smaller pool, designing of the ramps or platforms which factors in the minimum space requirements is essential.

The list of Group I and Group II pinnipeds and their average adult length in feet and meters would be provided in a new Table 3. In proposed Table 3, we

would reverse the order of displaying average adult length, with feet being shown first followed by meters. The average adult length information, which currently appears as part of Table 3 of the regulations, would not be changed except that we would add *Arctocephalus townsendi* (Guadalupe fur seal) to the Group I list, and the *Neomonachus schauinslandi*<sup>15</sup> (Hawaiian monk seal) to the Group II list of pinnipeds. We are proposing to add the Guadalupe fur seal and the Hawaiian monk seal to the list of Group I and Group II pinnipeds, respectively, because both species are now being held in captivity. We would also add the California sea lion to the list of Group I pinnipeds that will be considered as Group II when two or more sexually mature males are maintained together. In our experience, sexually mature male California sea lions can become aggressive during the breeding season, and visual barriers (e.g., fences, rocks, or foliage) would provide relief from any aggressive animals.

We would also reference a proposed new Table 4, which would summarize the minimum space requirements for pinnipeds in captivity, including MHD, depth, and surface area, as well as the required dry resting and social activity area required for different pinniped species. This table would provide user-friendly calculations of space requirements that should spare licensees and other stakeholders from having to perform the calculations themselves.

Finally, we propose to remove the statement that those parts of the primary enclosure pool which do not meet the minimum depth requirement cannot be included when calculating space requirements for pinnipeds. As discussed previously, we propose to make this requirement applicable to all marine mammals (proposed § 3.104(a)(2)) and it is unnecessary to include it here.

#### Space Requirements—Polar Bears

Paragraph (e) of § 3.104 sets out the space requirements for primary enclosures housing polar bears. It provides that primary enclosures housing polar bears shall consist of a pool of water, a dry resting and social activity area, and a den.

We are proposing to amend § 3.104(e) to require that pool exit and entry areas be of a depth and grade that allows for easy access and exit for polar bears of all ages and infirmities. This change would ensure that young, elderly, and

<sup>14</sup> This information was derived from APHIS-Animal Care internal research based on several inquiries with professionals in the field.

<sup>15</sup> [http://www.pifsc.noaa.gov/library/pubs/Baker\\_etal\\_MMS\\_2014.pdf](http://www.pifsc.noaa.gov/library/pubs/Baker_etal_MMS_2014.pdf).

ill or infirm polar bears are able to get out of the water to access their dry resting or social activity area.

#### Space Requirements—Sea Otters

Paragraph (f) of § 3.104 covers the space requirements for primary enclosures housing sea otters. Currently, paragraph (f) of § 3.104 provides that primary enclosures for sea otters must consist of a pool of water and a dry resting area. The minimum dry resting area required for one or two sea otters is based on the sea otter's average adult length, and is provided in Table V.

We propose to require that pool exit and entry areas be of a depth and grade that allows for easy access and exit for sea otters of all ages and infirmities. This change would ensure that young, elderly, and ill or infirm sea otters are able to get out of the water to access their dry resting or social activity area.

The regulations currently do not provide a surface area requirement. We would not change the existing formula for calculating the minimum dry resting area per animal. However, since sea otters do not readily use shared resting areas, we propose to add a requirement that individual areas or visual barriers separating appropriately sized individual resting spaces must be used.

Finally, we would redesignate Table V as Table 5. However, the information in the table would not be changed.

#### Water Quality

Currently, § 3.106 provides water quality standards for facilities housing marine mammals. Paragraph (a) provides a general introductory statement. Paragraphs (b), (c), and (d) contain requirements relating to bacterial standards, salinity, and filtration and water flow. We are proposing to make a number of changes throughout this section.

While sterile water was once considered the ideal standard, recent scientific research supports the point that non-sterile water is better for marine mammals. Non-sterile water seems to support the development of a healthy immune system, providing improved ability for marine mammals to better handle routine and novel types of bacteria. The presence of water quality test results that consistently show no bacteria may be indicative of an overly disinfected system, which may negatively impact the animals by causing skin and eye irritations from overchlorination. Over-disinfection may also reduce the effectiveness of the filtration system, which usually depends on a healthy microbial population for proper operation.

Paragraph (b) of § 3.106 contains the bacterial standards and related water quality testing requirements for facilities housing marine mammals. The bacterial standards provided in § 3.106(b) are based on accepted measures for monitoring water quality for human use at the time the regulations were promulgated in 1979. However, based on a review of the scientific literature<sup>16</sup> and the Environmental Protection Agency's (EPA's) 2012 Recreational Water Quality Criteria, we have determined that there are now additional tests that should be used to screen water quality. Accordingly, we are proposing to amend the bacterial standards in § 3.106(b) to reflect some of these current testing measures. We also propose to make other changes in the requirements for testing if high levels of bacteria are found. These changes are discussed below.

#### Coliform Testing

Most of the marine mammal standards were originally promulgated in 1979. The bacterial standards of § 3.106(b)(1) were based on the drinking water quality standards of that time and focused on coliform bacteria. Based on testing methods used during that time, the unit of measure was "most probable number" (MPN), a statistical measurement based on inoculation series (dilution series) using 1 mL aliquots of the sample. Usually 5–10 samples (diluted by powers of 10) were incubated and the actual number of bacteria present was estimated for a 100 mL sample.

With the advent of filtration techniques, the MPN method was no longer used as the sole measure of bacterial contamination in water samples. With MPN, actual numbers of bacteria in a 100 mL sample could now be measured and counted.<sup>17</sup>

As with other areas of technology, test kits have been developed to test for coliforms. These kits focus on enzymes and characteristic chemical properties

<sup>16</sup> Van Bonn, William, et al. (eds.), "Maintaining Healthy Marine Mammal Pools," draft/ correspondence (2015). Venn-Watson, S., et al., "Primary bacterial pathogens in bottlenose dolphins *Tursiops truncatus*: Needles in haystacks of commensal and environmental microbes," *Dis. Aquat. Organ.* (2008) 79(2): 87–93. IAAAM Water Quality Workshop 2015, notes. Health and Ecological Criteria Division, Office of Science and Technology, EPA, Office of Water 820–F–12–058 "Recreational Water Quality Criteria." Donlan, R.M., "Biofilms: Microbial life on surfaces," *Emerg. Infect. Dis.*, (2002) 49(1): 1–5.

<sup>17</sup> An example of this method is the Millipore filter kits that use differential media to grow only coliforms. Individual colonies could be re-plated and grown for identification if specific coliform type was needed, although most media provided a characteristic sheen to the fecal coliform colonies.

to simplify bacterial testing and identification. The EPA is responsible for setting Recreational Water Quality Criteria recommendations for primary contact recreational uses (*i.e.*, swimming and similar water contact activities). The EPA has also produced documents explaining how alternative methods and indicators can be used in place of standard filtration methods.

The bacterial standards requirements in this section are devised to not only protect the health and well-being of the marine mammals housed in the enclosures, but to conform with the EPA and related standards that address human activities, such as swimming (interactive programs). Accepted criteria recommendations in place at the time of implementation of the current standards (1984) have been in use since that time. APHIS has not found that marine mammal facilities routinely have compliance issues with these historic requirements. We do acknowledge that testing techniques and accepted criteria recommendations have changed since 1984, and we are proposing to update this section to reflect those changes. We are requesting data and references that would support or refute these criteria.

The AWA does not require a specific methodology for coliform testing, but rather defines an upper limit for total coliforms. If the methodology selected provides an actual colony count, then that is interchangeable with MPN.

Current paragraph (b)(1) of § 3.106 provides that the coliform bacteria count of the primary enclosure pool shall not exceed 1,000 MPN per 100 mL of water. Should the coliform bacterial count exceed 1,000 MPN, two subsequent samples may be taken at 48-hour intervals and averaged with the first sample. If the average count does not fall below 1,000 MPN, then the water in the pool is deemed unsatisfactory, and the condition must be corrected immediately.

Paragraph (b)(3) of § 3.106 requires water samples to be taken and tested on a weekly basis for coliform count. We are proposing that the coliform count can be either a total coliform count or a fecal coliform count. In the case of a total coliform count, we propose that the coliform count shall not exceed 500 colonies per 100 mL. If a fecal coliform test is used, we propose that the fecal count shall not exceed 400 colonies per 100 mL.<sup>18</sup> While total or fecal coliforms

<sup>18</sup> Van Bonn, William, et al. (eds.), "Maintaining Healthy Marine Mammal Pools," draft/ correspondence (2015). Venn-Watson, S., et al., "Primary bacterial pathogens in bottlenose dolphins *Tursiops truncatus*: Needles in haystacks of commensal and environmental microbes," *Dis.*

are one indicator of fecal contamination, they may not be the best sole criteria for determining true fecal contamination or the health of the water that marine mammals live in. Therefore, in addition to a total coliform or fecal coliform test, we propose to require that one<sup>19</sup> of the following tests also be conducted on a weekly basis:

Enterococci count (count shall not exceed 35 colonies per 100 mL); or  
Pseudomonas count (count shall not exceed 10 colonies per 100 mL); or  
Staphylococcus count (count shall not exceed 10 colonies per 100 mL).

These tests are used to indicate fecal contamination as well as pathogens in the water. Enterococci are bacteria that are primarily from the intestinal tract and can be a sensitive indicator of fecal contamination. If a facility only performs a total coliform test, this test would indicate the fecal portion of the coliform contamination. Pseudomonas is a bacterial pathogen very common to lung infections in marine mammals. Its presence in a water sample may indicate either an infection on an animal or the contamination of the environment of the animal with pathogenic bacteria. Staph bacteria can be pathogenic or non-pathogenic in all animals. It is a skin pathogen, and can also cause infections internally. Its presence can be an indicator of contamination and/or possible danger to the animals. We would require that one of these other bacterial tests be conducted, in addition to a total coliform or fecal coliform test, in order to obtain a more complete picture of the water quality of facilities housing marine mammals.

We propose to redesignate current § 3.106(b)(2), which covers chemical treatment of water, and § 3.106(b)(3), which concerns water sampling procedures, as § 3.106(b)(4) and § 3.106(b)(5), respectively, to accommodate the addition of new paragraphs § 3.106(b)(2) and (b)(3).

Proposed new paragraph § 3.106(b)(2) provides that if any of the above tests yield results that exceed the allowable bacterial count levels, then two followup samples must be taken to repeat the tests(s) for those bacterial contaminants identified as being present at levels exceeding the standards. The first followup sample would have to be taken immediately after the initial test result, while the second followup

sample would have to be taken within 48 hours of the first followup sample. This timing requirement would differ from the existing standard in § 3.106(b), which provides that the two followup samples may be taken at 48-hour intervals.

The rationale regarding retesting after 48 hours is based on the fact that the lab testing (inoculation or filtration and incubation) takes 48 hours.<sup>20</sup> Regardless of testing methods and timing, § 3.106(a) should be the overriding consideration; the water must not be harmful to the animals. This means if high bacterial levels are found, they should be addressed immediately. Although we require averaging of test results when retesting, the goal is to get the coliform count below 500 (proposed standard) as soon as possible.

This amendment is to clarify the timing of the follow-up test. At it currently reads, some entities interpret the testing to be after the first test results are known. The coliform test, if using traditional microbiological techniques (culture and incubation) takes 48 hours. If the first test is 500 (proposed) MPN, the retesting should be done immediately (relative to knowing the test results).

In the last 3 years, approximately four citations issued to marine mammal facilities involved high coliform counts without the required retesting.

Over the years there has been some confusion among regulated facilities and inspectors as to exactly when the followup samples should be taken. This change would address this problem by clarifying that the first followup sample has to be carried out immediately following the initial test result and the second followup sample has to be taken within 48 hours of the first followup sample. We would continue to require that the test results of the three samples be averaged and, if the averaged value of the three samples still exceeds the allowable bacterial counts referenced above, then the pool water would be considered unsatisfactory and its condition would have to be corrected immediately.

Proposed new paragraph § 3.106(b)(3) would provide that additional testing for suspect pathogenic organisms must be conducted when there is evidence of health problems at the facility or a potential health hazard to the animals. In the past, we have suspected that water-borne pathogens contributed to the poor health of animals at certain

facilities; however, the regulations did not require additional testing for pathogens. This change would address that issue in the regulations.

As discussed above, we would redesignate current § 3.106(b)(2) as § 3.106(b)(4). That paragraph provides that whenever the water is chemically treated, the chemicals shall be added so as not to cause harm or discomfort to the marine mammals, such as eye and skin irritation. We propose to amend the standard to state that any chemicals added to a pool must not cause harm or discomfort to the marine mammals during the introduction of the chemical or during the chemical's presence in the enclosure (in the water, on the surfaces, or in the air). This change would clarify that the health, safety, and welfare of the marine mammals must be taken into consideration not only when chemicals are added to the water, but whenever chemicals are present in and around the water.

