leased office space within the same metropolitan area not involving a substantial number of employees or a substantial increase in the number of motor vehicles at a facility.'' The proposed revision to break out a portion of the 1999 CE does not result in any change in scope or applicability from the CE in the 1999 NAO.

[H7.] ''Transferring real property to a non-Federal entity, an agency other than GSA, as well as to States, local agencies and Indian Tribes, including return of public domain lands to the Department of the Interior.''

NOAA proposes a new CE to cover the transfer of real property to a federal agency other than the General Services Administration as well as to a non-Federal entity, including States, local agencies, and Indian tribes. This proposed CE also applies to the return of public domain lands to the Department of the Interior.

Dated: November 9, 2016.

Lois J. Schiffer,

General Counsel, National Oceanic and Atmospheric Administration.

[FR Doc. 2016–27567 Filed 11–16–16; 8:45 am]

BILLING CODE 3510–12–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[Docket No. 121120640–6943–02]

RIN 0648–XC365

Endangered and Threatened Wildlife; Determination on Whether To List the Harbor Seals in Iliamna Lake, Alaska as a Threatened or Endangered Species

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of a listing determination.

SUMMARY: We, NMFS, have completed our review of the status of eastern North Pacific harbor seals (*Phoca vitulina richardii*) in Iliamna Lake, Alaska. Our review was in response to a petition to list these seals as threatened or endangered under the Endangered Species Act (ESA). Based on the best scientific and commercial information available, we conclude that the seals in Iliamna Lake do not constitute a species, subspecies, or distinct population segment (DPS) under the ESA. As a result, we conclude that listing the harbor seals in Iliamna Lake, Alaska is not warranted.

DATES: This listing determination is made as of November 17, 2016.

ADDRESSES: This finding and supporting information are available on our Web page at: *https://alaskafisheries.noaa.gov/pr/harbor-seals*. Supporting documentation used in preparing this listing determination is available for public inspection, by appointment, during normal business hours at the office of NMFS Alaska Region, Protected Resources Division, 709 West 9th Street, Room 461, Juneau, AK 99801. This documentation includes the petition, the Biological Review Team's DPS report, information provided by the public and interested parties, and scientific and commercial data gathered for the review.

FOR FURTHER INFORMATION CONTACT: Mandy Migura, NMFS Alaska Region, (907) 271–1332; Jon Kurland, NMFS Alaska Region, (907) 586–7638; or Lisa Manning, NMFS Office of Protected Resources, (301) 427–8466.

SUPPLEMENTARY INFORMATION:

Background

On November 19, 2012, we received a petition submitted by the Center for Biological Diversity (CBD) to list the harbor seals in Iliamna Lake, Alaska as a threatened or endangered species under the ESA, and to designate critical habitat concurrent with listing. CBD asserted that the harbor seals found in Iliamna Lake constitute a DPS of Pacific harbor seals and contended that the seals in Iliamna Lake face threats warranting protection as a listed species under the ESA. Iliamna Lake is the largest freshwater lake in Alaska and is connected to the Bristol Bay region of the Bering Sea by the Kvichak River.

On May 17, 2013 (78 FR 29098), we found that the petition presented substantial information indicating that listing the seals in Iliamna Lake under the ESA may be warranted, and we requested comments from the public to inform our status review, and to help us determine whether these seals should be listed as threatened or endangered. To assist with our status review, we convened a Biological Review Team (BRT), composed of federal scientists with expertise in marine mammal biology and marine mammal genetics, to review the available information about the status of the species, and provide an assessment regarding the seals in Iliamna Lake. The BRT compiled information about the harbor seals in Iliamna Lake in a DPS Report (Boveng *et al.,* 2016).

In this notice, we announce our finding that the petitioned action to list harbor seals in Iliamna Lake under the ESA as either threatened or endangered is not warranted because the seals do not constitute a distinct population segment (DPS) and thus are not a separate ''species,'' as the ESA defines that term. Speficically, while we conclude that the seals are a discrete population, the best scientific and commercial data available suggest that they are not significant to the greater taxon to which they belong, *i.e.,* the eastern North Pacific harbor seal subspecies (*Phoca vitulina richardii*).

ESA Statutory, Regulatory, and Policy Considerations

Section 3 of the ESA defines a ''species'' as ''any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.'' Section 3 of the ESA further defines an endangered species as ''any species which is in danger of extinction throughout all or a significant portion of its range'' and a threatened species as one ''which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.'' Thus, we interpret an ''endangered species'' to be one that is presently in danger of extinction. A ''threatened species,'' on the other hand, is not presently in danger of extinction, but is likely to become so in the foreseeable future. In other words, the primary statutory difference between a threatened and endangered species is the timing of when a species may be in danger of extinction, either presently (endangered) or in the foreseeable future (threatened).

Under section 4(a)(1) of the ESA, we must determine whether a species is threatened or endangered because of any one or a combination of the following factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) inadequacy of existing regulatory mechanisms; or (E) other natural or human-made factors affecting its continued existence. We must make this determination based solely on the best scientific and commercial data available after conducting a review of the status of the species and taking into account those efforts being made by states or foreign governments to protect the species.

The first step in determining whether the harbor seals in Iliamna Lake warrant listing under the ESA is to assess if they meet the ESA's definition of ''species.'' Although there has been speculation

regarding the taxonomy of the seals in Iliamna Lake (*i.e.,* whether they are harbor seals, spotted seals, or hybrids), recent genetic analyses (O'Corry-Crowe 2013) provide a high degree of confidence these seals are harbor seals (*Phoca vitulina*). The data available are insufficient to suggest the seals in Iliamna Lake, Alaska are a separate subspecies of harbor seal apart from the subspecies *P. v. richardii* (Boveng *et al.,* 2016), which ranges from Mexico to Alaska. Therefore, we assessed whether the harbor seals in Iliamna Lake constitute a distinct population segment of *P. v. richardii*.

The U.S. Fish and Wildlife Service (USFWS) and NMFS (the ''Services'') adopted the Policy Regarding the Recognition of Distinct Vertebrate Population Segments under the ESA (the DPS Policy, 61 FR 4722; February 7, 1996) to clarify the Services' interpretation of the term ''distinct population segment'' for the purposes of listing, delisting, and reclassifying vertebrates under the ESA. The DPS Policy establishes two criteria that must be met for a population or group of populations to be considered a DPS: (1) The population segment must be discrete in relation to the remainder of the species (or subspecies) to which it belongs; and (2) the population segment must be significant to the remainder of the species (or subspecies) to which it belongs. In this case, harbor seals in Iliamna Lake would need to be both discrete from and significant to the eastern North Pacific subspecies of harbor seals (*P. v. richardii*), to be designated as a DPS.

If the seals in Iliamna Lake were found to meet the DPS criteria, we would then conduct a status review and determine whether they are threatened or endangered because of any one or a combination of the factors from section 4(a)(1) of the ESA. Such a determination would be based solely on the best scientific and commercial data available. Here, because we concluded that the seal population in Iliamna Lake is not a DPS, we did not conduct a status review of the population under section 4(a)(1) of the ESA.

Harbor Seal Biology and Life History

Physical Description

Harbor seals (*Phoca vitulina*) range in length and size from 1.5–1.9 meters (m) and 75–180 kilograms (kg) for males, and 1.4–1.7 m and 60–145 kg for females, with weights varying seasonally (Sease 1992). At birth, harbor seal pups are approximately 0.75–1.0 m in length and weigh 10–20 kg (Sease 1992). There is a large amount of natural variation in harbor seal coats with coloration ranging from tan/brown to light gray/black with patterns of spots, rings, and blotches that vary between individuals (Shaughnessy and Fay 1977; Kelly 1981). Variable patterns in seal coats have been well documented and may be a result of the age or sex of the animal, season, location, or the environment they inhabit (Shaughnessy and Fay 1977; Kelly 1981; Moss 1992; Caro *et al.,* 2012). The stage of molting also has an impact on the appearance of their coats.

Life History

On average, harbor seals reach sexual maturity at the age of five for both females and males; however, females exhibit a larger range of age at maturity (Calkins and Pitcher 1979). The variation depends on population size and trend, body condition, and prey resources (Pitcher and Calkin 1979; Mclaren and Smith 1985; Atkinson 1997). Harbor seals in the eastern North Pacific subspecies also exhibit natural variation in the timing of pupping, ranging from March to September (Bigg 1969; Temte *et al.,* 1991; Searse 1992), depending in part on general geographic location. Aerial surveys of harbor seals in Iliamna Lake since 2010 have documented that pupping occurs in the lake, with pups observed during aerial surveys in June, July, and August (Burns *et al.,* 2012; Burns *et al.,* 2013; Boveng *et al.,* 2016; NMML unpubl. data).

Harbor seals molt annually following pupping (Pitcher and Calkins 1979). Molting usually lasts 1–2 months, during which time seals spend a large amount of time hauled-out (Pitcher and Calkins 1979; Daniel *et al.,* 2003). Molting occurs in stages across the body, affecting coloration and pattern of the coat throughout the molt.

Harbor seals are considered opportunistic foragers and feed on a wide variety of prey found in marine, estuarine, and fresh waters (Carretta *et al.,* 2015). Since they inhabit coastal waters, harbor seal dives are often less than 50 m and last 2–5 minutes (Bowen *et al.,* 1999; Frost *et al.,* 2001, 2006) which influences the prey species available for foraging. Alaskan harbor seals have been documented to forage on pollock, Pacific cod, Pacific sand lance, sculpins, Pacific salmon, trout, char, graylings, flatfishes, capelin, eulachon, smelt, and Pacific herring (Hobson *et al.,* 1997; Iverson *et al.,* 1997; Houser *et al.,* 2008; Geiger *et al.,* 2013). Power and Gregoire (1978) report harbor seal diet in Lower Seal Lake, Quebec being dominated by lake and brook trout. Harbor seals have also been documented to follow salmon and other anadromous fish up rivers and into freshwater lakes where they may remain for extended periods (*e.g.* Bigg 1969a, 1981, and Hoover 1988 *as cited in* Sease 1992; Middlemas *et al.,* 2006). One of the largest sockeye salmon populations in the world run up the Kvichak River into Iliamna Lake annually in June and July. Harbor seals have been observed to follow these fish runs seasonally from Bristol Bay, although whether those seals enter Iliamna Lake has not been documented.

