

Chapter 3

Effectiveness of Ongoing and Planned Conservation Efforts by States or Local Entities

The State of Alaska (State) provides information in this chapter as requested by the proposed rule (19861), consistent with the Service's March 28, 2003, Policy for Evaluating Conservation Efforts (PECE) (68 FR 15100). The proposed rule (19859) described the policy by which the Service must consider efforts by the State, political subdivisions of the State, Native American tribes and organizations, local governments, and private organizations to protect species when considering an Endangered Species Act (ESA) listing:

The PECE provides guidance on evaluating current protective efforts identified in conservation agreements, conservation plans, management plans, or similar documents (developed by Federal agencies, state and local governments, tribal governments, businesses, organizations, and individuals) that have not yet been implemented or have been implemented but have not yet demonstrated effectiveness. The PECE establishes two basic criteria for evaluating current conservation efforts: (1) the certainty that the conservation efforts will be implemented, and (2) the certainty that the efforts will be effective. The PECE provides specific factors under these two basic criteria that direct the analysis of adequacy and efficacy of existing conservation efforts.

We address the ongoing and planned protective efforts by numerous entities according to the PECE criteria and their effectiveness in two categories below. We urge the National Marine Fisheries Service (Service) to cooperatively pursue implementation of multi-entity Cook Inlet beluga conservation efforts. Through these ongoing and planned efforts, the State, other agencies, non-government organizations, and public propose to cooperatively pursue and provide increased funding that enables the Service and other entities to continue implementation of important cooperative measures toward research and management of beluga whales and their habitat. This would provide greater benefit for the Cook Inlet stock of beluga whales than would be possible through a recovery plan following an ESA listing, particularly since no known factor is affecting current population numbers.

(1) Funding and Finalization of the Service's Planned Conservation Plan

Background

On May 31, 2000, (65 FR 121), the Service published a final determination that the Cook Inlet stock of beluga whales was depleted as defined in the Marine Mammal Protection Act (MMPA). In that final rule, the Service committed to completing a conservation plan:

A conservation plan will be prepared unless it would not promote the conservation of the stock. (34592)

NMFS will prepare a conservation plan as quickly as limited resources allow. Initial conservation efforts will not, however, be delayed until such a plan is final. (34595)
(emphasis added)

On April 6, 2004, (69 FR 66), the Service published a final rule governing the taking of Cook Inlet beluga whales by Alaska Natives for subsistence purposes and implemented stipulations agreed to in the record of hearing before Administrative Law Judge McKenna (March 29, 2002) and subsequent negotiations. One of the comments on the draft rule urged the Service to implement a conservation plan to address additional issues such as education and enforcement. The Service responded (17976):

NMFS also intends to develop a conservation plan for these whales. NMFS agrees that education and enforcement are necessary and intends for these elements to be part of a conservation plan.

On March 16, 2005, (70 FR 50), the Service published a notice of availability of a draft Conservation Plan (nearly five years after published intent to quickly prepare a plan). No coordination with the State occurred in the development of that plan. However, the Service acknowledged such coordination is needed (12854):

*The goals and objectives of the draft Plan can be achieved only if a long-term commitment is made to support the respective actions recommended herein. **The shared resources and cooperative involvement** of federal, state, and local governments, industry, academia, non-governmental organizations, Alaska Natives, and other invested individuals **will be required throughout the recovery period.** (emphasis added)*

The Department provided comments on May 16, 2005, to the Service to improve the Plan, including recommending additional studies and pointing out errors in the modeling and other calculations. The Department emphasized:

*“**the Plan should be revised and finalized promptly.** ...The possibility that CI belugas could be listed under the ESA further emphasizes the need to implement the Plan’s conservation strategy and proactively pursue actions to promote recovery.”*