As discussed previously, we would redesignate current paragraph § 3.106(b)(3) as § 3.106(b)(5). That paragraph contains the standards for water sampling and states that water samples shall be taken and tested at least weekly for coliform count and at least daily for pH and any chemicals (e.g., chlorine and copper) that are added to the water to maintain water quality. Facilities that use natural seawater must test for coliforms, but are exempt from pH and chemical testing unless chemicals are added to the seawater to maintain water quality. Records must be kept that document when samples are taken and the test results. Records of the test results must be maintained by management for a 1-year period and must be made available for inspection by APHIS upon request.

We would remove the references to coliform testing in paragraphs (b)(1) and (b)(3) of § 3.106, since this subject would be covered in proposed § 3.106(b)(1). Under proposed § 3.106(b)(5), we would continue to provide that facilities must conduct daily testing for pH, as well as for any chemicals (e.g., chlorine, ozone, and copper) that are added to the water. We propose to add a new requirement that the water also be tested daily for salinity to ensure conformance with the salinity standards set out in proposed § 3.106(c). We would remove the reference to "facilities using natural seawater" and substitute in its place the term "natural lagoon and coastal enclosures." Facilities consisting of natural lagoon or coastal enclosures would continue to be exempt from pH testing but would be subject to testing for salinity, as well as

Aquat Organ, (2008) 79(2): 87–93. Health and Ecological Criteria Division, Office of Science and Technology, EPA, Office of Water 820–F–12–058 "Recreational Water Quality Criteria."

<sup>19</sup> While we would not require a facility to conduct more than one of these tests on a weekly basis, we would encourage facilities to conduct several of these tests weekly.

<sup>20</sup> In APHIS' view, the intent was to retest immediately if the results (48 hours after the initial sampling) exceed the 1000 MPN limit. Logic and bacteriology dictate that the first resample should be at 48 hours from the initial sample.

testing for any chemicals that have been added.<sup>21</sup>

Finally, we would move the discussion of water sampling recordkeeping from current § 3.106(b)(3) to a new paragraph, § 3.106(b)(6). This amendment would require that all water quality records be kept on site, not at a management office if that is located elsewhere. This will save APHIS time and effort in reviewing the records. APHIS needs to review the records at every inspection, as assessing the bacterial loads and the chemical make-up of the water is necessary to ensuring the health and welfare of the animals. For example, by reviewing such records, chlorine levels could be correlated with the eye issues of the animals in the enclosure. Identifying a probable cause not only will improve the welfare and health of the animal, but may speed the diagnosis of the underlying issue so that proper care can be provided.

We would also require that, in addition to noting the time of testing, the facility must document the date and location of the testing, including the particular pool and the sampling site within the pool. We would continue to provide that the records be maintained for a 1-year period. However, instead of providing that the records be maintained “by management,” which could be at a location away from the facility, we propose to require that the records be maintained “at the facility.” This would ensure that the records would be readily available to APHIS inspectors during inspections. We would also clarify the current requirement that records “must be made available for inspection purposes on request” to instead state that the records “must be made readily available to APHIS inspectors.”

Paragraph (c) of § 3.106 contains the salinity standards for primary enclosure pools, providing that such pools of water shall be salinized for marine cetaceans as well as for those other marine mammals which require salinized water for their good health and well-being. The current standards provide that water salinity shall be maintained within a range of 15–36 parts per thousand.

We are proposing to amend the salinity standards in § 3.106(c) to reflect the current level of scientific knowledge

and accepted industry practices. Specifically, instead of providing that the salinity standards shall apply “to marine cetaceans and other marine mammals that require salinized water for their good health and well-being,” we would be more specific in stating that “all primary enclosure pools must be salinized for cetaceans, pinnipeds, and sea otters.” However, we would specifically exempt from this requirement enclosures housing river dolphins and other species in fresh water, as well as enclosures housing pinnipeds that are provided salt supplements at appropriate levels, as determined by the attending veterinarian, and daily saltwater eye baths. We expect this will minimize additional costs and renovations at existing facilities.

We are also proposing to amend the currently required salinity range of 15–36 parts per thousand to a range of 24–36 parts per thousand in order to more closely approximate the salinity levels marine mammals encounter in their natural environments beyond certain coastal areas.<sup>22</sup> However, in the case of natural lagoon or coastal enclosures, where salinity can be lower due to mixing with freshwater sources entering into the oceans, we would require that the salinity level be no less than 15 parts per thousand, which is the lower limit of the currently allowed salinity range. If the salinity level falls below this level in such enclosures, the marine mammal facilities would have to temporarily house the animals in another enclosure where salinity can be controlled. We would further provide that the salinity requirements in § 3.106(c) would not preclude the use of other salinity levels when prescribed by the attending veterinarian to treat a specific medical condition or conditions. This proposed standard is not intended to limit treatment options prescribed by the attending veterinarian.

The benefits of requiring salinity monitoring and increasing the lower limit that is acceptable will benefit the health and well-being of the animals by maintaining pools closer to the actual conditions the animals would find in nature. The combination of the requirements regarding salinity will allow our inspectors to better assess the welfare of the marine mammals and potentially prevent any ongoing eye<sup>23</sup> or skin problems that can be associated with salinity issues.

Paragraph (d) of § 3.106 currently covers filtration and water flow. We are proposing to redesignate § 3.106(d) as § 3.106(e). In addition, we propose to add that water quality may also be maintained through naturally occurring tidal flow. This change would address those facilities with natural lagoon or coastal enclosures.

Finally, we propose to add a new § 3.106(d) covering the subject of water clarity. Although this subject is addressed generally in § 3.106(a), in recent years members of the public have contacted APHIS to express concern over the appearance of pool water at facilities. For our purposes, we believe pool water should be clear enough for caretakers to observe the animals. Therefore, under proposed § 3.106(d), we would require that pools be maintained in such a manner as to provide sufficient water clarity to view the animals in order to observe them and monitor their behavior and health. This performance-based requirement would provide flexibility while ensuring that the animals can be observed at any depth or placement in the pool in order to promote their health and well-being. If an animal cannot be observed clearly, it cannot be provided adequate animal welfare.

#### Interactive Programs

Section 3.111 contains additional regulatory requirements covering swim-with-the-dolphin (SWTD) programs. Specifically, § 3.111 includes provisions relating to space requirements, water clarity, employees and attendants, program animals, handling, recordkeeping, and veterinary care.

As previously discussed, in 1999 we suspended enforcement of the SWTD requirements found in § 3.111 and related definitions found in § 1.1. At that time, we solicited public comment on all aspects of the suspended regulations and on all human/marine mammal interactive programs. We accepted comments until July 1, 1999, and received 20 comments by that date.

The proposed changes to § 3.111 are based on the information contained in those comments; on our review of the comments received in response to the January 23, 1995, proposed rule; on information made available to us by the public following publication of the September 4, 1998, final rule; on our review of the ANPR comments; and on our experience enforcing the Act and the regulations. The proposed changes to § 3.111 are intended to address the need to monitor interactive programs, while giving consideration to program

<sup>21</sup> Enclosures that are not explicitly sea pens would need to be monitored and salinity adjusted as needed. There are approximately five facilities that pump sea water directly into on-land enclosures. These facilities would need to be monitored and salinity adjusted. The salinity adjustments would likely be for only 1–2 weeks a year to compensate for excessively rainy periods that would decrease salinity near the input pipes.

<sup>22</sup> [http://sam.ucsd.edu/sio210/lect\\_2/lecture\\_2.html](http://sam.ucsd.edu/sio210/lect_2/lecture_2.html); SIO 210 Talley Topic 2: Properties of seawater, Lynne Talley, 2000.

<sup>23</sup> See footnote 13.

histories,<sup>24</sup> enforcement history, information and scientific documentation on the effects of interactive programs on marine mammals, the general health and well-being requirements already in effect regarding marine mammals, and the need to avoid promulgation of redundant provisions. We set forth the proposed standards as performance-based standards wherever we believe such an approach is feasible and supportable by current information and scientific documentation.

Throughout proposed § 3.111, we would use the term “marine mammal(s)” in place of “cetaceans.” We would also use the term “interactive program(s)” in place of SWTD program(s). These changes are designed to clarify that programs may involve animals other than cetaceans (*i.e.*, sea lions) and may involve activities other than swimming with the animal (*i.e.*, programs where the participants sit on a dock or ledge, including therapeutic sessions).

The current introductory paragraph to § 3.111 provides that SWTD programs shall comply with the requirements in this section, as well as with all other applicable requirements of the regulations pertaining to marine mammals. We propose to amend this introductory paragraph to more specifically provide that all marine mammal interactive programs must comply in all respects with the regulations set forth in 9 CFR parts 2 and 3, which address animal welfare.

Paragraph (a) of § 3.111 provides the space requirements for the primary enclosure used by animals in an interactive program. This includes the interactive area, a buffer area, and the sanctuary area. The regulations provide that none of these areas shall be made uninviting to the animals, and that movement of cetaceans into the buffer or sanctuary area shall not be restricted in any way. The space requirements for each of the three areas are based upon the “horizontal dimension,” the minimum surface area, the average depth, and minimum volume.<sup>25</sup> The

horizontal dimension for each area must be at least three times the average adult body length of the species of cetacean used in the program. The minimum surface area required for each of the three areas is calculated as follows:

- Up to two cetaceans: Surface area =  $(3 \times \text{average adult body length}/2)^2 \times 3.14$ ;
- Three cetaceans: Surface area =  $(3 \times \text{average adult body length}/2)^2 \times 3.14 \times 2$ ; and
- Additional surface area for each animal in excess of three: Surface area =  $(2 \times \text{average adult body length}/2)^2 \times 3.14$ .

Generally, the average depth for sea pens, lagoons, and similar natural enclosures at low tide shall be at least 9 feet. The average depth for manmade enclosures or other structures not subject to tidal action shall also be at least 9 feet. The minimum volume required for each animal must equal 9 times the minimum surface area.

We are proposing that the sanctuary area for interactive programs meet the space requirements set forth in current and proposed § 3.104. The interactive area, however, would not have to meet the space requirements set forth in proposed § 3.104. Instead, we are proposing to require that the interactive area provide sufficient space for all marine mammals to freely swim or move about, consistent with the type of interaction. We believe that this performance-based standard would provide flexibility while promoting the health and well-being of the animals. We seek comment on this, and request any published scientific data or studies on this issue.

We are also proposing to remove the requirement for a separate buffer area. We are removing this requirement because we have found that it is unnecessary to require both a buffer area and a sanctuary area as long as the animal has unrestricted access to a sanctuary area. The intent of the buffer area was to provide a place where the animals could leave the interactive area but still be eligible for recall to the interactive area. This requirement has not been shown to be necessary for the welfare of the animals during the 20 years that these programs have been under USDA jurisdiction, and the requirement of no recall from the sanctuary area is sufficient to safeguard the animals during the interactive sessions. The sanctuary area is sufficient to safeguard the animal during the interactive sessions.

in the enclosure to be able to breathe at the surface and have a degree of freedom of movement while at the surface.

As proposed, § 3.111(a) would provide that each animal must have unrestricted access to the interactive area and the sanctuary area during an interactive session. Neither area shall be made uninviting to the animals. As previously discussed, the interactive area would not have to meet the minimum space requirements set forth in proposed § 3.104, but it must provide sufficient space for all marine mammals to freely swim or move about, consistent with the type of interaction, even with a full complement of public participants and employees in the area. We propose to require that the sanctuary area meet the minimum space requirements provided in § 3.104. Proposed paragraph (a) of § 3.111 would also provide that the sanctuary area may be within the enclosure containing the interactive area or it may be within a second enclosure to which free and unrestricted access is provided during the interactive session. The degree of free and unrestricted access would be assessed by the facility and the inspector through observation of whether the animals move freely between the areas during non-interactive periods.

Under current § 3.111(b), interactive programs are subject to certain water clarity standards. Paragraph (b) provides that sufficient water clarity be maintained so that attendants are able to observe cetaceans and humans at all times while within the interactive area. If water clarity does not allow these observations, the interactive sessions shall be canceled until the required clarity is provided. We propose to make only one change to § 3.111(b). We would substitute the phrase “marine mammals and the human participants” in place of “cetaceans and humans” for the reasons discussed previously.

Paragraph (c) of § 3.111 sets forth the minimum qualification requirements for personnel associated with a SWTD program. Each program must have a licensee or manager with at least 6 years of experience dealing with captive cetaceans; at least one head trainer/behaviorist with at least 6 years of experience in training cetaceans for SWTD behaviors, or an equivalent amount of experience involving in-water training of cetaceans; at least one full-time staff member with at least 3 years training and/or handling experience involving human/cetacean interaction programs; an adequate number of staff members who are adequately trained in the care, behavior, and training of the program animals; and at least one staff or consultant veterinarian who has at least the equivalent of 2 years full-time experience with cetacean medicine

<sup>24</sup> We note that interactive programs have been operating for over 20 years without any indications of health problems or significant and ongoing incidents of aggression in marine mammals, as evidenced by medical records maintained by licensed facilities and observations by experienced APHIS inspectors.