Distribution and Abundance

Harbor seals are one of the most widespread pinniped species and are found throughout the northern hemisphere, ranging from temperate to polar regions. As of 2008, the worldwide harbor seal population was estimated between 350,000 and 500,000 mature individuals (Thompson and Härkönen 2008). Currently, there are five recognized subspecies of harbor seals: *P. v. vitulina* in the eastern Atlantic; *P. v. concolor* in the western Atlantic; *P. v. mellonae* in some lakes and rivers draining into eastern Hudson Bay; *P. v. richardii* in the eastern North Pacific; and *P. v. stejnegeri* (also known as *P. v. kurilensis)* in the western North Pacific (Rice 1998; Berta and Churchill 2012).

The harbor seals found in Iliamna Lake are classified as part of the subspecies *P. v. richardii,* also commonly referred to as eastern North Pacific harbor seals. Eastern North Pacific harbor seals range from Mexico to Alaska (Carretta *et al.,* 2015), with an estimated abundance of 360,000 individuals (DFO 2010). More than 205,000 harbor seals occur in Alaska (Muto and Angliss 2015).

Eastern North Pacific harbor seals in Alaska are divided into 12 separate stocks under the Marine Mammal Protection Act; however, these stocks do not represent taxonomic delineations, and all 12 stocks are part of the subspecies *P. v. richardii*. Harbor seals in Iliamna Lake are part of the Bristol Bay stock, which was estimated at approximately 32,350 individuals based on a 2011 survey (Muto and Angliss 2015), an increase from the estimated 18,577 seals in 2005 (Allen and Angliss 2014).

Aerial surveys of harbor seals in Iliamna Lake have primarily been conducted in the summer and have consistently documented fewer than 350 animals (Mathisen and Kline 1992; Small 2001; Withrow and Yano 2009; Burns *et al.,* 2012; Burns *et al.,* 2013; NMML unpubl. data). The standard protocol for harbor seal aerial surveys is that only seals on land are counted and

seals in the water are not counted (Burns *et al.,* 2011; Burns *et al.,* 2013). It is likely that not all seals haul-out at the same time and some seals present in the water were not counted during the surveys of Iliamna Lake. Thus, the actual number of seals in Iliamna Lake at the time of these surveys may have been greater than the number of seals reported during the aerial surveys. To estimate abundance and trends in seal numbers in Iliamna Lake, a simple demographic model was developed (Boveng *et al.,* in prep *as reported in* Boveng *et al.,* 2016). That model indicates that the number of seals in the lake, about 400, has been relatively stable from 1984–2013 with little to no evidence of a trend over the past 5,10, and 15-year horizons. In 2011, household surveys of local residents from six communities in the Iliamna Lake region were conducted. Based upon a synthesis of the information provided by this local traditional knowledge (LTK) of Iliamna Lake residents, the population size of seals in the lake was believed to be approximately 329 individuals, with a general belief that the population was increasing (Burns *et al.,* 2013).

Habitat Use and Movements

Harbor seals typically inhabit near-shore coastal waters, but are well known for their use of estuaries and rivers, and have been recorded over 200 kilometers (km) upstream (*see review in* COSEWIC 2007). Harbor seals are known to haul-out on a variety of natural and manmade substrates which include beaches, sandbars, rocks, islands, ice, docks, piers, and boats. Their varied haul-out substrates are an example of the behavioral plasticity of harbor seals to adapt to a range of environmental settings and conditions (Komers 1997; Vincent *et al.,* 2010).

Harbor seals are often described as a sedentary, non-migratory species, with considerable site fidelity to one or a few haul-outs, with large scale movements being rare. Traditional thinking is that harbor seals generally stay within 50 km of a primary haul-out site (*e.g.,* see Peterson *et al.,* 2012). However, Burns (2002) states this is a ''gross oversimplification'' and instead states that harbor seals move quite extensively in some cases, including movements characterized as ''migrations, juvenile dispersal, seasonal shifts, shifts related to breeding activity, responses to seals habitat exclusion, responses to acute or chronic disturbance, and immigration/emigration, occasionally on a relatively large scale.'' Satellite tagging studies document that harbor seals have large home ranges with haul-out sites that vary seasonally and by individual, with some seals migrating hundreds of km between breeding and post-breeding habitats (*e.g.,* Lowry *et al.,* 2001; Lesage *et al.,* 2004; Peterson *et al.,* 2012; Womble and Gende 2013). These studies also report strong evidence of site fidelity by harbor seals to their breeding or locations where they were tagged during summer. In the St. Lawrence estuary in Canada, over half of the satellite tagged harbor seals left their summer haul-out areas once solid ice formed within the bays of the estuary, and migrated between 65 km and 520 km to over-wintering sites (Lesage *et al.,* 2004). In the Pacific Northwest region of the United States, Hardee (2008) reported that harbor seal movements up to 100 km from the tagging site occurred most frequently outside of the breeding season, and that some adult males made trips in excess of 200 km roundtrip that lasted 1–8 weeks between April and August. Hardee (2008) observed long-distance and long-duration movements by harbor seals throughout the study period, with males making multiple roundtrip movements greater than 200 km that were not associated with a migratory over-wintering behavior. Hardee's (2008) study, as well as a study of harbor seals from the Wadden Sea, Denmark (Tougaard *et al.,* 2003 *as cited in* Hardee 2008), contradict the traditional view that harbor seals reside in a limited geographic area and do not leave that home area for extended periods of time. Peterson *et al.* (2012) documented adult male harbor seals in the Pacific Northwest moving rapidly between haul-outs, at times traveling over 100 km in about two days. That study also concluded that some adult male harbor seals had secondary haul-out sites greater than 100 km from the primary haul-out site; that the locations of, and distances between, primary and secondary haul-outs varied by seal; and that seasonal migrations over 100 km by adult male seals were more common than previously believed. In Alaska, Lowry *et al.* (2001) reported juvenile harbor seal movements of 300–500 km, and Womble and Gende (2013) documented extensive migrations of harbor seals from Glacier Bay during the post-breeding season, with some females traveling to Prince William Sound, a distance up to 900 km one way. A harbor seal tagged in the Egegik and Ugashik region of eastern Bristol Bay traveled in excess of 470 km, and 8 of 14 tagged harbor seals traveled in excess of 100 km from a major haul-out site (ADF&G unpubl. data).

There is also variation in individual movements of harbor seals within a population, with some seals traveling great distances seasonally while others stay within a smaller area year-round. Womble and Gende (2013) noted that some harbor seals in Glacier Bay, Alaska, were residents year-round whereas others were migratory. For the migrating harbor seals, there was a high degree of site fidelity back to Glacier Bay the following pupping/breeding season despite the extensive migration away from the breeding area during the post-breeding season (Womble and Gende 2013). Lesage *et al.* (2004) documented that half of the tagged harbor seals in the St. Lawrence estuary in Canada left their summer haul-out areas and migrated up to 520 km to over-wintering sites, whereas the other half stayed year-round. Peterson *et al.* (2012) concluded that some harbor seals in the Pacific Northwest had spatially separated primary and secondary haul-outs, while other seals stayed relatively close to a primary haul-out year-round. Sharples *et al.* (2012) documented highly variable individual harbor seal movements for seals tagged in the British Isles. This study also concluded that region and season better explained the variation in foraging movements than the individual seal's sex, size, and body condition (Sharples *et al.* 2012), suggesting the local habitat conditions and distance to profitable feeding grounds may influence the foraging movements of the seals.

No harbor seals in Iliamna Lake have been satellite tagged, thus there are no data available about harbor seals movements in Iliamna Lake comparable to those discussed in the preceding paragraphs. Data on habitat use and movements of harbor seals in Iliamna Lake are from aerial surveys documenting locations where harbor seals were hauled-out (*e.g.,* Mathisen and Kline 1992; Small 2001; Withrow and Yano 2009; Burns *et al.,* 2012; Burns *et al.,* 2013), and the LTK of residents, including Alaska Native subsistence hunters around Iliamna Lake (*e.g.,* Burns *et al.,* 2013; Van Lanen *et al.,* 2013). In Iliamna Lake, hauled-out harbor seals are observed primarily in the northeastern portion of the lake, but some local residents report seeing seals in the southwestern portion of the lake, especially near the Kvichak River and Igiugig (Burns *et al.,* 2013). The majority of aerial surveys of Iliamna Lake were conducted during the summer/ice-free season, with a small number of recent (2010–2013) surveys also flown during the winter/ice-present season. The recent aerial surveys documented

seasonal variations in seal presence and abundance in the lake, with significantly greater numbers of seals observed hauled-out during the summer pupping and molting periods (*e.g.,* 237 seals observed August 4, 2013) than during the winter (*e.g.,* 9 seals observed April 4, 2013) (Burns *et al.,* 2011; Withrow *et al.,* 2012; Burns *et al.,* 2012; Burns *et al.,* 2013; NMML unpubl. data).

While harbor seals are known to haul-out on ice, recent aerial surveys have documented few seals hauled-out during winter surveys in Iliamna Lake. For example, an aerial survey flown in April 2010, when the lake was almost completely frozen-over, documented only 11 seals; observers reported they ''did not see any areas that could support the several hundred seals that have been documented in the summer'' (Withrow *et al.,* 2011). Another aerial survey in April 2013 observed only nine hauled-out seals (NMML unpubl. data). Although fewer seals are documented during winter months, there has been some speculation, primarily by some local residents (Burns *et al.,* 2013; Van Lanen *et al.,* 2013), that all the seals remain in the lake year-round and are undetectable during winter aerial surveys. It is possible seals present in the lake in winter are not observed because they are either in the water or they are under the ice in areas with air pockets, which may become accessible along shorelines when the lake's water level drops after a heavy layer of ice has formed at the surface. The particular environmental condition of under-ice air pockets has been scientifically documented in the Lacs des Loups Marins in Canada (Twomey 1939 *as cited in* Smith and Horonowitsch 1987; Smith and Horonowitsch 1987). The Lacs des Loups Marins are home to harbor seals in subspecies *P.* v. *mellonae,* who reside in freshwater lakes year-round and are believed to use under ice haul-outs when the lakes are iced-over (Smith and Horonowitsch 1987; Smith 1997; DFO 2016). While neither this environmental condition nor the use of under-ice air pockets by harbor seals have been scientifically assessed in Iliamna Lake, the use of under ice air pockets or chambers could explain why fewer seals are observed in Iliamna Lake when it is frozen compared to when it is not. However, this theory does not explain why only eight seals were counted in November 2010 (Burns *et al.,* 2011) when the lake was not iced-over. There currently is no scientific evidence available to determine whether air chambers or haul-outs are used by seals under the ice in Iliamna Lake during the winter; however, local residents have reported hearing seals under the ice in such spaces (Burns *et al.,* 2013). Regardless of the number of seals present in winter, the aerial surveys provide scientific evidence of some level of year-round presence of harbor seals in Iliamna Lake.