Instead of coordinating with federal, state, and local governments and others to cooperatively complete and implement the conservation plan, on March 24, 2006, the Service published (71 FR 57) a Notice of request for information to prepare an updated status review “*to determine if this group of beluga whales should be listed as an endangered or threatened species.*” The Governor and Department signed a response on May 24, 2006, opposing a listing and urging additional scientific information be acquired. Between 2004 and 2007, the Service received repeated requests from the State and three municipal governments to be allowed opportunities to contribute to the plan and studies. In late June 2007, we learned that the Service was about to publish a final Plan. No opportunity had been provided for the State, other federal agencies, boroughs, universities, or others to engage in design and coordination of possible research since publication of the 2005 Draft Plan. We appreciate that the State was recently given an opportunity to provide additional input on the final Plan, and we believe the Service should prepare a coordinated plan with all affected entities as was visualized in the 2000 and 2005 rules. Cooperative efforts with other researchers, governments, and non-government entities would provide more financial and staffing support to acquire information on beluga whales, their habitat, and factors that contribute to their sustainability than the Service’s solo efforts.

Conservation Plan

To date, the following deficiencies are neither addressed in the 2005 Draft Conservation Plan nor in subsequent efforts by the Service:

- Need cooperation of all stakeholders and shared resources in the development of a Plan, including the State, federal agencies, boroughs, academia, and non-government entities.
- Need an implementation strategy; i.e., who will investigate what, monitor, and evaluate progress, identify sources of funding, develop cost-sharing and leveraging of funds.
- Need a multi-disciplinary team, such as the workshop that was held in March 1999, to discuss, develop, and prioritize objectives and studies to address the wide range of scientific information that is not available.
- Need to address education and enforcement (as promised above), hydrology and other physical changes occurring in the Inlet due to geologic and other physical parameters, and many other aspects missing.

The draft plan and ongoing research conducted by the Service appear to largely focus on the interests of its own scientists and those that have independent funding. Recent research on biological and physical characteristics of the Inlet was ignored in the 2007 proposed rule. This leads us to conclude that the Service is not considering the best available scientific and commercial data. No mention is made of recent research conducted in Upper Cook Inlet to identify individual whales to provide information on age structure and numbers or on fish forage studies.

Conclusion

The Service needs to immediately pursue cooperative effort with the government and non-government agencies to improve funding and other resources toward the completion of identified needs. We urge the above list be addressed and a cooperative effort completed for a final Plan as soon as possible. We also object to the following conclusion the Service published in the 2007 proposed rule:

We support all conservation efforts currently in effect; however, these efforts lack the certainty of implementation and effectiveness so as to have removed or reduced threats to Cook Inlet belugas. In developing our final listing determination, we will consider the best available information concerning these conservation efforts and any other protective efforts by states or local entities for which we have information (See description of PECE above).

We provide the following information that illustrates the State has implemented significant and effective conservation efforts.

(2) Ongoing and Planned Conservation Efforts by States and Local Entities

The following discussion of ongoing and planned conservation by states and local entities covers land and water habitat stewardship, management plans, regulatory mechanisms, fish and wildlife management, and regulatory mechanisms.