<sup>25</sup> The space requirements, as promulgated in 1984, were based on circular pools, as most if not all pools were circular at that time. Many pools today are neither circular nor rectangular, but rather more natural curved shapes. The AWA requirements mean that there will be at least the minimum area in the pool, which is sufficient space at the surface of the pool for all marine mammals

within the past 10 years, and who is licensed to practice veterinary medicine.

We are proposing to amend § 3.111(c) so that personnel qualifications are not based entirely on job titles and absolute years of experience and training. We would instead provide standards that are based on the level of knowledge and skill needed to be a head trainer, or other trainers and attendants. This would provide the licensee or registrant greater flexibility to hire the most qualified individuals. We would also remove from § 3.111(c) the specific standards for the attending veterinarian. We believe that the current requirements in § 2.40 and § 3.110 provide sufficient oversight and guidance on this subject; interactive programs have not been shown to need additional restrictions.

In proposed § 3.111(c), we would change the heading from “Employees and attendants” to “Employees.” We propose to require that each interactive program have a sufficient number of adequately trained personnel to meet the husbandry and care requirements for the animals and comply with all training, handling, and attendant requirements of the regulations. We propose to provide that, during interactive sessions, there must be a trainer, handler, and sufficient number of adequately trained attendants, as specified in § 3.111(d)(4), which is discussed below.

In proposed § 3.111(c)(1), we would require that the head trainer/supervisor of the interactive program have demonstrable in-depth knowledge of the husbandry and care requirements of the family and species of marine mammals being exhibited, demonstrable knowledge of and skill in currently accepted professional standards and techniques in animal training and handling, and the ability to recognize normal and abnormal behavior and signs of behavioral stress in the animal families and species being exhibited. This proposed standard would differ from the current regulations, which focus on the person having a specific number of years of appropriate experience.

In proposed § 3.111(c)(2), we would require that all interactive program trainers and attendants have the knowledge and skill level sufficient to safely conduct and monitor an interactive session.

Current paragraph (d) of § 3.111 specifies what animals are eligible to participate in SWTD programs, providing only for cetaceans that meet certain requirements with respect to training and conditioning in human

interaction, as well as being under the control of a trainer, handler, or attendant during sessions with the public as described and defined in the NOAA-sponsored study by Samuels and Spradlin (1994 and 1995) cited above. Such animals must also be in good health. We are proposing to remove this paragraph in its entirety, removing the provision that limits program animals to cetaceans. The standards relating to conditioning, the presence of trainers or attendants, and animal health are sufficiently covered in other paragraphs of § 3.111.

The introductory text of current paragraph (e) of § 3.111 covers the handling of cetaceans used in interactive sessions. With the removal of § 3.111(d) on program animals, we would redesignate § 3.111(e) as § 3.111(d), as well as make a number of other changes to simplify and clarify the handling requirements.

Paragraph (e)(1) of § 3.111 provides that the interaction time for “each cetacean” shall not exceed 2 hours per day and that each program cetacean shall have at least one period in each 24 hours of at least 10 continuous hours without public interactions. In newly designated § 3.111(d)(1), we propose to provide that the interactive time between marine mammals and the public (*i.e.*, interactive session) not exceed 3 hours per day. We are making this change based on information provided by licensees with long-standing interactive programs involving, for example, bottlenose dolphins, beluga whales, spinner dolphins, California sea lions, and harbor seals, which suggested that the marine mammals would not be harmed by a modest increase in interactive time per day, and a study of Atlantic bottlenose dolphins showing that interactive programs can be an important part of an enrichment program.<sup>26</sup> The requirement of at least 10 continuous hours without public interactions would remain in effect. We request data or evidence supporting or opposing this change.

Paragraph (e)(2) of § 3.111 provides that cetaceans used in interactive sessions shall be adequately trained and conditioned in human interaction, with the head trainer/behaviorist, trainer/supervising attendant, or attendant maintaining control of the nature and

extent of the animal’s interaction with the public at all times consistent with the findings and recommendations in the NOAA-sponsored study by Samuels and Spradlin (1994 and 1995) cited above. In newly designated § 3.111(d)(2), we propose to simplify this requirement to apply to the “trainer, handler, or attendant.”

Newly designated § 3.111(d)(3) would parallel § 3.111(e)(3) of the current regulations by requiring that marine mammals be free of infectious disease and in good health. In addition, we would provide that marine mammals undergoing veterinary treatment may be used in interactive sessions only with the written approval of the attending veterinarian.

Current paragraph (e)(4) of § 3.111 provides that the ratio of human participants to cetaceans shall not be greater than 3 to 1. Paragraph (e)(4) also provides that the ratio of human participants to attendants or other authorized SWTD personnel (*i.e.*, head trainer/behaviorist or trainer/supervising attendant) shall also not exceed 3 to 1. In newly designated § 3.111(d)(4), instead of requiring the presence of a fixed number of certain personnel, we propose to require that there be a sufficient number of session attendants (which includes trainer, handler, or attendants) to effectively conduct the session in a safe manner. We propose this requirement based on the fact that the number of human participants and marine mammals swimming freely during such a session would determine the number of attendants needed to monitor and ensure the safety of all animal and human participants. This situation is different from a session in which fewer animals are used and participants are restricted to staying on a wharf or standing in shallow water.

We also propose to require at least one attendant per marine mammal in the session, and at least one attendant positioned to monitor each session. We would also provide that the number of public participants per marine mammal must not exceed the number that the attendant can monitor safely, appropriate to the type of interactive session.<sup>27</sup> These changes are intended to take into account the differences between shallow-water interactive programs (*i.e.*, sessions during which the marine mammal remains relatively

<sup>26</sup> See also L.J. Miller, J. Mellen, T. Greer, S.A. Kuczaj II, “The effects of education programs on Atlantic bottlenose dolphin.” *Animal Welfare* (2011): 159–172, for a discussion on interactive time limits. We acknowledge that while a limited number of species other than bottlenose dolphins are used in interactive programs, there is scant published scientific information available on the effect of education programs on these species.

<sup>27</sup> The number of attendants required to monitor each session may vary by facility according to how many are needed to ensure the safety of the animals and human participants involved in the interactive session. The programs are observed routinely by the attending veterinarian and the APHIS inspector to ensure safe functioning of the program.

stationary) and other interactive programs. We believe these changes would provide greater flexibility to interactive programs while still ensuring proper supervision to ensure the health and safety of marine mammals and human participants. We seek comment on this, and on any data or studies that support or refute this requirement.

Paragraph (e)(5) of § 3.111 provides that, prior to participating in an SWTD interactive session, public participants shall be provided with oral and written rules and instructions for the session, to include the telephone and fax numbers for APHIS, Animal Care, for reporting injuries or complaints. Public participants must agree in writing to abide by the rules and instructions before participating in an interactive session. Any public participant who fails to follow the rules or instructions will be removed from the interactive session by the facility.

Under newly redesignated § 3.111(d)(5), we would continue to require that participants be provided with oral rules and instructions prior to participating in the session; however, we propose to remove the requirement that participants must agree in writing to abide by the rules and instructions before being allowed to participate in the session. This requirement is unnecessary since we can enforce the regulations whether or not a participant has signed such an agreement. We would add a requirement that a copy of the written rules be made available to APHIS during an inspection. Furthermore, instead of requiring that participants be provided telephone and FAX numbers for APHIS, Animal Care, for reporting injuries or complaints, we propose to require that participants be provided with contact information for the appropriate Animal Care Field Operations office. We propose that this could be provided either in the form of a written handout to attendees, or in a notice, posted in a highly visible location, that summarizes the rules and instructions for the session and includes contact information for the appropriate Animal Care Field Operations office for reporting injuries or complaints.

We would also clarify the grounds for expelling session participants by providing that any participant who fails to follow the rules and instructions and jeopardizes human or animal safety or health must be immediately removed from the session by the facility management.

Paragraph (e)(6) of § 3.111 provides that all interactive sessions shall have at least two attendants or other authorized personnel (*i.e.*, head trainer/behaviorist or trainer/supervising attendant). At

least one attendant shall be positioned out of the water, while one or more attendants or other authorized personnel may be positioned in the water. If a facility has more than two incidents (defined as when a participant or an animal has been harmed or the marine mammal exhibits aggression) during interactive sessions within a year's time span involving human or animal injury or aggression by the animal, APHIS, in consultation with the head trainer/behaviorist, will determine if changes in attendant positions are needed.

We are proposing to remove paragraph (e)(6) in its entirety. The requirements regarding the presence of session attendants at an interactive session would be covered as part of newly designated § 3.111(d)(4). Proposed § 3.111(d)(4) would require that there be at least one attendant per marine mammal in the session, and at least one attendant positioned to monitor the session. However, the new standards in proposed § 3.111(d)(4) would not include specific language requiring APHIS consultations with the trainer to discuss personnel changes in cases where the facility has had more than two session incidents over a year's time that would be considered dangerous or harmful to the animal or the human participant. We do not believe this provision is necessary based on the available accident and injury data and taking into account our authority under the Act to respond to any incident.

Current paragraph (e)(7) of § 3.111 provides that all SWTD programs shall limit interaction between cetaceans and humans so that the interaction does not harm the cetaceans, does not remove the element of choice from the cetaceans by actions such as, but not limited to, recalling the animal from the sanctuary area, and does not elicit unsatisfactory, undesirable, or unsafe behaviors from the cetaceans. All SWTD programs shall prohibit grasping or holding of the cetacean's body, unless under the direct and explicit instruction of an attendant eliciting a specific cetacean behavior, and shall prevent the chasing or other harassment of the cetaceans.

We propose to amend these provisions to simplify and clarify them. The amended standards would be located in newly designated § 3.111(d)(6) and in a new § 3.111(d)(7). In newly designated § 3.111(d)(6), we would provide that all interactive programs would have to limit interactions between marine mammals and human participants so that the interaction does not present an undue risk of harm to the marine mammal or

humans, and does not restrict by word, action, or enclosure design, the ability of the animal to leave the interactive area and session as it chooses. Recalling animals from the sanctuary area would still not be allowed. If an animal removes itself or is removed from a session, the facility must maintain the appropriate balance of public participants per marine mammal, as discussed previously under proposed § 3.111(d)(4), by either removing human participants from the interactive area or introducing another animal.

In proposed § 3.111(d)(7), we would provide that all interactive programs must prohibit grasping or holding of the animal's body unless it is done under the direct and explicit instruction of the attendant. In addition, we would provide that all interactive programs must prohibit the chasing or other harassment of the animal(s). The proposed language in newly redesignated § 3.111(d)(7) would closely parallel requirements that appear in the current § 3.111(e)(7).

Paragraph (e)(8) of § 3.111 provides that, in cases where cetaceans exhibit unsatisfactory, undesirable, or unsafe behaviors during an interactive session, including, but not limited to, charging, biting, mouthing, or sexual contact with humans, such cetaceans shall either be removed from the interactive area or the session shall be terminated. Written criteria shall be developed by each SWTD program, and shall be submitted to and approved by APHIS regarding conditions and procedures for maintaining compliance with the required ratios of human participants to cetaceans and human participants to attendants, procedures for the termination of a session when removal of a cetacean is not possible, as well as procedures for handling program animals exhibiting unsatisfactory, undesirable, or unsafe behaviors, including retraining time and techniques, and removal from the program and/or facility, if appropriate. Paragraph (e)(8) provides that the head trainer/behaviorist shall determine when operations will be terminated, and when they may resume. In the absence of the head trainer/behaviorist, the determination to terminate a session shall be made by the trainer/supervising attendant. Only the head trainer/behaviorist may determine when a session may be resumed.

We would redesignate § 3.111(e)(8) as § 3.111(d)(8). In newly designated § 3.111(d)(8), we propose to provide that marine mammals that exhibit unsatisfactory, undesirable, or unsafe behaviors, including, but not limited to, charging, biting, mouthing, or sexual

contact with humans, must be removed from the interactive session immediately, or, if the animal cannot be removed, that the session be terminated. We propose to remove the requirement that the facility's staff determine when operations or sessions at the facility shall be terminated and when they resume. The focus would instead switch to the marine mammal(s) in question. We would provide that such animals must not be used in an interactive session until the trainer determines that the unsatisfactory, undesirable, or unsafe behavior is no longer being exhibited by the marine mammal. We would also simplify the requirements regarding the facility having a written plan in place in the case of a disruption due to the behavior of one or more marine mammals. We propose to require that written criteria that addresses the termination of a session due to such behavior and the retraining of such an animal be developed and maintained at the facility, and also be made available to APHIS during inspection or upon request. The written criteria must also disclose how the facility would maintain session staffing requirements, as provided in proposed § 3.111(d)(4), in the event of a disruption caused by one or more marine mammals during a session.