Conclusions drawn from recent aerial surveys suggest that some harbor seals may be year-round residents of Iliamna Lake whereas other harbor seals may seasonally migrate to and from the lake (Burns *et al.,* 2011; Withrow *et al.,* 2011; Burns *et al.,* 2012; Burns *et al.,* 2013). Some of the LTK regarding the migration patterns of seals in Iliamna Lake are inconsistent, and collectively they do not provide clarity (see Burns *et al.,* 2013). Some LTK reports indicate harbor seals migrate between Iliamna Lake and Bristol Bay and are frequently seen traversing the Kvichak River (*e.g.,* Alvarez 2013; Burns *et al.,* 2013; Igiugig Tribal Village Council 2013; Mohr 2013; Wilson 2013), while other reports indicate that the seals do not migrate and are present in the lake year-round (*e.g.,* Burns *et al.,* 2013; Jacko 2013; Mohr 2013). Local residents around Iliamna Lake indicate that observations of harbor seals in the Kvichak River are typically made beginning in spring, peak during mid-summer, and decline to zero in the winter months; however, some residents of Levelock on the Kvichak River have observed seals in the river in the winter (Burns *et al.,* 2013). This suggests that the Kvichak River may be used seasonally as a migration route between Iliamna Lake and Bristol Bay.

No scientific data are available to determine whether enough fish remain in Iliamna Lake to support hundreds of seals during winter. Some LTK indicates that the lake may not have sufficient food available to support the number of seals observed in summer months on a year-round basis. A local seal hunter recently noted that two seals harvested during two consecutive winters in the lake had not ''one drop of food in the stomach or intestines'' (Burns *et al.,* 2013). Another seal hunter recollected shooting a seal in March one year that was very skinny and had no fat on it, and speculated that during cold winters there was inadequate food for the seals (Burns *et al.,* 2013). However, the hunter also mentioned that it was very rare to find a skinny seal in Iliamna Lake. During our public comment period we received a comment that provided calculations of the abundance of non-salmonid freshwater fish available during the overwinter period and indicated that a population of approximately 300 seals could not be sustained on the levels of freshwater fish available in the winter. We have no information to support or refute the calculations provided by the commenter.

Alternatively, there may be adequate abundance of prey available in the lake year-round, but some seals could leave the lake in winter for other reasons. In the St. Lawrence estuary, a study of satellite-tagged harbor seals found that seals left summer haul-out areas when solid ice formed within the bays of the estuary despite ''evidence of high abundance of potential prey for harbor seals in the estuary during winter'' (Lesage *et al.,* 2004). This study concluded that availability of prey in winter ''is not the primary factor which influences the movement and distribution patterns of harbor seals'' (Lesage *et al.,* 2004). As discussed earlier, harbor seals have been documented to have spatially separated home ranges which vary seasonally (*e.g.* Lowry *et al.,* 2001; Lesage *et al.,* 2004; Peterson *et al.,* 2012; Womble and Gende 2013), but also high site fidelity to breeding locations. Thus, it is plausible that some harbor seals from Bristol Bay seasonally follow the salmon to Iliamna Lake and return to Bristol Bay for winter, but there are no data available either to support or refute this scenario.

Whether seals migrate seasonally between Iliamna Lake and Bristol Bay has not been scientifically investigated, with the exception of a few recent aerial surveys of Iliamna Lake and the Kvichak River. Aerial surveys of the Kvichak River (five complete or partial river surveys conducted from 2008–2013) have failed to document harbor seal presence in the river (Burns *et al.,* 2013), but it is possible that seals in the river may have been missed during the surveys or that the surveys were conducted when seals were not using the river. For example, during an aerial survey in 2011, the survey crew received a report of seals in a tributary of the Kvichak River near Kastinak Flats, but the survey crew was unable to locate the seals when they flew over the area approximately 30 minutes later (Burns *et al.,* 2013; D. Withrow, NMML, pers. comm.). Additionally, Burns *et al.,* (2013) postulated that seals present in the Kvichak River may not be accounted for as a result of the survey methodology, which only counts seals hauled-out, not those in the water. Other reports suggest harbor seals are regularly seen throughout the Kvichak River (Burns *et al.,* 2013; Van Lanen *et al.,* 2013; ADF&G unpubl. data). Of 14 harbor seals satellite tagged in Egegik and Ugashik Bays within eastern Bristol

Bay in 2000 and 2001, none were documented in the Kvichak River or Iliamna Lake (ADF&G unpubl. data). However, the sample size is too small to conclude that migration between Bristol Bay and Iliamna Lake does not occur. We did not find any scientific evidence to conclude the harbor seals in Iliamna Lake constitute a closed population with no migration between the lake and marine waters, and the documented LTK on this question was inconsistent. In the absence of persuasive evidence of a closed population, for purposes of our DPS assessment, we assumed that harbor seal migration between Iliamna Lake and Bristol Bay (or beyond) is possible.

Subsistence Harvest

Harbor seals are an important resource for Alaska Native communities surrounding Iliamna Lake. Harbor seals are not only a food source, but also provide materials that can be used for clothing, handicrafts, and cultural traditions. Reports of harvesting harbor seals by indigenous people around Iliamna Lake date back to the early 1800s and LTK suggests that seals have inhabited the lake for many centuries (Fall *et al.,* 2006; Van Lanen 2012; Burns *et al.,* 2013). The majority of hunting occurs during February and March; however, some animals have been harvested in summer and occasionally in winter (Burns *et al.,* 2013). Seven communities around Iliamna Lake and along the Kvichak River were surveyed regarding their harvest of marine mammals: Pedro Bay, Pope-Vannoy Landing, Kokhanok, Newhalen, Igiugig, Iliamna, and Levelock (Burns *et al.,* 2013). Between 1982 and 2011, approximately 150 seals were harvested in Iliamna Lake; however, there is a marked difference in the number of seals harvested each of those years (Burns *et al.,* 2013). For instance, there were no reported harvests of seals in 1982 and 1996, yet 33 were harvested in 1991. The most recent survey in 2011 reported that 44 percent of households surveyed from these seven communities used ''freshwater'' harbor seal products and 13 percent used ''saltwater'' harbor seal products in some capacity, resulting from an estimated harvest of 29 seals (five ''saltwater'' and 24 ''freshwater'') (Burns *et al.,* 2013).

Distinct Population Segment (DPS) Assessment

As described above, only species, subspecies, and DPSs are eligible for listing as a threatened or endangered species under the ESA. A DPS is a population or group of populations of a vertebrate species that meet both the ''discreteness'' and ''significance'' criteria of our DPS policy (61 FR 4722; February 7, 1996). If a population segment is found to be discrete and significant, it is a DPS and is considered a ''species'' under the ESA. If the population is not both discrete and significant, it does not meet the criteria for designation as a DPS and does not qualify as a ''species'' as defined by the ESA; thus, we need not evaluate its status relative to the factors in section 4(a)(1) of the ESA because it cannot be listed as a threatened or endangered species. Our assessment first addresses the discreteness of the harbor seals found in Iliamna Lake, and then addresses whether these seals are significant to *P. v. richardii,* as these terms are defined in our DPS policy (61 FR 4722; February 7, 1996).

As discussed above, we know from formal scientific studies and LTK that at least some harbor seals are present in the lake year-round; *i.e.* are residents of Iliamna Lake. What is not clear from the science or LTK is whether harbor seals from Bristol Bay migrate to Iliamna Lake. The BRT considered four scenarios: (1) The population of seals in Iliamna Lake is self-sustaining with seals being year-round residents of the lake, and no migration of seals from Bristol Bay into the lake occurs; (2) there are resident seals in the lake, and some seals from Bristol Bay migrate to the lake during the summer, but there is no interbreeding of seals from the two regions and the Bristol Bay seals do not stay in the lake during winter; (3) Iliamna Lake contains a mix of seals born in the lake and those born in the marine environment but who migrated to the lake (either temporarily or permanently), and these seals are interbreeding; or (4) there is no self-sustaining population of seals in the lake and migration is necessary to sustain the population of seals in the lake. The BRT found three of the four scenarios to be plausible, favoring explanations 1 and 2, but not ruling out 3. None of the BRT members considered the forth scenario likely (Boveng *et al.,* 2016). For our DPS analyses, we recognize that questions remain regarding whether there is migration, and references below to seals in or from Iliamna Lake are not meant to imply that their birth location (either in Iliamna Lake or the marine environment) is known, but rather are an indication of the seals' location in Iliamna Lake at time of observation or sampling.

Discreteness

We first sought to determine whether the harbor seal population in Iliamna Lake is discrete in relation to the remainder of the taxon to which it belongs (*i.e.,* the eastern North Pacific harbor seal subspecies, *P. v. richardii*). A population segment of a vertebrate species may be considered discrete if it satisfies either one of the following conditions specified in our DPS policy: ''(1) it is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors. Quantitative measures of genetic or morphological discontinuity may provide evidence of this separation; or (2) it is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the ESA.'' Because Iliamna Lake is entirely within the United States, the second discreteness criterion identified above is not relevant. Thus, we focused our assessment of discreteness on whether the harbor seals in Iliamna Lake are markedly separated from other harbor seals in the subspecies *P. v. richardii,* with emphasis on the nearest harbor seal stock in adjacent Bristol Bay. In addition to examining four categories of factors (*i.e.,* physical, physiological, ecological, or behavioral factors) as mechanisms with the potential for providing marked separation by limiting the dispersal of breeders between populations, the BRT recognized that dispersal rates often cannot be directly measured in natural populations. As such, the BRT also decided to separately review the available genetic information for evidence of separation.