Habitat

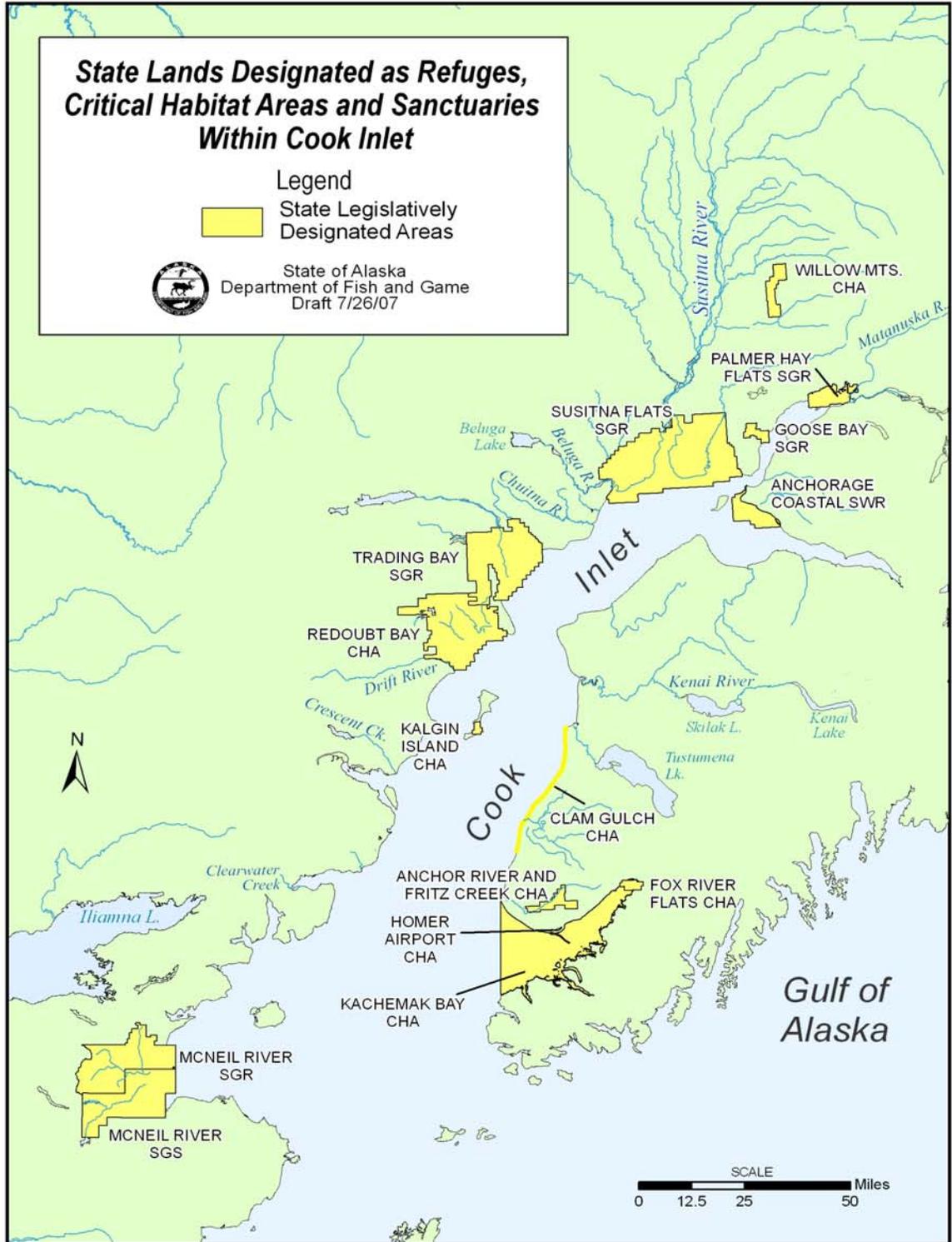
There is no scientific evidence to tie the decline of the Cook Inlet population of beluga whales to the destruction or modification of habitat (See further discussion of habitat “threats” in Chapter 2). During the 1994-1998 documented decline of beluga whales, there was no corresponding evidence of detrimental changes in habitat. The changes in habitat use by beluga whales appeared to relate largely to the decline in numbers, concentrating these social whales on selective habitat. The Wildlife Society recognized during the Alaska Center for the Environment suit (petition for the State to list beluga as endangered under State law) in 2003 that “*Physical habitat for Cook Inlet belugas is largely intact,*” and the Audubon Society noted no habitat problems for whales. No activities or developments have occurred since that time that would change the habitat within Cook Inlet.

Over 15 million acres of protected land in and around Cook Inlet helps to preserve good whale habitat. The habitat in Cook Inlet supports healthy populations of fish on which beluga whales prey, as evidenced by salmon returns to the river systems draining into Cook Inlet that continue to annually produce record numbers. These protected lands comprise State game refuges and critical habitats, special legislated management areas of the Upper Kenai and Recreational Rivers (Susitna), Chugach National Forest, Chugach State Park, and Katmai National Park and Preserve. (See Map in Overview) The State established through special legislative action 15 State game refuges and critical habitat areas, which provide protection for significant portions of the important beluga feeding areas in river mouths and in some areas out to three miles from Mean High Tide. Many of these State special land management areas were established nearly 30 years ago. (See Map and Table below)

All of these special land (and water) management areas have special management legislation limiting land use management activities, and most have detailed management plans in effect and that are effective in protecting habitat. In addition to land management plans, the State comprehensively regulates activities that occur throughout the Cook Inlet watershed that potentially affect water quality and quantity. Below are detailed examples of some of these management guidelines, regulations, and permit stipulations which are implemented by the Alaska Department of Environmental Conservation, Alaska Department of Natural Resources, and Alaska Department of Fish and Game as part of the State’s role in habitat protection measures.