Paragraph (g) of § 3.111 requires that the attending veterinarian carry out certain duties with regard to animals used in interactive programs. This includes on-site evaluations of each cetacean at least once a month, as well as examination of related behavioral, feeding, and medical records, and discussion of each animal with the appropriate animal care personnel at the facility. The attending veterinarian must record the nutritional and reproductive status of each cetacean. The attending veterinarian must also observe an interactive session at the facility at least once a month. In addition, the attending veterinarian is required to conduct a complete physical examination of each cetacean at least once every 6 months, which must include a complete blood count and serum chemistry analysis, as well as the taking of smear tests for cytology and parasite evaluation. The attending veterinarian is responsible for examining water quality records. Paragraph (g) of § 3.111 also provides a timetable for conducting a necropsy in the event a cetacean dies. Complete necropsy results, including all appropriate histopathology, shall be recorded in the cetacean's individual file and shall be made available to APHIS officials during facility inspections, or as requested by APHIS.

We would remove § 3.111(g) as written and provide a new paragraph, § 3.111(e), on veterinary care. In response to the large number of comments on the lack of supporting evidence for requiring veterinary care measures beyond those required for all other marine mammals, we would provide that the facility would have to comply with all provisions in §§ 2.33, 2.40, and 3.110. Section 2.33 contains provisions on attending veterinarians and adequate veterinary care at research facilities, while § 2.40 contains provisions on attending veterinarians and adequate veterinary care applicable to animals held by dealers or exhibitors of animals. Section 3.110 provides veterinary care standards for marine mammals generally, as well as necropsy requirements should a marine mammal die in captivity. In addition to meeting the requirements of §§ 2.33, 2.40, and 3.110, proposed § 3.111(e) would require the attending veterinarian to observe an interactive session at least once a month or observe each interactive session if they are offered less frequently than twice a month, and review the feeding records, behavior records, and water quality records at least biannually or as often as needed to assure the health and well-being of the marine mammals.

Paragraph (f) of § 3.111 contains the recordkeeping requirements for facilities with interactive programs. We are proposing to amend § 3.111(f) by streamlining its content to reduce the burden on the regulated parties while continuing to require certain documentation for effective enforcement of the regulations and standards.

Paragraph (f)(1) of § 3.111 provides that each facility shall provide APHIS with a description of its program at least 30 days prior to initiation of the program, or not later than October 5, 1998 in the case of any program in place before September 4, 1998. The description shall include at least the following information: Identification of each cetacean in the program; a description of the educational content and agenda of planned interactive sessions, and the anticipated average and maximum frequency and duration of encounters per cetacean per day; the content and method of pre-encounter orientation, rules, and instructions; a description of the SWTD facility, including the primary enclosure and other SWTD animal housing or holding enclosures at the facility; a description of the training, including actual or expected number of hours each cetacean has undergone or will undergo prior to participation in the program; the resume of the licensee and/or manager, the head

trainer/behaviorist, the trainer/supervising attendant, any other attendants, and the attending veterinarian; the current behavior patterns and health of each cetacean, to be assessed and submitted by the attending veterinarian; for facilities that employ a part-time attending veterinarian or consultant arrangements, a written program of veterinary care (APHIS form 7002), including protocols and schedules of professional visits; and a detailed description of the monitoring program to be used to detect and identify changes in the behavior and health of the cetaceans.

In proposed § 3.111(f)(1), we would continue to require that each facility provide APHIS with a description of its program at least 30 days prior to initiation of the program, or in the case of any program in place before the date a final rule is published, not later than 30 days after the effective date of the final rule. We also propose to provide that facilities that submitted the required documentation during the period of October through December 1998, and received approval letters, need only submit information that has changed. These letters were issued to approximately 16 facilities.

In proposed § 3.111(f)(1)(ii), we would clarify that the session agenda would have to include, at a minimum, written information distributed, topics addressed prior to entry in the water, and the planned program, including behaviors and activities expected to be presented or performed. We propose to delete current § 3.111(f)(1)(iii), which requires that the program description cover pre-encounter orientation. A similar requirement would appear in proposed § 3.111(f)(1)(ii). With the deletion of § 3.111(f)(1)(iii), we would redesignate paragraphs (f)(1)(iv) through (f)(1)(vi) of § 3.111 as (f)(1)(iii) through (f)(1)(v).

Current paragraph (f)(1)(iv) of § 3.111 requires that the program description include a description of the SWTD facility, including the primary enclosure and other SWTD animal housing or holding enclosures at the facility. In newly designated § 3.111(f)(1)(iii), we propose to clarify this requirement by providing that the program description must include a description of the interactive program enclosures, including identification of nonsession housing enclosures, sanctuary area, and interactive area. All enclosures housing or used by program animals would have to be covered in the description.

Current paragraph (f)(1)(v) of § 3.111 provides that the program description cover the training each cetacean has undergone or will undergo prior to

participation in the program. This includes the actual and expected number of hours of training. We propose making this requirement more performance-based. In newly designated § 3.111(f)(1)(iv), we would instead require that the program description include verification from the trainer that the program animals have received adequate and appropriate training for an interactive program. We would not require that the training description specifically include the number of hours of actual or expected training. Paragraph (f)(1)(vi) of § 3.111 currently provides that the program description include the resume of the licensee and/or manager, the head trainer/behaviorist, the trainer/supervising attendant, any other attendants, and the attending veterinarian. We propose to amend this requirement in newly designated § 3.111(f)(1)(v) to provide that the facility description include documentation of the experience and training of the trainer, handler, attendants, and attending veterinarian.

We propose to eliminate the requirements, currently appearing in § 3.111(f)(1)(vii) through (ix), that the facility description include information regarding the current behavior patterns and health of each cetacean, a written program of veterinary care for facilities that utilize a part-time attending veterinarian or consultant, and a detailed description of the monitoring program to be used to detect and identify changes in the behavior and health of the cetaceans. These requirements are redundant to what would already be required elsewhere in the regulations for maintaining medical and behavioral records for marine mammals held in captivity.

Current paragraph (f)(2) of § 3.111 provides that all SWTD programs shall comply in all respects with the regulations and standards set forth in 9 CFR parts 2 and 3. We would remove this language. A similar requirement would instead appear in the introductory paragraph at the beginning of § 3.111.

Paragraph (f)(3) of § 3.111 requires that all individual animal veterinary records, including all examinations, laboratory reports, treatments, and necropsy reports, be kept at the facility site for at least 3 years, while § 3.111(f)(4) requires that the facility retain for at least 3 years individual feeding and behavioral records. These records must be made available to APHIS officials during inspection. We would combine the information provided in paragraphs (f)(3) and (f)(4) into one paragraph, newly designated § 3.111(f)(2), which would require that

medical, feeding, water quality, and any behavioral records be kept at the facility for at least 1 year. This is consistent with other recordkeeping requirements in the subpart. We would, however, continue to require that necropsy records be maintained for 3 years (§ 3.110(g)(2)). We would also continue to require that the records be made available to APHIS officials during inspection.

Paragraph (f)(5) of § 3.111 requires that the facility retain for at least 3 years certain statistical summaries involving the amount of time each day that animals participated in an interactive session, as well as the number of persons who participated in the interactive sessions per month. We propose to amend this requirement, to appear at newly designated § 3.111(f)(3), to instead provide that records of individual animal participation times (date, start time of interactive session, and duration) must be maintained by the facility for a period of at least 1 year and be made available to APHIS officials during inspection. It would no longer be necessary for facilities to maintain statistical summaries of the number of persons who participated in the interactive program each month.

Paragraph (f)(6) of § 3.111 requires the facility to submit on a semi-annual basis a description of any changes made in the SWTD program. We propose to remove this paragraph. A new paragraph addressing these requirements on program changes would appear as proposed § 3.111(f)(5), discussed below.

Current § 3.111(f)(7) provides that facilities must maintain records regarding all incidents resulting in injury to either cetaceans or humans participating in an interactive session. All such incidents shall be reported to APHIS within 24 hours of the incident and a written report of the incident that provides a detailed description of the incident and a plan of action for the prevention of further occurrences shall be submitted to the Administrator within 7 days. We would make certain changes to this provision, which would appear at newly designated § 3.111(f)(4). We propose to expand the applicability of this provision to apply not only in cases of injury to human participants or marine mammals, but also to other members of the public and facility staff. In addition, we propose to require that incidents that occur during training sessions also be reported. We would require this reporting so that we would have information about all incidents at a facility, not just those incidents involving members of the public, and we would be able to identify any

patterns or problem areas that need to be addressed. We would continue to require that the incident be reported to APHIS within 24 hours of its occurrence, with a written report to be submitted to APHIS within 7 days. We would clarify that the 7-day deadline means 7 calendar days. We would add that, in addition to detailing the incident, the written report must also describe the facility's response to the incident. We would no longer require that the written report specifically include a plan of action for the prevention of further occurrences. We are proposing the latter change as we have determined from experience that working directly with the licensee after an incident is a more timely and flexible means to ensure that adequate measures are in place to prevent such an incident from occurring again.

We propose to add a new paragraph, to appear at § 3.111(f)(5), which would provide that any changes to the interactive program, such as, but not limited to, personnel, animals, facilities (enclosures and interactive areas), and behaviors used, must be submitted to APHIS within 30 calendar days of the change. As long as the change is consistent with requirements, no additional approval from APHIS would be needed. If there is any question of the change being consistent with requirements, APHIS would relay the information to the inspector to discuss with the licensee. This requirement would replace an existing requirement found at § 3.111(f)(6) that provides that the facility must submit on a semi-annual basis a description of any changes made in the SWTD program.

#### Miscellaneous

We also propose to make a number of minor editorial changes in various sections for clarity and consistency.

#### *Executive Orders 12866 and 13563 and Regulatory Flexibility Act*

This proposed rule has been determined to be significant for the purposes of Executive Order 12866 and, therefore, has been reviewed by the Office of Management and Budget.

We have prepared an economic analysis for this rule. The economic analysis provides a cost-benefit analysis, as required by Executive Orders 12866 and 13563, which direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, and equity). Executive Order 13563 emphasizes the importance of

quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. The economic analysis also provides an initial regulatory flexibility analysis that examines the potential economic effects of this rule on small entities, as required by the Regulatory Flexibility Act. The economic analysis is summarized below. Copies of the full analysis are available by contacting the person listed under **FOR FURTHER INFORMATION CONTACT** or on the Regulations.gov Web site (see **ADDRESSES** above for instructions for accessing Regulations.gov).

Based on the information we have, there is no reason to conclude that adoption of this proposed rule would result in any significant economic effect on a substantial number of small entities. However, we do not currently have all of the data necessary for a comprehensive analysis of the effects of this proposed rule on small entities. Therefore, we are inviting comments on potential effects. In particular, we are interested in determining the number and kind of small entities that may incur benefits or costs from the implementation of this proposed rule.

We are proposing to amend six sections of 9 CFR part 3 subpart E: § 3.100 on variances and implementation dates; § 3.102 on indoor facilities; § 3.103 on outdoor facilities; § 3.104 on space requirements, § 3.106 on water quality; and § 3.111 on swim-with-the-dolphin programs. Objectives of this proposed rule are to provide regulated facilities with more flexibility in meeting the space requirements (§ 3.100); prevent the accumulation of chlorine/chloramine fumes, ammonia fumes, ozone, other gases, and odors;

maintain relative humidity; and provide lighting that simulates natural lighting patterns for healthy animal metabolism (§ 3.102); ensure proper air and water temperature standards, and provide shelter to protect animals from overheating and sunburn due to direct sunlight (§ 3.103); provide easy access and exit for pinnipeds, polar bears, and sea otters of all ages and infirmities to ensure that young, elderly, and ill or infirm animals are able to get out of the water to access their dry resting or social activity area (§ 3.104); provide water quality standards including requirements relating to bacterial standards, salinity, filtration, and water flow (§ 3.106); and address the need to avoid promulgation of redundant provisions and enable APHIS to again enforce regulations covering marine mammal interactive programs which have been suspended since 1999 (§ 3.111).<sup>28</sup>

The entities primarily affected by this proposed rule would be 115 facilities that handle or maintain marine mammals in captivity, such as aquariums, zoos, marine life parks, marine mammal rehabilitation and conservation facilities that are open to the public, and research facilities. Other stakeholders include, but are not limited to, organizations and individuals who are dedicated to improving the welfare of marine mammals in captivity, other Federal agencies that are responsible for the protection and conservation of marine mammals, as well as members of the general public who view and interact with marine mammals in captivity.