Physical Factors: Iliamna Lake is located at the base of the Alaska Peninsula, where it drains through the Kvichak River into Bristol Bay. Thus, harbor seal habitat in Iliamna Lake is separated from the nearest habitat commonly used by harbor seals in Bristol Bay by the Kvichak River. Reports regarding the length of the Kvichak River vary, with some older documents reporting the river is approximately 80 km (50 mi) in length (*e.g.,* Orth 1971; BLM 2004), whereas more recent reports suggest it is closer to 115–120 km (71–75 mi) (*e.g.,* Withrow and Yano 2009; Boveng *et al.,* 2016; validated by a measurement of the river path between Kogging and Iliamna Lake using a high resolution topographic map). The discrepancy in reported distances of the river could be explained by changes in the river itself over time, variances in the starting and ending measurement points, or by using

straight-line measurements on a map versus tracing the path of the river.

Although seals are found predominantly in the northeast region of Iliamna Lake, the most recent studies indicate harbor seals are found throughout Iliamna Lake, in rivers draining into the lake (Iliamna, Newhalen, and Gilbralter rivers), and throughout the Kvichak River (Alvarez 2013; Burns *et al.,* 2011; Burns *et al.,* 2012; Burns *et al.,* 2013; Igiugig Tribal Village Council 2013; Mohr 2013; Van Lanen *et al.,* 2013; Wilson 2013). The distance that seals would have to travel from the lake to Bristol Bay is well within the known distances that harbor seals travel (see previous discussion in ''Habitat Use and Movements''). Thus, the evidence available does not indicate that the length of the Kvichak River nor the distance to the northeast region of Iliamna Lake (approximately 180 km from Bristol Bay) would be a physical barrier separating seals in Iliamna Lake from those in Bristol Bay.

Physical factors that could impede harbor seal passage in the Kvichak River include shallow braided sandbars and ice cover during winter. Although poorly adapted for travel on land, harbor seals in other areas have been suspected to cross land up to 0.15 km long and on inclines as steep as 25 degrees to get from one body of water to another (COSEWIC 2007), so it is reasonable to assume harbor seals have the capability to cross shallow braided sandbars in the Kvichak River.

Millions of sockeye salmon enter Iliamna Lake from marine waters annually via the Kvichak River along with other species of anadromous salmon. Also, another marine mammal species has been reported to travel to Iliamna Lake via the Kvichak River. Beluga whales, which are less agile and much larger than harbor seals, have been documented in the Kvichak River (Frost *et al.,* 1983; Quakenbush 2002) in the spring, summer, and fall (Chythlook and Coiley 1994) and have been observed near Igiugig (Burns *et al.,* 2013; Wilson 2013) and in Iliamna Lake (Mohr 2013). Thus, the available evidence suggests the Kvichak River is passable for harbor seals, at least part of the year when the river is not frozen over.

Individual BRT members were not in agreement regarding the scientific support for discreteness due to physical factors, but concluded ''no strong evidence was found either for or against marked separation by physical barriers between harbor seals in Iliamna Lake and those in Bristol Bay'' (Boveng *et al.,* 2016). When we considered the best available information indicating that there is access between Iliamna Lake and Bristol Bay via the Kvichak River, which is passable at least part of the year, and that the distance between the two locations is within documented migration distances of harbor seals, along with with the opinion of the BRT, we concluded that the best available information does not support a conclusion that there is separation due to physical factors. As such, we find that harbor seals in Iliamna Lake are not markedly separated from other harbor seals of the subspecies *P. v. richardii* as a consequence of physical factors.

Physiological Factors: Unlike the Lacs des Loups Marins harbor seals in Canada, a landlocked population that lives exclusively in freshwater lakes and rivers and has documented physiological differences from the adjacent harbor seal population in marine waters (Smith *et al.,* 1994), no studies exist suggesting there are statistically significant morphological or physiological differences between harbor seals in Iliamna Lake and other members of the subspecies *P. v. richardii*. Consequently, our discreteness analysis considered other types of evidence which may suggest physiological differences. Specifically, we considered observations obtained primarily from those with LTK of seals in Iliamna Lake having a different size, taste, pelage, and timing of pupping as compared to seals in Bristol Bay.

The concentration and availability of salmon to seals in Iliamna Lake in the summer may account for perceived differences reported by LTK in size and taste of seals in Iliamna Lake compared to seals in Bristol Bay. For example, several respondents of a recent LTK survey indicated that the ''physical size of the seals grows every year following the salmon runs'' (Burns *et al.,* 2013), suggesting high availability and consumption of energy-rich salmon results in growth of seals during the summer. While the well-fed seals may have experienced salmon-fueled growth, the flavor of the harvested seals has been reported to become less desirable after the salmon runs, which is reportedly why seals in Iliamna Lake are not normally hunted in fall (Burns *et al.,* 2013). The LTK perception of differences in pelage pattern and coloration is conflicting (see Burns *et al.,* 2013), and no formal studies have been conducted to determine if there are significant differences in pelage patterns for harbor seals in Iliamna Lake versus elsewhere. Burns *et al.,* (2013) speculate that the timing of the harvest of harbor seals in relation to the timing of the annual molt may play a role in the perceptions of difference in pelage texture or coloration. The observed variances in taste, body size, and pelage traits are more likely a reflection of seasonal diet, normal phenotypic plasticity, and individual variation rather than an indication that the seals in Iliamna Lake are physiologically distinct from those in the adjacent marine environment.

The timing of pupping for eastern North Pacific harbor seals ranges from March to September (Bigg 1969; Temte *et al.,* 1991; Sease 1992). In Iliamna Lake, LTK reports about the timing of pupping are variable, with some reports of seal pups born on the lake ice during March and April, and other reports indicating pups are born during the first half of June (Burns *et al.,* 2013). LTK observations of seal pup sightings in Iliamna Lake ranged from February to September, with the majority of pup sightings between April and August (Burns *et al.,* 2013). Between 2009 and 2013, aerial surveys of Iliamna Lake documented newborn pups in June, July, and August (Burns *et al.,* 2013). Both aerial survey observations and local resident observations of newborn seal pups in Iliamna Lake are within the normal range of pupping dates for the eastern North Pacific harbor seal subspecies.

Jemison and Kelly (2001) and Reijnders *et al.* (2010) showed that the timing of harbor seal pupping in the same location can shift by as much as several weeks over the course of a few decades. A review of data from 1975–2006 for harbor seals in Nanvek Bay, Alaska, (which is the main location within Bristol Bay for which harbor seal pupping data are available) indicates that the average peak pupping date can vary by a couple of weeks over just a few years (*e.g.,* June 18 in 2002 vs. July 3 in 2006; see Table 1 in Boveng *et al.,* 2016). This observed natural variation in timing of harbor seal pupping, along with scarcity of available data, may account for seemingly conflicting information in the scientific literature about the timing of pupping in Iliamna Lake relative to other harbor seals in Alaska (*e.g.,* Burns *et al.,* 2013 states ''when compared to Bristol Bay seals only, the timing of pupping in Iliamna does not appear to be substantially delayed'' versus Withrow *et al.* (2011) which states ''Elsewhere in Alaska we observe harbor seals pupping much earlier, in May and June''). According to the BRT report (Boveng *et al.,* 2016), the latest peak pupping date estimated for the Nanvek Bay region of Bristol Bay was July 5 (1990). Iliamna Lake aerial surveys flown in 2010, 2011, and 2013 indicate that the earliest peak pupping date was July 9 (2010). Sparse data

about pupping dates in both Bristol Bay and Iliamna Lake lead us to conclude that while we do not know the precise timing of peak pupping of harbor seals in either region, we do know that timing of peak pupping can vary by a couple of weeks among years within a given location. Therefore, an overlap of the timing of pupping between seals in Bristol Bay and Iliamna Lake is possible, even though there may be a 15-day delay in the average peak pupping date in Iliamna Lake (July 12) versus the average peak pupping date in Nanvek Bay (June 27) (see Boveng *et al.,* 2016). Burns *et al.* (2013) also concluded that compared to Bristol Bay, the timing of pupping in Iliamna Lake does not appear to be substantially delayed. A model developed to estimate the abundance and trend of harbor seals in Iliamna Lake (Boveng *et al.,* in prep *as cited in* Boveng *et al.,* 2016) predicted a peak pupping date of July 20 (versus the July 12 peak pupping date suggested by a simple average of the dates of maximum pup counts presented in Table 1 of the BRT Report); however, there was substantial imprecision in the model's estimate for the peak of pup counts in the lake.

Individual BRT members were not all in agreement regarding the degree of scientific support for discreteness based upon marked separation due to physiological factors. Regarding differences in physiological traits such as pelage coloration or texture and seal size and taste, the BRT report stated ''whether any of these differences truly reflect physiological differences or separation is not clear, and the BRT was unaware of any documentation that these traits are heritable and would indicate separation or novel genetic diversity'' (Boveng *et al.,* 2016). Regarding physiological separation based on the notion that pupping in Iliamna Lake is potentially delayed by two to six weeks when compared to nearby populations, the BRT stated, ''The sparsity of information currently available for Iliamna Lake, imprecision in determining the timing for any of the comparison populations, and the length of the harbor seal pupping period (approximately 6–10 weeks), reduce the confidence that can be placed on the apparent difference'' (Boveng *et al.,* 2016).

When we considered all the evidence currently available to us, including the lack of direct measures of physiological factors, the possibility that perceived differences in seals' appearance may be the result of natural individual variation, the imprecision of estimating pupping dates due to limited data, the potential overlap of pupping seasons between Iliamna Lake and Bristol Bay, and the large timeframe (March to September) for typical pupping times across the eastern North Pacific harbor seal taxon, we concluded that the available information is too weak for us to make a determination that there is separation based on physiological factors. As such, based on the available evidence, we find that harbor seals in Iliamna Lake are not markedly separated from other harbor seals of the subspecies *P. v. richardii* as a consequence of physiological factors.