ALASKA DEPARTMENT OF FISH AND GAME’S ROLE IN HABITAT PROTECTION

In addition to its many responsibilities for sustainability of fish and wildlife on all lands and waters in the State, the Alaska Department of Fish and Game (ADF&G) manages State lands designated as Refuges, Critical Habitat Areas and Sanctuaries within Cook Inlet.



Alaska Special Areas: Refuges, Sanctuaries and Critical Habitat Areas within the Cook Inlet Drainage, managed by ADF&G and the status of current management plans.

Name of Special Area	Date Established	Management Plan Required by Statute		Date of Management Plan
		Yes	No	
State Game Refuges				
Anchorage Coastal Wildlife Refuge	1971/1988	AS 16.20.031 (b)		1991
Goose Bay State Game Refuge	1975		No	
McNeil River State Game Refuge	1993		No	1995 (w/McNeil River State Game Sanctuary)
Palmer Hay Flats State Game Refuge	1975/1985		No	1986
				2002
Susitna Flats State Game Refuge	1976		No	1988
Trading Bay State Game Refuge	1976		No	1994 (w/Redoubt Bay Critical Habitat Area)
State Game Sanctuaries				
McNeil River State Game Sanctuary	1967/1993		No	1996 (w/McNeil River State Game Refuge)
Fish & Game Critical Habitat Areas				
Anchor River and Fritz Creek Critical Habitat Area	1985	AS 16.20.605 (d)		1989
Clam Gulch Critical Habitat Area	1976		No	
Fox River Flats Critical Habitat Area	1972		No	1993
Homer Airport Critical Habitat Area	1996		No	
Kachemak Bay Critical Habitat Area	1974		No	1993
Kalgin Island Critical Habitat Area	1972		No	
Redoubt Bay Critical Habitat Area	1989		No	1994 (w/Trading Bay State Game Refuge)
Willow Mountain Critical Habitat Area	1989	AS 16.20.620 (b)		

The ADF&G special area management plans are available at:
<http://www.wildlife.alaska.gov/index.cfm?adfg=refuge.main>

The ADF&G participates with other State agencies in **Oil Spill Contingency Plans**. The Alaska Department of Environmental Conservation (ADEC) requires all vessels transporting oil and hazardous substances within the State of Alaska to have a contingency plan in the event of a spill. Each operator is required to follow the ADEC format as described in 18 AAC 75, Article 4 which is located at the following link: http://www.dec.state.ak.us/spar/statutes_regs.htm#regs75

In addition to industry contingency plans, ADEC and other agencies, including ADF&G, formalized regional plans to ensure consistency. Cook Inlet has its own regional plan entitled 'The Cook Inlet Subarea Contingency Plan for oil and hazardous substance spills and releases'. This regional plan is located at : <http://www.akrrt.org/CIplan/CookInletSCP.shtml>. The industry contingency plans are a way that ADEC can ensure that the company is prepared and thinking in advance before they travel in Alaska waters. ADF&G reviews relevant industry plans with a focus on the protection of fish and wildlife.

Below is the “Unified Plan and Subarea Contingency Plan Description” of the regional plans, quoted from the Cook Inlet Subarea Contingency Plan:

UNIFIED PLAN & SUBAREA CONTINGENCY PLAN DESCRIPTIONS

The Cook Inlet Subarea Contingency Plan is a supplement to the *Alaska Federal/State Preparedness Plan for Response to Oil & Hazardous Substance Discharges/Releases* (commonly referred to as the Unified Plan). The Unified and the Subarea Contingency Plans represent a coordinated and cooperative effort by government agencies and were written jointly by the U.S. Coast Guard, the U.S. Environmental Protection Agency, and the Alaska Department of Environmental Conservation. The Oil Pollution Act of 1990 (OPA 90) requires the USCG and the USEPA to prepare oil spill response plans for the State of Alaska, which is designated as an entire planning region under federal guidelines. Alaska statute requires the ADEC to prepare a state-wide master plan addressing oil and hazardous substance discharges. The Unified Plan meets these federal (National Contingency Plan and OPA 90) requirements for regional and area planning, as well as State planning requirements.