A total of 1,544 marine mammals are listed in the latest APHIS inspection data: Dolphins (35 percent), sea lions

(25 percent), and seals (21 percent) are the principal species housed at regulated facilities, followed by polar bears (5 percent), sirenians (4 percent), sea otters (3 percent), whales other than killer whales (3 percent), killer whales (2 percent) and walrus (1 percent). The number of marine mammals housed per facility varies from fewer than 4 animals (48 facilities or 42 percent of the 115 facilities) to over 50 animals (4 facilities or 3 percent of the total). Two-thirds of the 115 facilities currently house fewer than 9 marine mammals, and 13 facilities (11 percent) house more than 25 marine mammals. The average number of marine mammals housed is 13.

This proposed rule would directly impact these regulated facilities. Categories of expected benefits and costs of the proposed rule are summarized in Table 1.<sup>29</sup> As for the monetized costs, we estimate that one-time costs to the industry would total about \$131,000 to \$156,000 for providing easy access and exit ramps for pinnipeds, polar bears, and sea otters; individual visual barriers for sea otters; and portable refractometer for salinity testing. Annual recurring costs would total about \$574,000 to \$604,000 for shelters and bacterial testing for water quality. We estimate that the total additional annual revenue for the marine mammal interactive industry would be about \$23 million to \$24 million, but we lack data with which to estimate profits—which, rather than revenues, represent the benefits of this proposed rule’s interactive program provision. We encourage the public to provide information that would help us to refine these estimates.

TABLE 1—SUMMARY OF EXPECTED BENEFITS AND COSTS OF THE PROPOSED RULE

Sections	Expected benefits (Benefits are primarily qualitative and are not monetized)	Expected costs	
		One-time costs	Annual recurring costs
§ 3.100 Variance ...	Make this section operative again and provide more flexibility.	None .....	None.
§ 3.102 Indoor facilities.	<i>Ventilation</i> : Reduce risks of skin and mucous membrane irritation and bacterial and mold growth.	<i>Ventilation</i> : None .....	<i>Ventilation</i> : None.

<sup>28</sup> Refer to the “Interactive Programs” section of the proposed rule for more information on the enforcement of interactive programs.

<sup>29</sup> The proposed changes are intended to benefit the welfare of marine mammals in captivity. These benefits are included in the table without monetizing as no studies or models to quantify these benefits are available. Impacts for the individual facilities would vary due to the degree to which they are already in compliance with the proposed amendments, and because various approaches and applications could be used when

changes are needed. The proposed rule also includes certain changes that are for clarification purposes only, or for which the majority of affected entities are already in compliance. For these changes, we expect little or no associated economic impact, and they are therefore not included in the table.

TABLE 1—SUMMARY OF EXPECTED BENEFITS AND COSTS OF THE PROPOSED RULE—Continued

Sections	Expected benefits (Benefits are primarily qualitative and are not monetized)	Expected costs	
		One-time costs	Annual recurring costs
§ 3.103 Outdoor facilities.	<i>Lighting:</i> Ensure normal functioning of metabolic systems for animals and provide facility personnel sufficient light to observe animals and to operate safely.	<i>Lighting:</i> Expected to be small, if any, as most facilities are under compliance.	<i>Lighting:</i> Expected to be minimal, if any, due to increased energy-efficiency and longer-life of bulbs.
	<i>Environmental temperatures:</i> Clarify the requirements and help animals maintain their desired internal temperatures without stressing their metabolisms.	<i>Environmental temperatures:</i> Expected to be small, if any. (No citation in the last 3 years.)	<i>Environmental temperatures:</i> Expect little economic impact.
§ 3.104 Space requirements.	<i>Shelter:</i> Minimize overheating and sunburn of animals from direct and reflective sunlight. For pinnipeds, limit the severity of lens-related disease.	<i>Shelter:</i> None .....	<i>Shelter:</i> \$20,000–\$50,000 (Annual or biennial costs, based on 50 pools.)
	<i>Space requirements—general and species specific:</i> Clarify the requirements and update tables for average adult lengths and corresponding minimum space requirements.	<i>Space requirements—general and species specific:</i> None.	<i>Space requirements—general and species specific:</i> None.
§ 3.106 Water quality.	<i>Easy access and exit ramps and visual barriers:</i> Provide elderly, and ill or infirm animals with easy access to their dry resting areas, and, for sea otters provide safe resting spaces.	<i>Easy access ramps and visual barriers:</i> \$85,000–\$110,000 (Based on 50 fiberglass ramps @\$1,500–\$2,000 and 50 barriers @\$200).	<i>Easy access ramps and visual barriers:</i> None.
	<i>Bacterial standards and salinity testing:</i> Clarify and update the bacterial count and salinity requirements to ensure animals' health and well-being and to conform to the EPA and related standards that protect the health and well-being of humans in the water, such as when taking part in interactive programs.	<i>Bacterial standards:</i> None ..... <i>Salinity testing:</i> \$46,000 (Based on 460 pools and a cost of portable refractometer @\$100).	<i>Bacterial standards:</i> \$554,000 (Based on 460 pools, 20% lab-tests @\$85 per week and 80% on-site tests with \$7.70 test kit per week per pool). <i>Salinity testing:</i> None.
§ 3.111 Marine mammal interactive programs.	<i>On-site record keeping:</i> Allow APHIS inspectors to better access the animal welfare information to assess the animal health.	<i>On-site record keeping:</i> A small cost to create a new on-site filing for those facilities which keep records at a centralized location.	<i>On-site record keeping:</i> A small: None.
	<i>Water clarity, filtration and water flow:</i> Through performance based standards, provide flexibility while ensuring animals' well-being.	<i>Water clarity, filtration and water flow:</i> None.	<i>Water clarity, filtration and water flow:</i> None.
	<i>The program name and marine mammal species:</i> Provide consistency to the industry and bring other animals under the protection of interactive programs.	<i>The program name and marine mammal species:</i> None.	<i>The program name and marine mammal species:</i> None.
	<i>The interactive area:</i> Provide better use of resources while providing improved safety for animals and public participants.	<i>The interactive area:</i> None .....	<i>The interactive area:</i> None.
	<i>Minimum qualification requirements for program personnel:</i> Provide more flexibility in staffing decisions by focusing on an individual's needed knowledge, skills, and abilities.	<i>Minimum qualification requirements for program personnel:</i> None.	<i>Minimum qualification requirements for program personnel:</i> None.
	<i>Interactive time between animals and the public and the ratio of human participants to animal:</i> Proposed increase of daily interactive time from 2 hours to 3 hours could generate additional annual revenue of about <b>\$23 million–\$24 million</b> for the industry. (Assumptions—87 interactive programs, 3 participants per session in the programs, 360 days/year operations) The benefit of this provision would be increased profit, not increased revenue, but we have no net profit estimates for the industry.	<i>Interactive time between animals and the public and the ratio of human participants to animal:</i> Decisions to increase interactive program time are discretion of the facilities, and no costs are expected which are directly caused by the proposed changes.	<i>Interactive time between animals and the public and the ratio of human participants to animal:</i> None.

TABLE 1—SUMMARY OF EXPECTED BENEFITS AND COSTS OF THE PROPOSED RULE—Continued

Sections	Expected benefits (Benefits are primarily qualitative and are not monetized)	Expected costs	
		One-time costs	Annual recurring costs
	<i>Written agreements by participants, a provision of APHIS consultations, recordkeeping, and veterinary care requirements: Streamline recordkeeping requirements to reduce administrative burdens without compromising the quality of animal welfare.</i>	<i>Written agreements by participants, a provision of APHIS consultations, recordkeeping, and veterinary care requirements: None.</i>	<i>Written agreements by participants, a provision of APHIS consultations, recordkeeping, and veterinary care requirements: None.</i>
Sum of monetized benefits and costs of the proposed rule.	Not available .....	\$131,000–\$156,000 .....	\$574,000–\$604,000.

**Source:** Data compiled by APHIS based on publicly available costs and marine mammal interactive program fees.

**Note 1:** Number of facilities not currently in compliance is not available but is thought to be small.

**Note 2:** The total number of pools is not available. The number of pools at a given facility ranges widely from 1 pool at some small facilities to over 20 pools including back area holding pools in some large facilities.

**Note 3:** The annual industry revenue under the assumption that, on average, each interactive session has 1 marine mammal which is participating in the interactive session. The annual revenue for the industry is calculated by multiplying the 87 interactive programs by the average annual revenue per marine mammal interactive program. For more detail, refer to the marine mammal interactive programs in the expected benefit section.

**Note 4:** Revenues are estimated based on the information retrieved from Web sites of the 32 facilities.

As shown in Table 1, we expect that the proposed rule would not result in significant costs for most of the regulated facilities.

Facilities that house marine mammals for exhibition purposes are grouped under the following industries by the North American Industry Classification System: Zoos, Aquariums, and Botanical Gardens (NAICS 712130), Amusement and Theme Parks (NAICS 713110), and Nature Parks and other Similar Institutions (NAICS 712190). Establishments in these three industries are considered small according to the Small Business Administration's (SBA) size standards if annual receipts are, respectively, not more than \$27.5 million (NAICS 712130), \$38.5 million (NAICS 713110) and \$7.5 million (NAICS 712190). Facilities that maintain marine mammals for research purposes (NAICS 541712) are considered small if they have 500 or fewer employees. In 2012, the average annual value of sales per entity for Zoos, Aquariums, and Botanical Gardens (NAICS 712130) was \$5.2 million; for Amusement and Theme Parks (NAICS 713110), \$27.6 million; and for Nature Parks and Other Similar Institutions (NAICS 712190), \$1.1 million. Ninety-eight percent of the facilities that maintain marine mammals for research purposes (NAICS 541712) had fewer than 500 employees. Based on this information most if not all businesses in these industries are considered to be small.

*Executive Order 12372*

This program/activity is listed in the Catalog of Federal Domestic Assistance under No. 10.025 and is subject to

Executive Order 12372, which requires intergovernmental consultation with State and local officials. (See 2 CFR chapter IV.)

*Executive Order 12988*

This proposed rule has been reviewed under Executive Order 12988, Civil Justice Reform. It is not intended to have retroactive effect. The Act does not provide administrative procedures which must be exhausted prior to a judicial challenge to the provisions of this rule.

*Paperwork Reduction Act*

In accordance with section 3507(d) of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), the information collection or recordkeeping requirements included in this proposed rule have been submitted for approval to the Office of Management and Budget (OMB). Please send written comments to the Office of Information and Regulatory Affairs, OMB, Attention: Desk Officer for APHIS, Washington, DC 20503. Please state that your comments refer to Docket No. APHIS–2006–0085. Please send a copy of your comments to: (1) Docket No. APHIS–2006–0085, Regulatory Analysis and Development, PPD, APHIS, Station 3A–03.8, 4700 River Road Unit 118, Riverdale, MD 20737–1238, and (2) Clearance Officer, OCIO, USDA, Room 404–W, 14th Street and Independence Avenue SW., Washington, DC 20250.

We are proposing to amend the Animal Welfare Act regulations concerning the humane handling, care, treatment, and transportation of marine mammals in captivity. These proposed changes would affect sections in the

regulations relating to variances, indoor facilities, outdoor facilities, space requirements, and water quality. We are also proposing to revise the regulations that relate to swim-with-the-dolphin programs. These proposed amendments may increase paperwork by requiring more records pertaining to water quality and by creating more frequent requests concerning variances and variance extensions from space requirements and other requirements for marine mammals. For interactive programs, the proposed amendments will decrease the amount of recordkeeping and reporting. However, because of an increase in these types of programs and a more inclusive definition of interactive programs under the proposed rule, a larger number of facilities may be required to maintain and report such records. In addition, the estimated annual number of respondents is the number of respondents that we estimate will respond to all of the information collections annually. We are soliciting comments from the public (as well as affected agencies) concerning our proposed reporting, third party disclosure, and recordkeeping requirements. These comments will help us:

(1) Evaluate whether the proposed information collection is necessary for the proper performance of our agency's functions, including whether the information will have practical utility;

(2) Evaluate the accuracy of our estimate of the burden of the proposed information collection, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the information collection on those who are to respond (such as through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology; e.g., permitting electronic submission of responses).

*Estimate of burden:* Public reporting burden for this collection of information is estimated to average 0.31426 hours per response.

*Respondents:* Dealers, exhibitors, research facilities, intermediate carriers, veterinarians, marine mammal experts, and handlers.

*Estimated annual number of respondents:* 162.

*Estimated annual number of responses per respondent:* 90.

*Estimated annual number of responses:* 14,507.

*Estimated total annual burden on respondents:* 4,559 hours. (Due to averaging, the total annual burden hours may not equal the product of the annual number of responses multiplied by the reporting burden per response.)