Ecological Factors: Harbor seals are known to pursue and aggregate around concentrations of anadromous prey, particularly salmon (*e.g.,* London *et al.,* 2001, Orr *et al.,* 2004, and Wright *et al.,* 2007, *as cited in* Peterson *et al.,* 2012; Middlemas *et al.,* 2006; Hauser *et al.,* 2008). Changes in distribution of seasonally abundant prey in the Pacific Northwest have been suggested as a possible explanation for seasonal movements of harbor seals in that area (Peterson *et al.,* 2012), as harbor seals may move deliberately to exploit regions of higher prey availability (Hardee 2008). In Alaska, movements of 125 km by adult female harbor seals have coincided with seasonal eulachon runs in the Copper River Delta (Lowry *et al.,* 2001). Savarese and Burns (2010) documented peak harbor seal numbers coincident with peaks in regional salmon abundance in the Bering Glacier region, and contended the salmon attracted large numbers of harbor seals to the region. Peterson *et al.* (2012) speculated that the observations of harbor seals using spatially separated haul-out sites on a seasonal basis may be related to seasonal changes in prey distribution and foraging opportunities.

Hauser *et al.* (2008) examined foraging by harbor seals in Iliamna Lake during July and August, when salmon are very abundant in the lake, and reported that the seals predominately fed on large salmonids (salmon, trout, char, and graylings) during the summer months. In addition to salmonids, Hauser *et al.* (2008) documented lampreys, smelts, sculpins, whitefishes, sticklebacks, and other unidentified prey items in the scat samples of harbor seals in Iliamna Lake. Thus, harbor seals in Iliamna Lake appear to be opportunistic feeders, consistent with the general pattern of harbor seals foraging on a wide variety of fish and invertebrate prey across their range, with regional differences in diet diversity (Jemison 2001; COSEWIC 2007). The prey items and seasonal concentration of salmon in the diet of seals in Iliamna Lake are consistent with those documented for harbor seals in other freshwater systems. For example, Middlemas *et al.* (2006) documented a summer peak in the contribution of salmonid prey to the diet of harbor seals observed in a Scottish river system; Beck *et al.* (1970) documented a seal in Edehon Lake, Canada with both trout and whitefish in its stomach; and Power and Gregoire (1978) reported that harbor seals in lakes ate various freshwater fish present in the lakes, including trout. Smith *et al.* (1996) examined stomachs of four harbor seals from the Lacs des Loups Marins which contained in large part lake whitefish, lake trout, and brook trout. Scat collected in the Nanvak Bay region of Bristol Bay also showed that harbor seals have a diverse diet, including some of the same types of prey species consumed in Iliamna Lake (*e.g.,* salmon, smelts, sculpins) as well as other prey species (*e.g.,* codfishes, herring, squid/octopus) (Jemison 2001).

Stable isotope analyses of whiskers and muscle tissue can provide some insights about harbor seal diets from several months prior to the date the samples were collected. Samples collected from a small number of subsistence harvested harbor seals from Iliamna Lake provide preliminary evidence that those specific seals consumed freshwater fish during the previous winter (Burns *et al.,* 2013). These preliminary data and the typical timing of ice melt in the Kvichak River and Iliamna Lake (May–June) suggest that these samples were most likely collected from seals which had overwintered in the lake. However, these preliminary stable isotope data are not especially revealing due to the lack of data on whisker growth rates, tissue turnover times, and direct measures of the isotopic signature of potential prey resources (Burns *et al.,* 2013).

If ecological factors prevented harbor seals in Iliamna Lake from mixing with other harbors seals during mating season, then there could be marked separation as a result of lack of opportunities for interbreeding. However, when considering the timing of the annual ice melt in the Kvichak River and Iliamna Lake, the sockeye salmon runs into Iliamna Lake, and the presumed mating seasons of seals in Bristol Bay and in Iliamna Lake, the BRT concluded that the timing of these events would not preclude opportunities for interbreeding by seals migrating from Bristol Bay to Iliamna Lake (Boveng *et al.,* 2016).

The BRT members were in general agreement regarding the degree of scientific support for discreteness based upon marked separation due to ecological factors, and concluded there

was ''no strong evidence for separation'' as a result of any of the ecological factors considered. Based on the available evidence, we find that harbor seals in Iliamna Lake are not markedly separated from other harbor seals of the subspecies *P. v. richardii* as a result of ecological factors.

Behavioral Factors: There are no scientific or LTK data available to assess whether mating behaviors (*e.g.,* vocalizations or mate attraction displays) differ for seals in Iliamna Lake relative to those in Bristol Bay or other areas of the eastern North Pacific harbor seal range. Absent data available regarding mating behaviors of harbor seals in Iliamna Lake, the BRT construed the selection of relatively remote pupping sites in the northeastern region of Iliamna Lake (nearly 200 km from pupping sites in Bristol Bay) to be a behavior, and suggested the selection of the unusual location was evidence of some degree of separation, especially given harbor seals' site fidelity to breeding locations. The selection of distant pupping sites could be interpreted to mean that harbor seals in Iliamna Lake are not freely breeding with harbor seals in Bristol Bay, and lead to a conclusion there is marked separation. However, even a small amount of breeding dispersal from marine populations of harbor seals into Iliamna Lake could render the degree of genetic differentiation insignificant (Boveng *et al.,* 2016), suggesting there may not be marked separation. The available LTK does not resolve this question, as opinions vary regarding whether seals in the lake are residents, migrants, or a mix of both (see Burns *et al.,* 2013).

Previously we mentioned that harbor seals commonly follow anadromous prey into freshwater environments, such as rivers and lakes. Thus, we do not consider the mere presence of harbor seals in Iliamna Lake to be a behavioral adaptation suggestive of marked separation from harbor seals in the marine environment. However, some Alaska Natives in the Iliamna Lake region, including subsistence hunters, have postulated that the seals overwinter in the lake by using under-ice air gaps and haul-outs (Burns *et al.,* 2013), although such winter habitats have not been documented in Iliamna Lake. Lack of data complicates a determination of whether use of under-ice shelters would be a special, learned behavioral adaptation that is unique to harbor seals over-wintering in freshwater environments, or if this behavior would be one that any harbor seal in a similar environment may adopt. Similar under-ice habitats in the Lacs des Loups Marins in Canada have been suggested as potential harbor seal lairs or breathing chambers (*e.g.,* Smith and Horonowitsch 1987; COSEWIC 2007). This, in turn, suggests that use of such under-ice habitats may be an example of the behavioral plasticity that results in harbor seals using a range of behaviors and habitats in response to environmental conditions (Komers 1997; Vincent *et al.,* 2010).

The Lacs des Loups Marins harbor seal population has shown evidence of modifying typical harbor seal behavior and adapting to its environment. It is postulated that, because no pups have been observed being born on the ice during that species' pupping time period (April, when the lakes are frozen), the Lacs des Loups Marins harbor seals have learned and adapted to their situation by whelping in under-ice shelters similar to subnivean birth lairs (snow caves) used by ringed seals (Consortium Gilles Shooner & Associes *et al.,* 1991 *as cited in* Smith 1997). On the contrary, Burns *et al.* (2013) include information from local residents near Iliamna Lake who suggest some harbor seal pups may be born in Iliamna Lake in March and April, when the lake is still frozen, but pup on the ice, not under it. Due to this reported on-ice pupping, even if the harbor seals in Iliamna Lake utilize under-ice habitats as shelters or breathing chambers, such behavior would not be an adaptation necessary for successful pupping by seals that use the lake. Thus, unlike the Lacs des Loups Marins harbor seals, the evidence suggests that harbor seals in Iliamna Lake have not developed novel behaviors to facilitate pupping in a lake environment.

The BRT members were in general agreement regarding the degree of scientific support for discreteness based upon marked separation due to behavioral factors, as determined by selection of pupping locations far from those in Bristol Bay, and the ambiguity regarding the degree of migration and breeding dispersal (if any). Their judgment suggests behavioral separation is possible, but the available evidence is not strong, or is contradicted by other evidence. Our review of behavioral factors indicates that the observed harbor seal behaviors in Iliamna Lake are not uncommon; harbor seals in Iliamna Lake have not been documented to display behaviors outside the range of normal harbor seal behaviors (*e.g.,* no unique mating, pupping, or foraging behaviors reported), although there are unresolved questions about migration and use of under ice shelters. There is no information available to suggest that harbor seals living in ice conditions year-round in a freshwater system would require different behavioral adaptations from harbor seals living in ice conditions in a saltwater or estuarine system. Despite the lack of these obvious indications of potential behavioral separation, we recognize the possibility that the selection of pupping locations distant from other known pupping locations could be construed as a behavior and indicate marked separation as a result of the selection of pupping sites limiting the potential for interbreeding. Therefore, we find that the best available evidence is not conclusive but indicates that harbor seals in Iliamna Lake may be markedly separated from other harbor seals of the subspecies *P. v. richardii* as a consequence of behavioral factors.

Genetics: To further consider whether harbor seals in Iliamna Lake are markedly separated from other populations of eastern North Pacific harbor seals as a consequence of physical, physiological, ecological, or behavioral factors, we examined available genetic evidence which may be indicative of separation. Genetic samples available from harbor seals in Iliamna Lake were compared to genetic samples available from harbor seals in the Egegik and Ugashik regions of eastern Bristol Bay. Bristol Bay has the nearest concentration of seals to Iliamna Lake, and the BRT determined ''the seals in eastern Bristol Bay would be expected to be the most similar to the Iliamna Lake seals if there is breeding dispersal between the two areas, and therefore would be expected to pose the most stringent test for demonstrating discreteness'' (Boveng *et al.,* 2016).

Genetic samples have been collected and analyzed from 13 harbor seals in Iliamna Lake collected in six years from 1996 through 2012. The mitochondrial DNA (mtDNA) analysis revealed that 11 of 13 seals sampled from Iliamna Lake exhibited the same mtDNA haplotype (O'Corry-Crowe 2013), meaning all 11 seals had the same group of genes inherited from their female parent. The remaining two DNA samples did not yield results for this test. This specific mtDNA haplotype (Pvit-Hap#7) is the most common haplotype found in harbor seals sampled from Bristol Bay and is observed in roughly 21 percent of harbor seals from the Egegik and Ugashik regions of Bristol Bay (Burns *et al.,* 2013; O'Corry-Crowe 2013). Thus, this haplotype is not unique to harbor seals in Iliamna Lake.