OPA 90 requires the development of Area Contingency Plans for the inland and coastal zones of each federal region. For the Alaska region, there are three Coast Guard Captain of the Port zones and one inland zone. The three Captain of the Port zones are: 1) Southeast, which covers all of Southeast Alaska; 2) Prince William Sound, which covers the Prince William Sound area; and 3) Western Alaska, which includes the rest of coastal Alaska from Cook Inlet out the Aleutians and north to the Beaufort Sea and the Canadian border. The inland zone is subdivided into two sectors: 1) the North Slope oil production area and the Trans-Alaska Pipeline System (TAPS) and 2) all other areas inland from the coastal zones.

Alaska statute divides the state into ten regions for oil and hazardous substance spill planning and preparedness. The USCG and the USEPA joined with the ADEC to use these ten regions for area planning instead of the federal planning divisions since this would facilitate unified planning for the State of Alaska and prove more practical as well (for example, the huge COTP Western Alaska planning area is replaced by seven more manageable divisions). Because the State of Alaska is called a planning “region” under federal planning guidelines and to avoid confusion with the other federal term, “area contingency plans,” these ten subordinate planning regions of the State are called “subareas” in the context of the Unified Plan.

The Unified Plan contains information applicable to pollution response within the entire State of Alaska and meets the pollution response contingency planning requirements applicable to the federal and State governments. The plan provides broad policy guidance and describes the strategy for a coordinated federal, State and local response to a discharge, or substantial threat of discharge, of oil and/or a release of a hazardous substance within the boundaries of Alaska and its surrounding waters.

Under both federal and State law, the responsible party for an oil or hazardous substance incident is required to report the incident and mount a response effort to contain and cleanup the release. The federal and State governments mandate response plans for oil tank vessels and facilities that have stringent spill response requirements. If the responsible party fails to respond adequately or if no responsible party can be identified, then the federal and State governments will rely on the Unified Plan and the appropriate Subarea Contingency Plan for response protocols and guidance.

Whereas the Unified Plan contains general information for response efforts taking place anywhere in the State of Alaska, the Subarea Contingency Plan (SCP) concentrates on issues and provisions specific to its particular subarea. The Cook Inlet SCP focuses on the Cook Inlet region of the State. The boundaries of this subarea are described in the Background Section of this plan. The Cook Inlet SCP provides information specific to the area, including emergency response phone numbers, available response equipment and other resources, specific response guidelines, and information on hazardous substance presence and sensitive areas protection.

Alaska State statute mandates a public review of all new plans, an annual departmental review of these plans, and another public review whenever the plans are significantly revised. The ADEC offers a public review of these plans for a period of 30 to 60 days during which verbal and written comments are accepted. During this comment period, several public meetings are held at locations appropriate for the plan being reviewed. The federal government does not require public review for any of its plans, though the USCG and the USEPA, as part of the Alaska unified planning process, do cooperate with the State of Alaska and participate in the public review process.

Neither the federal nor the State government maintains a formal approval process for these plans. The Unified Plan and the SCPs are presented to the Alaska State Emergency Response Commission and the Alaska Regional Response Team (ARRT) for review and comment. The ARRT's concurrence is also part of the process for plan promulgation. Final promulgation of the plan is accomplished once the three plan holders – the USCG, the USEPA and the State of Alaska – sign the letter of promulgation.

Source: Cook Inlet SCP July 1997, page vii, Change 1, May 2004

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION ROLE IN HABITAT PROTECTION

The following provides an overview of the Alaska Department of Environmental Conservation (ADEC) environmental monitoring and permitting in the Cook Inlet region.

The ADEC mission involves the permitting and authorization of actions relating to oil and gas development, oil spill prevention and response, pollutant discharges, and other activities affecting the waters of Cook Inlet. The agency's permitting and regulatory actions provide thorough habitat protections, and ADEC's water related permits and authorizations typically also involve the Environmental Protection Agency (EPA). Thus, our discussions include information and reference to EPA documents.