Copies of this information collection can be obtained from Ms. Kimberly Hardy, APHIS' Information Collection Coordinator, at (301) 851-2727.

*E-Government Act Compliance*

The Animal and Plant Health Inspection Service is committed to compliance with the E-Government Act to promote the use of the Internet and other information technologies, to provide increased opportunities for citizen access to Government information and services, and for other purposes. For information pertinent to E-Government Act compliance related to this proposed rule, please contact Ms. Kimberly Hardy, APHIS' Information Collection Coordinator, at (301) 851-2727.

**List of Subjects**

*9 CFR Part 1*

Animal welfare, Pets, Reporting and recordkeeping requirements, Research.

*9 CFR Part 3*

Animal welfare, Marine mammals, Pets, Reporting and recordkeeping requirements, Research, Transportation.

Accordingly, we propose to amend 9 CFR parts 1 and 3 as follows:

**PART 1—DEFINITION OF TERMS**

■ 1. The authority citation for part 1 continues to read as follows:

**Authority:** 7 U.S.C. 2131–2159; 7 CFR 2.22, 2.80, and 371.7.

■ 2. Section 1.1 is amended as follows:

■ a. By removing the definitions of *buffer area* and *swim-with-the-dolphin (SWTD) program*.

■ b. By revising the definitions of *interactive area*, *interactive session*, *primary enclosure*, and *sanctuary area*.

■ c. By adding, in alphabetical order, a definition of *interactive program*.

The addition and revisions read as follows:

**§ 1.1 Definitions.**

\* \* \* \* \*

*Interactive area* means that area of a marine mammal primary enclosure where an interactive program takes place.

*Interactive program* means any human-marine mammal interactive program where a member of the public enters a primary enclosure for a marine mammal with the intent of interacting with the marine mammal(s), except for potentially dangerous marine mammals, such as, but not limited to, polar bears. Such programs include, but are not limited to, sessions in which the human participants swim, snorkel, scuba dive, or wade in the enclosure and sessions in which the human participants sit on a dock or ledge, including therapeutic sessions. Such programs exclude, but such exclusions are not limited to, feeding or petting pools where the members of the public are not allowed to enter the enclosure, and the participation of an audience member at what has been traditionally known as a performance or show involving the exhibition of marine mammals.

*Interactive session* means the time during which a marine mammal and a member of the public are in the interactive area.

\* \* \* \* \*

*Primary enclosure* means any structure or device used to restrict an animal or animals to a limited amount of space, such as a room, pen, run, cage, compartment, pool, or hutch. This term, which may also be referred to as enclosures, includes, but such inclusions are not limited to, display enclosures, holding enclosures, night enclosures, off-exhibit enclosures, and medical enclosures.

\* \* \* \* \*

*Sanctuary area* means that area in a primary enclosure for marine mammals that abuts the interactive area and is off-limits to the public.

\* \* \* \* \*

**PART 3—STANDARDS**

■ 3. The authority citation for part 3 continues to read as follows:

**Authority:** 7 U.S.C. 2131–2159; 7 CFR 2.22, 2.80, and 371.7.

■ 4. Section 3.100 is revised to read as follows:

**§ 3.100 Special considerations regarding compliance and/or variance.**

(a) All persons subject to the Animal Welfare Act who maintain or otherwise handle marine mammals in captivity must comply with the provisions of this subpart, except that they may request a variance<sup>6</sup> from the Deputy Administrator from one or more specified provisions of § 3.104.

(b) An application for a variance must be made to the Deputy Administrator in writing. The request must include:

- (1) The species, number, and gender of animals involved;
- (2) A statement from the attending veterinarian certifying the age and health status of the animals involved and how the granting of a variance would be beneficial or detrimental to the marine mammals involved;
- (3) Each provision of § 3.104 that is not being met;
- (4) The time period requested for a variance;
- (5) The specific reasons why a variance is requested; and
- (6) The estimated cost of coming into compliance, if construction is involved.

(c) After receipt of an application for a variance, APHIS may require the submission in writing of a report by two recognized experts selected by the Deputy Administrator concerning potential adverse impacts on the animals involved or on other matters relating to the effects of the requested variance on the health and well-being of such marine mammals. Such a report will be required in those cases where the Deputy Administrator determines that such expertise is necessary to determine whether the granting of a variance would cause a situation detrimental to the health and well-being of the marine mammals involved. All costs associated with such a report will be borne by the applicant.

(d) Variances may be granted for facilities because of ill or infirm marine mammals that cannot be moved without placing their well-being in jeopardy, or for facilities within 1 foot (0.3048 meters) of compliance with any linear space requirement. Such variances may

<sup>6</sup> Written permission from the Deputy Administrator to operate as a licensee or registrant under the Act without being in full compliance with one or more specified provisions of § 3.104.

be granted for up to the life of the marine mammals involved.

(e) The Deputy Administrator will deny any application for a variance if it is determined that the requested variance is not justified under the circumstances or that allowing it will be detrimental to the health and well-being of the marine mammals involved.

(f) A research facility may be granted a variance from specified requirements of this subpart when such variance is necessary for research purposes, is fully explained in the experimental design, and has the appropriate scientific research permit under the Marine Mammal Protection Act, Endangered Species Act, and Institutional Animal Care and Use Committee (IACUC) approval. Any time limitation stated in this section will not be applicable in such case. This provision cannot be used to avoid complying with § 3.104.

(g) A facility may be granted a variance from specified requirements of this subpart when such variance is necessary due to an emergency or temporary special circumstance. Any time limitation stated in this section will not be applicable in such case. This provision cannot be used to avoid complying with § 3.104.

■ 5. Section 3.102 is revised to read as follows:

### § 3.102 Facilities, indoor.

(a) *Ambient temperature.* The air and water temperatures in indoor facilities must be sufficiently regulated by heating or cooling to protect the marine mammals from extremes of temperature, to provide for their good health and well-being, and to prevent discomfort, in accordance with the currently accepted practices as cited in appropriate professional journals or reference guides, depending upon the species housed therein. Rapid changes in air and water temperatures must be avoided.

(b) *Ventilation.* Indoor housing facilities must be ventilated by natural and/or mechanical means to provide a flow of fresh air for the marine mammals that will prevent the accumulation of chlorine/chloramine fumes, ammonia fumes, ozone, other gases, or odors at levels that would be objectionable or harmful to a reasonable person of average sensitivity, and maintain relative humidity at a level that prevents condensation in order to minimize the potential for bacterial, fungal, or viral contamination from condensation. The average ventilation rate should exceed 0.2 cubic feet per minute per kilogram (cfm/kg) of animal. A vertical air space averaging at least 6 feet (1.83 meters) must be maintained in

all enclosures housing marine mammals, including over pools.

(c) *Lighting.* Indoor housing facilities for marine mammals must have ample lighting, by natural or artificial means, or both, of a quality, distribution, and duration which is appropriate for the species involved. Artificial lighting must provide full spectrum lighting. Sufficient lighting must be available to provide uniformly distributed illumination which is adequate to permit routine inspection, observation, and cleaning of all parts of the enclosure including any den area(s). Artificial light levels measured 1 meter above pools or decks should not exceed 500 lux. Lighting intensity and duration must be consistent with the general well-being and comfort of the animals and provide at least 6 hours of uninterrupted darkness during each 24-hour period. Lighting must not cause overexposure, discomfort, or trauma to the marine mammals. To the extent possible, it should approximate the lighting conditions encountered by the animal in its natural environment.

■ 6. Section 3.103 is amended as follows:

■ a. By revising paragraphs (a) introductory text and (a)(3).

■ b. By revising paragraph (b).

The revisions read as follows:

### § 3.103 Facilities, outdoor.

(a) *Environmental temperatures.* Marine mammals must not be housed in outdoor facilities unless the air and water temperature ranges that they may encounter while they are so housed are in accordance with currently accepted practices for the species, as cited in appropriate professional journals or reference guides, and do not adversely affect their health and comfort. A marine mammal must not be introduced to an outdoor housing facility until it is acclimated to the air and water temperature ranges that it will encounter there. The following requirements will be applicable to all outdoor pools:

\* \* \* \* \*

(3) Sirenians and primarily warm water dwelling species of pinnipeds or cetaceans must not be housed in outdoor pools where water temperature cannot be maintained within the temperature range needed to maintain their good health and prevent discomfort in accordance with currently accepted practices as cited in appropriate professional journals or reference guides.

(b) *Shelter.* Natural or artificial shelter that is appropriate for the species concerned, when the local climatic conditions are taken into consideration,

must be provided for all marine mammals kept outdoors to afford them protection from the weather. Shade must be provided to protect marine mammals from direct sunlight, including during feeding and training sessions. Shade must be accessible and cover sufficient area to afford all animals within the enclosure protection. Shaded areas need not be contiguous and shade structures may be permanent or temporary for easy movement or deployment.

\* \* \* \* \*

■ 7. Section 3.104 is amended as follows:

■ a. In paragraph (a), by designating the text following the paragraph heading “*General.*” as paragraph (a)(1) and adding paragraph (a)(2).

■ b. In paragraph (b) introductory text, by removing the first sentence after the paragraph heading “*Cetaceans.*” and by removing the words “Table III” and adding the words “Table 1” in their place.

■ c. In paragraph (b)(1)(i), footnote 8 is redesignated as footnote 7.

■ d. In paragraph (b)(1)(iv), in the last sentence, by removing the words “, and for Group II cetaceans in Table II” and by adding the words “and Group II” after the words “Group I”.

■ e. Following paragraph (b)(1)(iv), by removing Tables I, II, and III, and adding Tables 1, 2, 3, and 4 in their place.

■ f. In paragraph (b)(2), by removing the last sentence.

■ g. In paragraph (b)(3) introductory text, by removing the words “Tables I, II, and IV” and adding the words “Table 1” in their place.

■ h. In paragraph (b)(3)(ii), in the last sentence, by removing the words “Table II” and adding the words “Table 1” in their place.

■ i. In paragraph (b)(4)(i), by redesignating footnote 9 as footnote 8.

■ j. In paragraph (b)(4)(ii), by removing the last sentence and by redesignating footnote 10 as footnote 9.

■ k. In paragraph (b)(4)(iii), by removing the words “Table IV” and adding the words “Table 1” in their place.

■ l. Following paragraph (b)(4)(iii) introductory text, by removing Table IV.

■ m. In paragraph (c), by removing the first sentence following the paragraph heading “*Sirenians.*”

■ n. In paragraph (c)(1), by adding a sentence after the last sentence.

■ o. In paragraph (c)(2), by removing the last sentence.

■ p. By revising paragraph (d)(1).

■ q. In paragraph (d)(3)(iii), by removing the last sentence.

■ r. In paragraph (e), by adding a sentence after the first sentence.

■ s. In paragraph (f)(1), by adding a sentence after the first sentence and by removing the words “Table V” and adding the words “Table 5” in their place.

■ t. In paragraph (f)(2), by removing the words “Table V” and adding the words “Table 5” in their place.

■ u. In paragraph (f)(3), by removing the words “will result in the following figures:” and adding the words “are in Table 5. Since sea otters do not readily use shared resting areas, individual areas or visual barriers separating

appropriately sized individual resting spaces must be used.” in their place.

■ v. Following paragraph (f)(3) introductory text, in the table heading, by removing the words “Table V” and adding the words “Table 5” in their place.

The additions and revision read as follows:

**§ 3.104 Space requirements.**

(a) \* \* \*

(2) Only those areas that meet or exceed the minimum depth requirement

may be used in determining compliance with minimum horizontal dimension (MHD), volume, and surface area. APHIS will determine if partial obstructions in a horizontal dimension compromise the intent of the regulations and/or significantly restrict freedom of movement of the animal(s) in the enclosure.