The identification of only one mtDNA haplotype in harbor seals from Iliamna Lake appears to suggest unusually low genetic diversity. For comparison, 76 harbor seals sampled from the Egegik

and Ugashik regions of eastern Bristol Bay exhibited 33 different mtDNA haplotypes (O'Corry-Crowe 2013; Burns *et al.,* 2013). If seals from the Egegik and Ugashik regions were immigrating into the lake and staying year-round, there would be almost an 80 percent likelihood that one of the other mtDNA haplotypes, not Pvit-Hap#7, would be seen in samples collected from Iliamna Lake (O'Corry-Crowe 2013). However, because mtDNA is inherited from the mother, mtDNA diversity analysis cannot determine if male seals are migrating to and from the lake and breeding with resident female seals. Hardee (2008) recognized similar limitations of mtDNA given observations of male harbor seals in the Pacific Northwest traveling larger distances than previously believed, possibly to mate in a separate geographic region before returning to their home site. Therefore, conclusive results about the level of genetic diversity require analyses using nuclear DNA (nDNA; which also provides information from the male parent), and more formal analyses of mtDNA with statistical comparisons to harbor seals sampled from other regions within the range of the taxon (O'Corry-Crowe 2013). These more stringent data regarding genetic diversity do not exist.

In addition to examining the existing genetic diversity of the samples, analyses were conducted to examine the extent of genetic differentiation between harbor seals sampled in Iliamna Lake from those sampled in the Egegik and Ugashik regions of eastern Bristol Bay. The results of analyses examining genetic differentiation using both mtDNA and nDNA suggest that the harbor seals sampled in Iliamna Lake were genetically differentiated from harbor seals sampled in the Egegik and Ugashik regions of eastern Bristol Bay (Burns *et al.,* 2013; O'Corry-Crowe 2013). The results of these analyses also suggest that male and female-mediated dispersal between the Egegik and Ugashik regions of eastern Bristol Bay and Iliamna Lake was restricted (Burns *et al.,* 2013; O'Corry-Crowe 2013). Although no directed comparisons were conducted between Iliamna Lake samples and genetic samples collected from harbor seals in other areas of Bristol Bay or other portions of the range of the taxon, the measure of mtDNA genetic differentiation between seals in Iliamna Lake and those in eastern Bristol Bay yielded results showing substantially greater genetic differentiation than all previous pairwise comparisons between the other major centers of harbor seal abundance in Alaska (O'Corry-Crowe 2012; Boveng *et al.,* 2016). These genetic differentiation results are suggestive of the presence of a small, isolated population of harbor seals in Iliamna Lake.

O'Corry-Crowe (2013) identifies several limitations of the findings for the Iliamna Lake samples. He cautions that the sample size is extremely small and that questions regarding the patterns of kinship among the collected samples remain unresolved (*i.e.,* if some of the samples were from related individuals, then the data could be skewed and not representative of a random sampling of the population), and indicates that genetic differentiation may be enhanced in small populations when there is a rapid rate of genetic drift, even when there is continued gene flow. Although the 13 genetic samples from seals in Iliamna Lake were collected between 1996 and 2012, most samples were collected during months when seasonal migrants would not be expected to be in the lake, thus the power to detect seasonal migrants may be low. Conversely, the timing of the samples may be benficial for considering if the resident seals in the lake are discrete from their marine counterparts because for most samples seasonal migrants would not be expected to be present in the lake. O'Corry-Crowe (2013) also provides recommendations for future genetic research to resolve lingering issues, including analyzing 20 microsatellite loci (only 9–11 loci were analyzed) and updating the techniques used for the analyses to newer technologies, which would increase the power to resolve genetic questions. We also note that the tests for genetic differentiation compared the Iliamna Lake samples solely against samples collected from the Egegik and Ugashik regions of eastern Bristol Bay. Thus, the samples used for the comparison group may not be representative of all the seals that could migrate to Iliamna Lake.

The genetic data available suggest the harbor seals sampled in Iliamna Lake have low mtDNA diversity, possess the most common mtDNA haplotype found in Bristol Bay harbor seals, and are genetically differentiated from harbor seals sampled in the Egegik and Ugashik regions of eastern Bristol Bay. Given the concerns about the limited nature of the available genetic information previously discussed here and by O'Corry-Crowe (2013), ambiguity remains regarding the degree of separation, and hence discreteness, of harbor seals in Iliamna Lake. However, in the absence of more samples collected from a greater number of seals in Iliamna Lake and the Kvichak River, to include the potential migration season, and/or completion of additional tests such as those recommended by O'Corry-Crowe (2013), we consider the existing genetic results to be the best available data upon which to base our determination. These genetic results support a decision that harbor seals in Iliamna Lake are markedly separated from harbor seals in eastern Bristol Bay, and by assumption, from the remainder of the taxon.

Discreteness Conclusion

We find the available evidence for discreteness based on physical, physiological, or ecological factors to be unconvincing. The available evidence based on behavioral factors is not conclusive, but the selection of pupping locations distant from other known pupping locations could be construed as a behavior and indicate marked separation as a result of the selection of pupping sites limiting the potential for interbreeding. The strongest evidence for discreteness derives from 13 genetic samples collected from seals in Iliamna Lake. Analyses of these samples strongly indicate the seals from Iliamna Lake are genetically differentiated from seals sampled in two locations within Bristol Bay (Ugashik and Egegik), the nearest concentration of seals to Iliamna Lake with genetic data available. Genetic comparisons of samples for the entire taxon do not exist, but this region within Bristol Bay was expected to provide the most stringent comparison for discreteness if there is breeding dispersal between the two regions. The BRT was in strong agreement that the genetic data reflect marked separation, although the BRT acknowledged that the mechanism of such separation is unknown and the data are limited. It is possible that the limited available genetic data may accurately represent the situation in both Iliamna Lake and all of Bristol Bay, or that additional genetic analysis from *P. v. richardii* animals sampled from elsewhere in their range or from additional seals in Iliamna Lake, could result in a different conclusion. Nonetheless, the best available genetic information leads us to conclude that some portion, and perhaps all, of the harbor seals in Iliamna Lake likely constitute a resident population that is genetically differentiated from harbor seals in eastern Bristol Bay, and thus meet the criteria for consideration as a discrete entity per our DPS policy (61 FR 4722; February 7, 1996).

Significance

Having determined that resident seals from Iliamna Lake are likely discrete, at

least from harbor seals in the Egegik and Ugashik regions of nearby Bristol Bay, we next sought to determine whether they are significant to the *P. v. richardii* subspecies.

In carrying out the significance examination per our DPS policy (61 FR 4722; February 7, 1996), we are to consider available scientific evidence of the population's importance to the taxon to which it belongs. This consideration may include, but is not limited to, the following: (1) Persistence of the discrete population segment in an ecological setting unusual or unique for the taxon; (2) evidence that loss of the discrete population segment would result in a significant gap in the range of the taxon; (3) evidence that the discrete population segment represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range; or (4) evidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics.

This determination, however, is highly fact specific and may consider factors besides those enumerated above. Further, significance of the discrete population segment is not necessarily determined by existence of one of these classes of information standing alone. Information analyzed under these and any other applicable considerations is evaluated relative to the biological and ecological importance of the discrete population to the taxon as a whole. Accordingly, all relevant and available biological and ecological information is analyzed. As we explained in the DPS policy, ''the principal significance to be considered in a potential DPS will be the significance to the taxon to which it belongs'' (61 FR 4722, 4724; February 7, 1996). Finally,we assessed the biological and ecological significance of the seals in Iliamna Lake to the *P. v. richardii* (the eastern North Pacific harbor seal) taxon in light of Congressional guidance that the authority to list DPSs be used ''sparingly'' while conserving the genetic diversity of the species (see Senate Report 151, 96th Congress, 1st Session).

Persistence in an Unusual or Unique Ecological Setting: In assessing the ''persistence of the discrete population segment in an ecological setting unusual or unique for the taxon,'' we considered whether specific characteristics of the Iliamna Lake environment are unusual or unique; whether persistence in the Iliamna Lake environment is unusual or unique; and whether there are adaptations as a result of persistence in an unusual or unique environment which would result in the discrete population being biologically or ecologically significant to the taxon *P. v. richardii.*

The diet of harbor seals in Iliamna Lake is consistent with what we would expect for the species occupying a freshwater system dominated by anadromous salmon. Hauser *et al.* (2008) indicate that harbor seals in Iliamna Lake consumed large amounts of sockeye salmon when they were seasonally abundant, and also fed on trout, char, graylings, lampreys, smelts, sculpins, whitefishes, sticklebacks, and other unidentified prey items. Burns *et al.* (2013) examined eight harbor seal stomachs collected from seals harvested from Iliamna Lake in 2011 and 2012; only three had identifiable prey items and the remaining five stomach were either empty, only had worms, or had unidentifiable contents. An examination of the identifiable prey items found that these seals had consumed small or young salmonids (salmon and/or trout), threespine stickleback, and Arctic grayling or lake whitefish (Burns *et al.,* 2013). The variety and types of prey items in the diet of these sampled seals in Iliamna Lake reflects harbor seals being opportunistic feeders (Carretta *et al.,* 2015), and the available data suggest no unusual or unique prey for the habitat occupied.

We also considered whether the habitat available for use by seals in Iliamna Lake is unusual or unique. Harbor seals commonly use reefs, sand and gravel beaches, sand and mud bars, island beaches, and ice (glacial ice, pan ice, sea ice, or icebergs) as haul-out sites. Harbor seals in Iliamna Lake are known to haul-out on rocky and sandy substrates, sand bars, small islands, and ice near pressure cracks or polynas (Burns *et al.,* 2011; Burns *et al.,* 2012). None of these haul-out substrates are unique or unusual for harbor seals. Harbor seals in Iliamna Lake are reported to pup both on ice (Burns *et al.* 2013) and other haul-outs in the absence of ice. There is no evidence of seals in Iliamna Lake pupping in air pockets beneath the ice, which would be unusual. Such use has been hypothesized for the harbor seals in the Lacs des Loups Marins (Consortium Gilles Shooner & Associes *et al.* 1991 *as cited in* Smith 1997; DFO 2016). According to LTK, pupping in Iliamna Lake likely occurs at island beaches or sandbars in the northeastern portion of the lake, which is consistent with the types of substrates upon which aerial surveys documented pups (*i.e.,* on low-lying islands and sand spits; Burns *et al.,* 2013). Nothing suggests that harbor seals in Iliamna Lake display unusual or unique pupping behaviors (including habitat usage).

Smith and Horonowitsch (1987) studied the ice at one location within the Lacs des Loups Marins and documented what they refer to as ''shoreline ice-steps'' which they speculated could be used as breathing chambers for over-wintering seals in the lake. LTK suggests the presence and use of similar under-ice haul-outs in Iliamna Lake (Burns *et al.,* 2013). While this would represent unusual habitat use for harbor seals in general, and unique habitat for harbor seals of *P. v. richardii,* it would be consistent with the general observation that harbor seals exhibit wide variation in habitat use, rather than being indicative of an adaptation by seals in Iliamna Lake that would be significant to the *P. v. richardii* taxon as a whole (see further discussion of habitat adaptation below).

Harbor seals have the broadest distribution and occur in more different habitats than any other pinniped species (Burns 2002; COSEWIC 2007), and are frequently and commonly observed in freshwater systems (Burns 2002). Mansfield (1967) provides information about sightings of harbor seals in rivers and lakes in Arctic Canada (referencing Doutt 1942 and Harper 1961 for detailed summaries of Arctic harbor seals' freshwater distribution), indicating that harbor seals have ''a strong liking for fresh water'' and are often found in estuaries and freshwater habitats ''far from the sea.'' Beck *et al.,* (1970) report harbor seals in the Thlewiaza River system and associated lakes west of Hudson Bay. Smith *et al.* (1994) and Smith (1997) provide an extensive list of reports of harbor seals documented in freshwater systems. Smith *et al.* (1996) conducted analyses involving both the Lacs des Loups Marins harbor seals as well as a second group of ''lacustrine'' harbor seals from Kasegalik Lake in Canada's Northwest Territory. Middlemas *et al.* (2006) provide documentation of harbor seals in a Scottish river system. The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) reports that harbor seals occasionally ascend the St. Lawrence River to the Great Lakes (COSEWIC 2007). In the Bristol Bay region, harbor seals have been observed in other lakes in addition to Iliamna Lake, such as Lake Becharof and Naknek Lake (Mathisen and Kline 1992). Thus, the presence of harbor seals in freshwater systems or lakes, including Iliamna Lake, is not unusual or unique for the species.

Year-round persistence of harbor seals in a lake is less common. Besides the unknown number of harbor seals

occupying Iliamna Lake through the winter, the Lacs des Loups Marins harbor seals are the only other documented instance of harbor seals persisting in freshwater systems year-round. However, a review of available literature suggests the possibility this scenario may be more prevalent than just these two groups of harbor seals. For example, Mansfield (1967) states that the population of freshwater harbor seals in the Upper and Lower Seal Lakes east of Hudson Bay (a.k.a. the Lacs des Loups Marins) is not unique given reports of harbor seals found in other freshwater systems of Canada. Beck *et al.* (1970) postulated that harbor seals may live in the Thlewiaza River and associated lakes year-round, and documented a pup in the Edehon Lake, leading them to conclude that harbor seal reproduction is successful in that freshwater habitat. Beck *et al.* (1970) also concluded that individual seals in those lakes may be born and spend most or all of their lives in freshwater, but there was no reason to believe they were an isolated population. In Alaska, winter aerial surveys led Savarese and Burns (2010) to suggest that harbor seals are present year-round in Vitus Lake, a tidally-influenced lake near the Bering Glacier. No pups were documented during that study and diet and genetic data indicated seals from various stocks moved into Vitus Lake to take advantage of local salmon runs (Savarese and Burns 2010). These reports of potential year-round presence of harbor seals in various freshwater systems are sporadic, and do not confirm self-sustaining populations exist in those other freshwater systems. Therefore, it is reasonable to conclude that the year-round persistence of a discrete population of harbor seals in the freshwater environment of Iliamna Lake is at least unusual, if not unique, to the *P. v. richardii* harbor seal taxon.

The BRT considered whether the persistence of the population of harbor seals in this setting is important to the taxon as a whole (see discussion in Boveng *et al.,* 2016). Specifically, the BRT considered whether harbor seals in Iliamna Lake exhibit any adaptations to the environment which would be biologically or ecologically significant to the *P. v. richardii* harbor seal taxon. The evidence of such adaptations is not necessarily required to demonstrate significance; however, the BRT examined such evidence here in light of harbor seals' widespread and diverse habitat and diet. The BRT considered the physiology of the seals in Iliamna Lake as well as their over-wintering strategy as possible indicators of adaptations of potential importance for the taxon.

As previously discussed, some local residents of the Iliamna Lake region have suggested they think the harbor seals harvested from Iliamna Lake taste, look, or feel different (*e.g.,* seals are fatter; pelage is softer) from those harvested in the marine environment (Burns *et al.,* 2013). There was, however, a lack of consensus regarding the perceived differences (*e.g.,* some say seals from Iliamna Lake are darker than marine counterparts, others say the seals are lighter) among the local residents interviewed. Moreover, attributes such as fatness and softness of the coat, or the way the seals taste when consumed, are not necessarily inherited traits and could be acquired during time spent in the lake. Unlike other lake seal species, there are no data available to document whether morphological (*e.g.,* craniometric) differences exist; if such morphological differences are present, they are not distinct enough to be generally recognized in traditional knowledge of Alaska Native residents in the area (see discussion in Boveng *et al.,* 2016). There is no evidence to suggest these reported physical differences in fatness, softness, or taste are adaptations that would convey significance of these seals to the taxon.

The use of air gaps under the ice in winter is a potential adaptation to freshwater life in sub-Arctic regions, and is only documented among harbor seals in one location (*P. v. mellonae* of Lacs des Loups Marins). Whether the use of under-ice shelters would be a true adaptation to a freshwater environment which freezes over, or would simply be a response to habitat conditions that may be used by any harbor seal exposed to those conditions, remains uncertain. On the importance of this particular behavior relative to significance of seals in Iliamna Lake to the *P. v. richardii* subspecies, the BRT concluded any assessment would ''be in the realm of judgment or even speculation'' (Boveng *et al.,*2016). Even though harbor seals in Iliamna Lake cope with the extensive ice cover in winter, there is no indication they have adapted or modified their breeding, whelping, or pup-rearing behaviors in a manner unusual for, or of significance to, the taxon.

The BRT members were in strong agreement that harbor seals persisting year-round and breeding in a freshwater lake that freezes over almost completely nearly every year is unique for the subspecies *P. v. richardii,* and unusual for the harbor seal species. However, there was a lack of consensus amongst BRT members whether the available evidence reflects physical, life-history, or other adaptations as a result of persisting in an unusual or unique ecological setting which would make the harbor seal population in Iliamna Lake biologically or ecologically significant to the broader taxon. The discrepancies in opinion stemmed from ''differences in assessing the weights of several lines of qualitative and indirect evidence'' (Boveng *et al.,* 2016). The BRT also concluded (1) seals from the marine population would be able to persist in the Iliamna Lake setting, and (2) even if seals from the marine population were unable to persist in Iliamna Lake, the ''lack of 'ecological exchangeability' is not important to the persistence of the taxon as a whole'' (Boveng *et al.,* 2016). Ultimately, the BRT's assessment favored ''a conclusion that the evidence does not support significance'' (Boveng *et al.,* 2016). We agree that persistence of a population of harbor seals in the unusual or unique ecological setting of Iliamna Lake in and of itself does not confer significance of that population to the taxon. The absence of evidence suggesting the harbor seals in Iliamna Lake have adaptations to their environment which would benefit the taxon to which they belong leads us to determine that the persistence of a population of harbor seals in Iliamna Lake is not significant to the subspecies *P. v. richardii.*

Evidence That Loss Would Result in Significant Gap in Range: Eastern North Pacific harbor seals range from Mexico northward along the coastlines of the continental U.S. and Canada and much of Alaska. In Alaska, harbor seals of this subspecies are distributed almost continuously throughout the southern coastal waters in the region surrounding Iliamna Lake. In assessing whether the loss of harbor seals in Iliamna Lake would result in a significant gap in the range, we considered a scenario whereby all the seals in the lake were extirpated and there was no migration into the lake, either because there is no migration currently occurring or because a future physical barrier prevents migration. Given the extensive and continuous range of the eastern North Pacific harbor seals, the loss of the small proportion of habitat in Iliamna Lake would not result in a significant gap in the range. Furthermore, the evidence indicating possible seasonal movement of some harbor seals from Bristol Bay to Iliamna Lake suggests that the habitat in this portion of the range could be reoccupied.

The loss of harbor seals in Iliamna Lake would not have a detrimental impact to other harbor seal populations

that comprise the subspecies *P. v. richardii,* as this is not an interstitial population of harbor seals whose loss would isolate another population from the main group. Additionally, there are only an estimated 400 harbor seals in Iliamna Lake (Boveng *et al.,* 2016), so this population represents a minute fraction of the total population ofeastern North Pacific harbor seals, estimated at 360,000 (DFO 2010).

The BRT was in strong agreement that the evidence is clear that the loss of the Iliamna Lake segment would not result in a significant gap in the range of the taxon, and we agree.

Evidence of Only Surviving Natural Occurrence: Harbor seals in taxon *P. v. richardii* are currently found throughout their historic range along the coasts from Baja California, Mexico, northward to Alaska, and west through the Gulf of Alaska and Aleutian Islands, and in the Bering Sea north to Cape Newenham and the Pribilof Islands. There are no known introductions of this species to any place outside its historic range, thus it is naturally occurring wherever it occurs. The BRT was unanimous in its assessment that harbor seals in Iliamna Lake are not the only surviving natural occurrence of the taxon. We concur in that determination.