(b) \* \* \*

(1) \* \* \*

(iv) \* \* \*

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Table 1. Average adult lengths and minimum space requirements for cetaceans in captivity

Species Group I	Common name	Average adult length		Minimum horizontal dimension		Minimum depth		Volume of water for 1-2 animals		Volume of water required for each additional animal in excess of 2		Surface area for 1-2 animals <sup>1</sup>	
		Feet	Meters	Feet	Meters	Feet	Meters	Feet <sup>3</sup>	Meters <sup>3</sup>	Feet <sup>3</sup>	Meters <sup>3</sup>	Feet <sup>2</sup>	Meters <sup>2</sup>
<u>Cephalorynchus commersonii</u>	Commerson's dolphin	5.00	1.52	24.00	7.32	6.00	1.83	2,712.96	76.97	117.75	3.32	29.44	2.72
<u>Delphinapterus leucas</u>	Beluga whale	14.0	4.27	28.0	8.54	7.00	2.14	4,308.08	55.11	1,077.02	30.63	230.79	21.47
<u>Eschrichtius robustus</u>	Gray whale	42.60	13.00	85.20	26.00	21.30	6.50	121,374.78	3,449.29	3,0343.69	862.32	2136.88	199.00
<u>Globicephala macrorhynchus</u>	Short-finned pilot whale	18.00	5.49	36.00	10.98	9.00	2.75	9,156.24	260.26	2289.06	65.06	381.51	35.49
<u>Globicephala melaena</u>	Long-finned pilot whale	19.00	5.79	38.00	11.58	9.50	2.90	10,768.63	305.27	2692.16	76.32	425.08	39.47
<u>Grampus griseus</u>	Risso's dolphin	12.00	3.66	24.00	7.32	6.00	1.83	2,712.96	76.97	678.24	19.24	169.56	15.77
<u>Inia geoffrensis</u>	Amazon river dolphin	8.00	2.44	24.00	7.32	6.00	1.83	2,712.96	76.97	301.44	8.55	75.36	7.01
<u>Monodon monoceros</u>	Narwhal	13.00	3.96	26.00	7.92	6.50	1.88	3,499.29	92.57	862.32	20.86	192.92	16.65
<u>Orcinus orca</u>	Killer whale	24.0	7.32	48.0	14.64	12.0	3.66	21,793.68	615.79	5,425.92	153.95	678.24	63.09
<u>Phocoena phocoena</u>	Harbor porpoise	5.50	1.68	24.00	7.32	6.00	1.83	2,712.96	76.97	142.48	4.05	35.62	3.32
<u>Platanista, all species</u>	Ganges river dolphin	8.00	2.44	24.00	7.32	6.00	1.83	2,712.96	76.97	301.44	8.55	75.36	7.01
<u>Pontoporia blainvillei</u>	La Plata river dolphin or Franciscana	5.00	1.52	24.00	7.32	6.00	1.83	2,712.96	76.97	117.75	3.32	29.44	2.72
<u>Pseudorca crassidens</u>	False killer whale	14.30	4.35	28.60	8.70	7.15	2.18	4,591.00	129.53	1,147.75	32.38	240.79	22.28
<u>Sotalia fluviatilis</u>	Tucuxi or white dolphin	5.50	1.68	24.00	7.32	6.00	1.83	2,712.96	76.97	142.48	4.05	35.62	3.32

<u>Tursiops truncatus</u> (Atlantic)	Atlantic bottlenose dolphin	9.0	2.74	24.0	7.32	6.00	1.83	2,712.96	76.97	381.15	10.79	95.38	8.84
<u>Tursiops truncatus</u> (Pacific)	Pacific bottlenose dolphin	10.00	3.05	24.00	7.32	6.00	1.83	2,712.96	76.97	471.00	13.36	117.75	10.95
Species Group II	Common name	Average adult length		Minimum horizontal dimension		Minimum depth		Volume of water for 1-4 animals		Volume of water required for each additional animal in excess of 4		Surface area for 1-4 animals	
		Feet	Meters	Feet	Meters	Feet	Meters	Feet <sup>3</sup>	Meters <sup>3</sup>	Feet <sup>3</sup>	Meters <sup>3</sup>	Feet <sup>2</sup>	Meters <sup>2</sup>
<u>Delphinus delphis</u>	Common dolphin	8.50	2.59	34.00	10.36	8.50	2.59	7,713.41	218.22	1,928.35	54.55	85.07	7.90
<u>Feresa attenuata</u>	Pygmy killer whale	8.00	2.44	32.00	9.76	8.00	2.44	6,430.72	182.46	1,607.68	45.61	75.36	7.01
<u>Kogia breviceps</u>	Pygmy sperm whale	13.00	3.96	52.00	15.84	13.00	3.96	27,594.32	779.97	6,898.58	194.99	199.00	18.47
<u>Kogia simus</u>	Dwarf sperm whale	9.50	2.90	38.00	11.60	9.50	2.90	10,768.63	306.33	2,692.16	76.58	106.27	9.90
<u>Lagenorhynchus acutus</u>	Atlantic white-sided dolphin	9.50	2.90	38.00	11.60	9.50	2.90	10,768.63	306.33	2,692.16	76.58	106.27	9.90
<u>Lagenorhynchus albirostris</u>	White-beaked dolphin	9.00	2.74	36.00	10.96	9.00	2.74	9,156.24	258.37	2,289.06	64.59	95.38	8.84
<u>Lagenorhynchus cruciger</u>	Hourglass dolphin	5.60	1.70	24.00	7.32	6.00	1.83	2,712.96	76.97	590.82	16.61	36.93	3.40
<u>Lagenorhynchus obliquidens</u>	Pacific white-sided dolphin	7.50	2.29	30.00	9.15	7.50	2.29	5,298.75	150.50	1,324.69	37.71	66.23	6.17
<u>Lissodelphis borealis</u>	Northern right whale dolphin	9.00	2.74	36.00	10.96	9.00	2.74	9,156.24	258.37	2,289.06	64.59	95.38	8.84
<u>Neophocaena phocaenoides</u>	Finless porpoise	6.00	1.83	24.00	7.32	6.00	1.83	2,712.96	76.97	678.24	19.24	42.39	3.94
<u>Peponocephala electra</u>	Melon-headed whale	9.00	2.74	36.00	10.96	9.00	2.74	9,156.24	258.37	2,289.06	64.59	95.38	8.84
<u>Phocoenoides dalli</u>	Dall's porpoise	6.50	2.00	26.00	8.00	6.50	2.00	3,449.29	100.48	862.32	25.12	49.75	4.71
<u>Stenella attenuata</u>	Pantropical spotted dolphin	7.50	2.29	30.00	9.15	7.50	2.29	5,298.75	150.50	1,324.69	37.71	66.23	6.17

<u>Stenella clymene</u>	Short-snouted spinner dolphin	7.00	2.13	28.00	8.52	7.00	2.13	4,308.08	121.37	1,077.02	30.34	57.70	5.34
<u>Stenella coeruleoalba</u>	Striped dolphin	7.50	2.29	30.00	9.15	7.50	2.29	5,298.75	150.50	1,324.69	37.71	66.23	6.17
<u>Stenella frontalis</u>	Atlantic spotted dolphin/bridled dolphin	7.50	2.29	30.00	9.15	7.50	2.29	5,298.75	150.50	1,324.69	37.71	66.23	6.17
<u>Stenella longirostris</u>	Spinner dolphin	7.00	2.13	28.00	8.52	7.00	2.29	4,308.08	130.49	1,077.02	32.62	57.70	5.34
<u>Steno bredanensis</u>	Rough-toothed dolphin	8.00	2.44	32.00	9.76	8.00	2.44	6,430.72	182.46	1,607.68	45.61	75.36	7.01

<sup>1</sup> Surface area required for additional cetaceans will be calculated in accordance with paragraph (b)(1)(iii) of this section.

TABLE 2—AVERAGE ADULT LENGTHS OF SIRENIANS AND MUSTELIDS IN CAPTIVITY

Species	Common name	Average adult length	
		In feet	In meters
Sirenia:			
<i>Dugong dugon</i> .....	Dugong .....	11.00	3.35
<i>Trichechus inunguis</i> .....	Amazon manatee .....	8.00	2.44
<i>Trichechus manatus</i> .....	West Indian manatee .....	11.50	3.51
Mustelids:			
<i>Enhydra lutris</i> .....	Sea otter .....	4.10	1.25

TABLE 3—AVERAGE ADULT LENGTHS FOR PINNIPEDS IN CAPTIVITY

Species	Common name	Average adult length			
		In feet		In meters	
		Male	Female	Male	Female
Group I:					
<i>Arctocephalus australis</i> * .....	South American fur seal .....	6.20	4.70	1.88	1.42
<i>Arctocephalus gazella</i> * .....	Antarctic (or Kerguelen) fur seal .....	5.90	3.90	1.80	1.20
<i>Arctocephalus pusillus</i> * .....	South African/Australian (or Cape) fur seal.	8.96	6.00	2.73	1.83
<i>Arctocephalus townsendi</i> * .....	Guadalupe fur seal .....	6.27	4.29	1.90	1.30
<i>Arctocephalus tropicalis</i> * .....	Subantarctic (or Amsterdam Island) fur seal.	5.90	4.75	1.80	1.45
<i>Callorhinus ursinus</i> * .....	Northern fur seal .....	7.20	4.75	2.20	1.45
<i>Eumetopias jubatus</i> * .....	Steller sea lion .....	9.40	7.90	2.86	2.40
<i>Halichoerus grypus</i> * .....	Gray seal .....	7.50	6.40	2.30	1.95
<i>Hydrurga leptonyx</i> .....	Leopard seal .....	9.50	10.80	2.90	3.30
<i>Leptonychotes weddellii</i> * .....	Weddell seal .....	9.50	10.30	2.90	3.15
<i>Lobodon carcinophagus</i> .....	Crabeater seal .....	7.30	7.30	2.21	2.21
<i>Mirounga angustirostris</i> .....	Northern elephant seal .....	13.00	8.20	3.96	2.49
<i>Mirounga leonina</i> * .....	Southern elephant seal .....	15.30	8.20	4.67	2.50
<i>Odobenus rosmarus</i> * .....	Walrus .....	10.30	8.50	3.15	2.60
<i>Ommatophoca rossi</i> * .....	Ross seal .....	6.50	7.00	1.99	2.13
<i>Otaria byronia</i> * .....	Southern (or Patagonian) sea lion ...	7.90	6.60	2.40	2.00
<i>Phoca caspica</i> .....	Caspian seal .....	4.75	4.60	1.45	1.40
<i>Phoca fasciata</i> .....	Ribbon seal .....	5.70	5.50	1.75	1.68
<i>Phoca groenlandica</i> .....	Harp seal .....	6.10	6.10	1.85	1.85
<i>Phoca largha</i> .....	Spotted seal .....	5.60	4.90	1.70	1.50
<i>Phoca sibirica</i> .....	Baikal seal .....	5.60	6.10	1.70	1.85
<i>Phoca vitulina</i> .....	Harbor seal .....	5.60	4.90	1.70	1.50
<i>Zalophus californianus</i> * .....	California sea lion .....	7.30	5.70	2.24	1.75
Group II:					
<i>Cystophora cristata</i> .....	Hooded seal .....	8.50	6.60	2.60	2.00
<i>Erignathus barbatus</i> .....	Bearded seal .....	7.60	7.60	2.33	2.33
<i>Neomonachus schauinslandi</i> .....	Hawaiian monk seal .....	7.40	7.40	2.25	2.25
<i>Phoca hispida</i> .....	Ringed seal .....	4.40	4.30	1.35	1.30

\* Any Group I animals maintained together will be considered as Group II when the animals maintained together include two or more sexually mature males from species marked with an asterisk, regardless of whether the sexually mature males are from the same species.

Table 4.—Minimum space requirements for pinnipeds in captivity

Common Name	Minimum horizontal dimension				Minimum depth				Surface area for 1-2 animals DRA for 1-2 animals			
	In feet		In meters		In feet		In meters		In feet <sup>2</sup>		In meters <sup>2</sup>	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Antarctic fur	8.40	9.11	2.70	2.25	3.00	3.00	0.92	0.92	69.62	30.42	6.48	2.88
Baikal seal	8.40	9.15	2.55	2.78	3.00	3.05	0.92	0.93	62.72	74.42	5.78	6.85
Bearded seal	11.40	11.40	3.50	3.50	3.80	3.80	1.17	1.17	167.50	167.50	15.74	15.74
California	10.95	8.55	3.36	2.55	3.65	3.00	1.12	0.92	106.58	64.98	10.04	6.13
Caspian seal	7.13	6.90	2.18	2.10	2.38	2.30	0.73	0.70	45.13	42.32	4.21	3.92
Crabeater	10.95	10.95	3.32	3.32	3.65	3.65	1.11	1.11	106.58	106.58	9.77	9.77
Gray seal	11.25	9.60	3.45	1.43	3.75	3.20	1.15	0.98	112.50	81.92	10.58	7.61
Guadalupe fur seal	9.41	6.44	2.85	1.95	3.14	3.00	0.95	0.92	78.63	36.81	7.22	3.38
Harbor seal	8.40	7.35	2.55	2.25	3.00	3.00	0.92	0.92	62.72	48.02	5.78	4.50
Harp seal	9.15	9.15	2.78	2.78	3.05	3.05	0.93	0.93	74.42	74.42	6.85	6.85
Hawaiian monk seal	11.10	11.10	3.38	3.38	3.70	3.70	1.12	1.12	158.80	158.80	14.68	14.68
Hooded seal	12.75	9.90	3.90	3.00	4.25	3.30	1.30	1.00	209.53	126.32	19.60	11.60
Leopard seal	14.25	16.20	4.35	4.95	4.75	5.30	1.45	1.65	180.50	233.28	16.82	21.78
Northern elephant seal	19.50	12.30	5.94	3.74	6.50	4.10	1.98	1.25	338.00	134.48	31.36	12.40
Northern fur	10.80	7.13	3.30	2.18	3.60	2.38	1.10	0.73	103.68	45.13	9.68	4.21
Ribbon seal	8.55	8.25	2.63	2.52	2.85	2.75	0.88	0.84	64.98	60.50	6.13	5.64
Ringed seal	6.60	6.45	2.03	1.95	2.20	2.15	0.68	0.65	56.14	53.62	5.29	4.90
Ross seal	9.75	10.50	2.99	3.20	3.25	3.50	1.00	1.07	84.50	98.00	7.92	9.07
South African/Australian	13.44	9.00	4.10	2.75	4.48	3.00	1.37	0.92	160.56	72.00	14.91	6.70
South American fur seal	9.30	7.05	2.82	2.13	3.10	2.35	0.94	0.71	76.88	44.18	7.07	4.03