Evidence of Marked Difference in Genetic Characteristics: As discussed above, the limited genetic data available from seals in Iliamna Lake indicate 11 of 13 (2 samples did not yield results) sampled seals had the same mtDNA haplotype, an indication of possible low genetic diversity (O'Corry-Crowe 2013). Unlike the Lacs des Loups Marins harbor seals, which exhibit mtDNA haplotypes that are only found in seals from the Lacs des Loups Marins (Smith 1997), the single mtDNA haplotype exhibited in the harbor seals in Iliamna Lake is not unique to Iliamna Lake. Rather, it is the most common mtDNA haplotype found in samples from harbor seals in Bristol Bay (O'Corry-Crowe 2013; Van Lanen *et al.,* 2013). One plausible explanation for the single haplotype found in all the harbor seal samples from Iliamna Lake is that these seals are simply a genetic subset of seals from Bristol Bay, and have lost rather than gained substantial amounts of genetic diversity since isolation. An alternative explanation is the seals in Iliamna Lake have been isolated a long time, during which they may have accumulated genetic differences at other loci (not currently examined) via mutation, especially for loci under selective pressure (*i.e.,* adaptation). However, as previously discussed, only a small number of genetic loci were tested and the sample size was small, so the reason for a single mtDNA haplotype is undeterminable at this time. We conclude that the best scientific and commercial data available, a single mtDNA haplotype which is commonly found in other populations of the taxon and the data used to assess discreteness of the population, do not indicate that harbor seals in Iliamna Lake have novel genes which could be significant to the taxon as a whole.

There is no strong evidence to indicate the existence of phenotypic differences between harbor seals in Iliamna Lake and those in other portions of the taxon's range. Although there have been some LTK reports that the seals in Iliamna Lake may taste different or have pelage of varying appearance from seals in Bristol Bay, there have been no studies assessing whether these perceived differences are the result of significant differences in genetics. The BRT members did not reach consensus regarding this issue, with a slight preponderance of opinion favoring the conclusion that the genetic characteristics of seals in Iliamna Lake did not convey significance to these seals in regards to *P. v. richardii.* Some members considered the data available as mostly insufficient for drawing a conclusion regarding significance, and some considered the evidence against significance slightly more persuasive than the evidence for significance. Accordingly, we find that the genetic characteristics (*i.e.,* mtDNA haplotype) found in seals from Iliamna Lake do not differ markedly from those found in Bristol Bay and therefore determine that the best available genetic data, albeit limited, supports a conclusion that harbor seals in Iliamna Lake do not have genetic characteristics that are significant to the taxon as a whole.

Overall Significance to the Taxon: We considered several factors that could indicate whether harbor seals in Iliamna Lake may be biologically and ecologically significant to the taxon as a whole. Of the four factors delinated in the 1996 DPS policy, we conclude that there is evidence of only one: The population persists in an unusual or unique setting for the taxon. As we explained in our policy, ''occurrence in an unusual ecological setting is potentially an indication that a population segment represents a significant resource of the kind sought to be conserved by the'' ESA and in ''any actual case of a DPS recognized in part on this basis, the Services will describe in detail the nature of this significance when accepting a petition or proposing a rule'' (61 FR at 4724). While year-round persistence in the freshwater environment of Iliamna Lake is unique to the taxon *P. v. richardii* and unusual for the entire species, we agree with the BRT (Boveng *et al.,* 2016) that the best scientific and commercial data available are limited and suggest that the persistence of the seals in Iliamna Lake is not significant to the taxon as a whole. The loss of the Iliamna Lake segment would not result in a gap in the range of the taxon, and the harbor seals in Iliamna Lake are not the only surviving natural occurrence of the taxon; thus harbor seals in Iliamna Lake do not demonstrate significance to the taxon based on these factors. Further, available genetic data suggest that harbor seals in Iliamna Lake are not significant to the larger taxon. Although the best available genetic data indicate that at least some of the seals in Iliamna Lake are distinct from harbor seals in the eastern regions of nearby Bristol Bay, the genetic characteristics (*e.g.,* the single mtDNA observed in samples from seals in Iliamna Lake is the most common haplotype found in seals frim Bristol Bay) do not appear to differ in ways that would convey significance to the *P. v. richardii* subspecies.

Individual BRT members were not in agreement regarding the degree of scientific support overall for or against the significance of seals in Iliamna Lake to the *P. v. richardii* subspecies, but stated ''the slight majority judgment against significance of the population segment . . . summarized a diversity of views about how much weight to place on the various lines of mostly weak and qualitative evidence'' and that ''the evidence itself must be characterized as mostly indirect, qualitative rather than quantitative, and equivocal for the purpose of demonstrating biological or ecological importance to the broader taxon'' (Boveng *et al.,* 2016). Taking into consideration the totality of all the information discussed above regarding the possible significance of harbor seals in Iliamna Lake to the *P. v. richardii* taxon, including the qualitative and equivocal nature of the available information, along with the guidance from legislative history to identify DPSs ''sparingly,'' we find that the available evidence supports a conclusion that the harbor seals in Iliamna Lake are not significant to the remainder of the taxon.

DPS Conclusion

Based on the best scientific and commercial data available, we find the evidence for marked separation of harbor seals in Iliamna Lake from the remainder of the taxon based on physical, physiological, ecological or behavioral factors to be unconvincing or

weak. The strongest support for marked separation comes from the best available genetic data which, although limited and preliminary, support a conclusion that at least some of the harbor seals in Iliamna Lake are likely isolated from harbor seals in the Egegik and Ugashik regions of eastern Bristol Bay. Thus, we conclude that the harbor seal population in Iliamna Lake is separated from other populations of the taxon and meet the discreteness criterion of our DPS policy (61 FR 4722; February 7, 1996).

Per the second component of our DPS Policy, we are to consider available scientific evidence of the discrete population's importance to the taxon to which it belongs (61 FR 4722; February 7, 1996). Our review of the best available information suggests the only characteristic which may make this population of harbor seals unique within its taxon is the fact that they persist year-round in a freshwater system which freezes over to some degree in most winters. While that characteristic is unique within the subspecies *P. v. richardii,* we determined such persistence is not biologically or ecologically important to the taxon as a whole. Furthermore, the information available supports a conclusion that loss of this population would not be detrimental to the persistence of the taxon or constitute a gap in the range of the taxon; this population is not the only natural surviving population; and there are no unique genetic characteristics conveying significance of this population to the taxon. After reviewing the best available data as they apply to the significance criterion, we conclude that the harbor seals in Iliamna Lake are not significant to the taxon *P. v. richardii.*

Under our DPS Policy, both the discreteness and significance elements must be met to qualify as a DPS. Our review has determined that the seals persisting year-round in Iliamna Lake are discrete but not significant; therefore, the harbor seals in Iliamna Lake do not qualify as a DPS and are not a listable entity under the ESA.

Finding

In assessing whether the actions in the petition are warranted, we reviewed the best available scientific and commercial information available, including the BRT report, the petition and literature cited in the petition, published and grey literature relevant to the topic, correspondence with experts in academic and government institutions, documentation of LTK, and public comments. On the basis of this review, we have determined that harbor seals in Iliamna Lake meet the criteria for discreteness but do not meet the criteria for significance. As such, the harbor seals in Iliamna Lake do not meet all the criteria necessary to constitute a DPS, and thus are not a listable entity under the ESA. Therefore, we find that the petitioned actions to list the harbor seals in Iliamna Lake as a threatened or endangered species under the ESA, and to designate critical habitat, are not warranted.

In our 90-day finding (78 FR 29098; May 17, 2013), we indicated we were commencing a status review of the harbor seals in Iliamna Lake. To assist our evaluation of whether the seals in Iliamna Lake constitute a DPS, the BRT prepared a report which compiled background information about the harbor seals in Iliamna Lake and evaluated the scientific information relevant to the DPS criteria (Boveng *et al.,* 2016). Upon our determination that the DPS criteria were not met and the seals in Iliamna Lake are not a ''species'' under the ESA, there is no need to complete the status review by conducting a threats assessment or extinction risk assessment in light of the factors in section 4(a)(1) of the ESA.

In some instances, where we find a petitioned action is not warranted because the petitioned population does not constitute a ''species'' under the ESA, we have initiated a status review of a related or larger population (*e.g.,* the 12-month determination that the petitioned action to list Lynn Canal Pacific herring was not warranted, followed by a status review of the Southeast Alaska population of Pacific herring; 73 FR 19824; April 11, 2008). Here, the scope of the petition was limited to the seals in Iliamna Lake, and since the most recent abundance data for the Bristol Bay harbor seal stock (the stock that includes seals in Iliamna Lake) indicates this stock increased from an estimated 18,577 seals in 2005 to an estimated 32,350 seals in 2011 (Allen and Angliss 2014; Muto and Angliss 2015), we are not initiating a status review of the Bristol Bay harbor seal stock at this time.

References

A complete list of all references cited herein is available upon request (see **ADDRESSES**).

Authority

The authority for this action is the Endangered Species act of 1973, as amended (16 U.S.C. 1531 *et seq.).*

Dated: November 10, 2016.

Samuel D. Rauch, III,

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

[FR Doc. 2016–27690 Filed 11–16–16; 8:45 am]

BILLING CODE 3510–22–P

CONSUMER PRODUCT SAFETY COMMISSION

[CPSC Docket No. 17–C0001]

PetSmart, Inc., Provisional Acceptance of a Settlement Agreement and Order

AGENCY: Consumer Product Safety Commission

ACTION: Notice.

SUMMARY: It is the policy of the Commission to publish settlements which it provisionally accepts under the Consumer Product Safety Act in the **Federal Register** in accordance with the terms of the Consumer Product Safety Commission's regulations. Published below is a provisionally-accepted Settlement Agreement with PetSmart, Inc., containing a civil penalty in the amount of four million, two hundred fifty thousand dollars ($4,250,000) within thirty (30) days of service of the Commission's final Order accepting the Settlement Agreement.

DATES: Any interested person may ask the Commission not to accept this agreement or otherwise comment on its contents by filing a written request with the Office of the Secretary by December 2, 2016.

ADDRESSES: Persons wishing to comment on this Settlement Agreement should send written comments to the Comment 17–C0001, Office of the Secretary, Consumer Product Safety Commission, 4330 East-West Highway, Room 820, Bethesda, Maryland 20814–4408.

FOR FURTHER INFORMATION CONTACT: Philip Z. Brown, Trial Attorney, Division of Compliance, Office of the General Counsel, Consumer Product Safety Commission, 4330 East-West Highway, Bethesda, Maryland 20814–4408; telephone (301) 504–7645.

SUPPLEMENTARY INFORMATION: The text of the Agreement and Order appears below.[1]

[1] The Commission voted (4–1) to provisionally accept the Settlement Agreement and Order regarding PetSmart, Inc. Chairman Kaye, Commissioner Adler, Commissioner Robinson and Commissioner Mohorovic voted to provisionally accept the Settlement Agreement and Order. Commissioner Buerkle voted to reject the Settlement Agreement and Order.