Subantarctic fur seal	8.40	7.13	2.70	2.18	3.00	3.00	0.92	0.92	69.62	45.13	6.48	4.21
Southern (Patagonian) sea lion	11.85	9.90	3.60	3.00	3.95	3.30	1.20	1.00	124.82	87.12	11.52	8.00
Southern elephant seal	22.95	12.30	7.01	3.75	7.65	4.10	2.34	1.25	468.18	134.48	43.62	12.50
Spotted seal	8.40	7.35	2.55	2.25	2.80	2.45	0.85	0.75	62.72	48.02	5.78	4.50
Steller sea	14.10	11.85	4.29	3.60	4.70	3.95	1.43	1.20	176.72	124.82	16.36	11.52
Walrus	15.45	12.75	4.73	3.90	5.15	4.25	1.58	1.30	212.18	144.50	19.85	13.52
Weddell seal	14.25	15.45	4.35	4.73	4.75	5.15	1.45	1.58	180.50	212.18	16.82	19.85

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\* \* \* \* \*

(c) \* \* \*

(1) \* \* \* See Table 2 for the average adult lengths of sirenians.

\* \* \* \* \*

(d) \* \* \*

(1) Primary enclosures housing pinnipeds shall contain a pool of water and a dry resting area or social activity area that must be close enough to the

surface of the water to allow easy access for entering or leaving the pool for all animals regardless of age or infirmity. For the purposes of this subpart, pinnipeds have been divided into Group I pinnipeds and Group II pinnipeds as shown in Table 3 in this section. In certain instances some Group I pinnipeds shall be considered Group II pinnipeds. (See Table 3.) Minimum space requirements for pinnipeds are given in Table 4.

\* \* \* \* \*

(e) \* \* \* Exit and entry area to the pool shall be of a depth and grade to allow easy access and exit for all animals regardless of age or infirmity.

\* \* \*

(f) \* \* \*

(1) \* \* \* Exit and entry area to the pool shall be of a depth and grade to allow easy access and exit for all animals regardless of age or infirmity.

\* \* \* \* \*

■ 8. Section 3.106 is revised to read as follows:

### § 3.106 Water quality.

(a) *General.* The primary enclosure must not contain water which could be detrimental to the health of the marine mammal contained therein.

(b) *Bacterial standards.* (1) All primary enclosure pools must be tested for fecal bacterial contamination on a weekly basis. The facility must conduct the following tests:

- (i) Total coliform count (count shall not exceed 500 colonies per 100 mL) or fecal coliform count (count shall not exceed 400 colonies per 100 mL); and
- (ii) Enterococci count (count shall not exceed 35 colonies per 100 mL); or
- (iii) Pseudomonas count (count shall not exceed 10 colonies per 100 mL); or
- (iv) Staphylococcus count (count shall not exceed 10 colonies per 100 mL).

(2) Should any of the bacterial counts exceed these levels, two followup samples must be taken to repeat the test(s) for those bacterial contaminants identified as being present at levels exceeding the standards. The first followup must be taken immediately after the initial test result and the second followup must be taken within 48 hours of the first followup. The results of the initial test result, first followup test result, and second followup test result must be averaged. If the averaged value exceeds the acceptable levels above, the pool water is unsatisfactory and conditions must be corrected immediately.

(3) Additional testing for suspect pathogenic organism(s) should be conducted when there is sufficient

evidence of health problems at the facility or of a potential health hazard to the animals.

(4) The addition of any chemicals to a pool must be done in a manner that will not cause harm or discomfort to the marine mammals during the introduction of the chemical or during its presence in the enclosure (in the water, on the surfaces, or in the air).

(5) Water samples must be taken at least daily for pH, salinity, and any chemicals (e.g., chlorine and copper) that are added to the water to maintain water quality standards. Natural lagoon and coastal enclosures will be exempt from pH testing, but must be tested for salinity and any chemical additives, if used.

(6) Records must be kept documenting the date, time, location (pool and sampling site within the pool) of the sample collection and the results of the sampling. Records of all such test results must be maintained at the facility for a 1-year period and made readily available to APHIS inspectors.

(c) *Salinity.* (1) All primary enclosure pools must be salinized for cetaceans, pinnipeds, and sea otters, except for pools housing:

- (i) River dolphins; or
- (ii) Pinnipeds where oral administration of sodium chloride (salt) supplements at appropriate levels for the species, as determined by the attending veterinarian, is provided and saltwater eye baths are used on a daily basis.

(2) Salinity must be maintained within the range of 24–36 parts per thousand except in natural lagoon or coastal enclosures, where the salinity must be no less than 15 parts per thousand.

(3) The requirements in paragraphs (c)(1) and (2) of this section do not preclude the use of other salinity levels when prescribed by the attending veterinarian to appropriately treat specific medical conditions.

(d) *Water clarity.* Pools must be maintained in a manner that will provide sufficient water clarity to view the animals in order to observe them and monitor their behavior and health.

(e) *Filtration and water flow.* Water quality must be maintained by filtration, chemical treatment, naturally occurring tidal flow, or other means that will comply with the water quality standards specified in this section.

■ 9. Section 3.111 is revised to read as follows:

### § 3.111 Interactive programs.

All marine mammal interactive programs must comply with this section

and all other appropriate provisions set forth in parts 2 and 3 of this subchapter.

(a) *Space requirements.* During an interactive session, each animal must have unrestricted access to the interactive area and the sanctuary area. Neither area may be made uninviting to the animals. Each area must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) The interactive area must provide sufficient space for all marine mammals to freely swim or move about, consistent with the type of interaction, even with a full complement of public participants and employees in the area.

(2) The sanctuary area may be within the enclosure containing the interactive area or it may be within a second enclosure to which free and unrestricted access is provided during the interactive session. The sanctuary area must meet the minimum space requirements found in § 3.104.

(b) *Water clarity.* Sufficient water clarity must be maintained so that attendants are able to observe the marine mammals and the human participants at all times while within the interactive area. If water clarity does not allow these observations, the interactive sessions must be canceled until the required clarity is provided.

(c) *Employees.* Each interactive program must have a sufficient number of adequately trained personnel to meet the husbandry and care requirements for the animals and comply with all training, handling, and attendant requirements of the regulations. For interactive programs, there must be a trainer, handler, and sufficient number of adequately trained attendants to comply with § 3.111(d)(4).

(1) The head trainer/supervisor of the interactive program must have demonstrable in-depth knowledge of the husbandry and care requirements of the family and species of marine mammals being exhibited, demonstrable knowledge of and skill in current accepted professional standards and techniques in animal training and handling, and the ability to recognize normal and abnormal behavior and signs of behavioral stress in the animal families and species being exhibited.

(2) All interactive program trainers and attendants must have the knowledge and skill level sufficient to safely conduct and monitor an interactive session.

(d) *Handling.* (1) Interactive time between marine mammals and the public (i.e., interactive session) must not exceed 3 hours per day per animal. Each animal must have at least one period in each 24 hours of at least 10 continuous hours without public interactions.

(2) All marine mammals used in an interactive session must be adequately trained and conditioned in human interaction so that they respond in the session to the attendants with appropriate behavior for safe interaction. The trainer, handler, or attendant must, at all times, control the nature and extent of the marine mammal interaction with the public during a session using the trained responses of the program animal.

(3) All marine mammals used in interactive sessions must be in good health, including, but not limited to, not being infectious. Marine mammals undergoing veterinary treatment may be used in interactive sessions only with the written approval of the attending veterinarian.

(4) There must be a sufficient number of session attendants (includes trainer, handler, or attendants) to effectively conduct the session in a safe manner. There must be at least one attendant per marine mammal in the session, and at least one attendant positioned to monitor each session. The number of public participants per marine mammal must not exceed the number that the attendant can monitor safely, appropriate to the type of interactive session.

(5) Prior to participating in an interactive session, members of the public must be provided with oral rules and instructions for the session. The program must also either provide to the attendees in a written handout, or post in a highly visible location, a notice that summarizes the rules and instructions for the session and includes contact information for the appropriate Animal Care Field Operations office for reporting injuries or complaints. A copy of the written rules must be made available to APHIS during an inspection. Any participant who fails to follow the rules and instructions and jeopardizes human or animal safety or health must be immediately removed from the session by the facility management.

(6) All interactive programs must limit interactions between marine mammals and human participants so that the interaction does not harm the marine mammal or human participants, does not elicit unsatisfactory, undesirable, or unsafe behaviors from the marine mammal, and does not restrict by word or action (including recalling), from the sanctuary area, or enclosure design, the ability of the animal to leave the interactive area and session as it chooses. If an animal removes itself or is removed from a session, the facility must maintain the ratios of § 3.111(d)(4) by either removing

human participants from the interactive area or introducing another animal.

(7) All interactive programs must prohibit grasping or holding of the animal's body unless it is done under the direct and explicit instruction of the attendant, and must prohibit the chasing or other harassment of the animal(s).

(8) Marine mammals that exhibit unsatisfactory, undesirable, or unsafe behaviors, including, but not limited to, charging, biting, mouthing, or sexual contact with humans, must be removed from the interactive session immediately, or, if the animal cannot be removed, the session must be terminated. Such an animal must not be used in an interactive session until the trainer determines that the animal is no longer exhibiting the unsatisfactory, undesirable, or unsafe behavior. Written criteria for the termination of a session due to such behavior and the retraining of such an animal must be developed and maintained at the facility and be made available to APHIS during inspection or upon request. This document must also address the procedures to be used to maintain compliance with § 3.111(d)(4) during such disruption of an interactive session.

(e) *Veterinary care.* The facility must comply with all provisions of §§ 2.33, 2.40, and 3.110 of this subchapter. In addition, the attending veterinarian must observe an interactive session at least once a month or each interactive session if they are offered less frequently than twice a month, and review the feeding records, behavior records, and water quality records biannually or more often if needed to assure the health and well-being of the marine mammals. Necropsy requirements are found in § 3.110(g).

(f) *Recordkeeping.* (1) Each facility must provide APHIS with a description of its program at least 30 days prior to initiation of the program, or in the case of any program in place before [Date of publication of final rule], not later than [Date 30 days after effective date of final rule]. Facilities that submitted the required documentation from October through December 1998 and received approval letters need only submit information about any regulated aspects of the program that have changed since that time. The description must, at least, include the following:

(i) Identification of each marine mammal in the interactive program, by means of name and/or number, sex, age, and any other means the Administrator determines to be necessary to adequately identify the animal;

(ii) An outline of the session agenda, including, but not limited to, written

information distributed, topics addressed prior to entry in the water, an in-water program agenda, including behaviors and activities expected to be presented or performed;

(iii) A description of the interactive program enclosures, including identification of non-session housing enclosures, sanctuary area, and interactive area. All enclosures housing or used by program animals must be included;

(iv) Verification from the trainer that the program animals have received adequate and appropriate training for an interactive program; and

(v) Documentation of the experience and training of the trainer, handler, attendants, and attending veterinarian.

(2) Medical, feeding, water quality, and any behavioral records must be kept at the facility for at least 1 year or as otherwise required in this subchapter and be made available to APHIS during inspection or upon request.

(3) Records of individual animal participation times (date, start time of interactive session, and duration) must be maintained by the facility for a period of at least 1 year and be made available to APHIS officials during inspection or upon request.

(4) All incidents resulting in injury to either a marine mammal, members of the public, or facility staff during an interactive session or training session must be reported to APHIS within 24 business hours of the incident. A written report detailing the incident and the facility's response to the incident must be submitted to APHIS within 7 calendar days of the incident.

(5) Any changes to the interactive program, such as, but not limited to, personnel, animals, facilities (enclosures and interactive areas), and behaviors used, must be submitted to APHIS within 30 calendar days of the change.

(Approved by the Office of Management and Budget under control numbers 0579-0036 and 0579-0093)

Done in Washington, DC, this 21st day of January 2016.

**Gary Woodward,**

*Deputy Under Secretary for Marketing and Regulatory Programs.*

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