ADEC's responsibilities to address potential "threats" identified by the Service

The Service identified specific potential threats to Cook Inlet beluga whale habitat in the April 20, 2007, Federal Register notice of the proposed rule, including:

- Development of the Beluga Coal Mine
- Oil and gas exploration, development and production
- Oil spills
- Seafood processing
- Ship ballast
- Municipal wastewater treatment systems (Point Woronzoff and others)
- Urban runoff

Information provided by ADEC below addresses the above "proposed threats" in the following categories:

1. Oil spill prevention and response
2. Discharges to the waters of Cook Inlet
3. Ballast water discharges
4. Municipal wastewater discharges

5. Industrial wastewater discharges
6. Non-point source pollution and impaired waters that flow to Cook Inlet
7. Water Quality Monitoring and Assessment

1. Oil Spill Prevention and Response

ADEC’s Spill Prevention and Response Division’s activities are specifically focused on oil spill prevention and assurance of adequate oil spill response. ADEC focuses its resources on the consequences of an oil spill, rather than predicting the probability of an oil spill occurring. It is the specific responsibility of ADEC to ensure that the environmental consequences of a discharge can be mitigated to a degree protective of human health and the environment by requiring regulated operators to be prepared to respond to and clean up oil spills under typical environmental conditions.

In 2003, the Minerals Management Service (MMS) produced a final EIS for oil and gas lease sales (191 & 199) in the Cook Inlet Planning area. An oil spill risk assessment was produced as part of that effort which indicated the proposed action in the lease sale (oil and gas development) would result in a 2% chance of one or more platform-based spills, 16% to 17% chance of one or more pipeline spills, and 17% to 19% chance of one or more spills total.

The population viability analysis (PVA) noted by the Service in the *2006-16, Status Review and Extinction Assessment of Cook Inlet Belugas* (November 2006 Status Review) discussed “potential catastrophic events,” which included oil or toxic substance spills, failure of key fish runs, ice entrapments or disease /parasite introductions; these added 10-15% to the probability of extinction. It was not clear from the report and the included references what oil spill data set (if any) was used to come up with the 10-15% factor. Below are the data from the ADEC Spills Database for spill information from 1996 through the present.

Summary of Spills to Cook Inlet, 1996-2006								
Calendar Year	Crude Oil		Hazardous Substances		Non-Crude Oil		Annual Total	
	count	Gallons	Count	gallons	count	gallons	count	gallons
1996	6	649	12	268	22	1,192	40	2,109
1997	12	81	8	110	30	10,729	50	10,920
1998	12	446	15	1,136	30	338	57	1,920
1999	31	1,529	10	425	37	542	78	2,496
2000	6	34	13	674	15	458	34	1,166
2001	11	508	17	247	22	492	50	1,247
2002	12	697	11	3,742	28	265	51	4,704
2003	6	186	18	778	23	78	47	1,042
2004	4	115	17	1,293	20	273	41	1,681
2005	6	91	17	1,649	31	714	54	2,454
2006	1	1	5	44	7	55	13	100
10-yr Total	107	4,337	143	10,366	265	15,136	515	29,839
10-yr Average	11	434	14	1,037	27	1,514	52	2,984

2. Discharges to the waters of Cook Inlet

Cook Inlet is a tidal estuary with a northeast to southwest orientation. It is roughly 180 miles long and averages 60 miles wide. Water depths are typically 100 to 200 feet but can be up to 500 feet in channels near the Forelands (near the middle of Cook Inlet). The flow of Cook Inlet water is generally to the southwest. Discharged substances that are dissolved or remain in suspension generally will be transported out of Cook Inlet and into the Gulf of Alaska within about ten months. The concentration of suspended particulate matter in the water column of lower Cook Inlet ranges from 1 – 50 parts per million (ppm).

Cook Inlet is a relatively large tidal estuary with a sizable tidal range. The turbulence associated with strong tidal currents as well as common winds results in the vertical mixing of the waters. A relatively large volume of water and a large variety of naturally occurring inorganic and organic substances are transported into Cook Inlet by the streams and rivers and by currents from the Gulf of Alaska. The amounts of individual substances discharged into the Inlet appear to be quite variable. Substances transported into Cook Inlet that remain in suspension or dissolved in the water column are dispersed by tidal currents and winds. Mean annual freshwater input to Cook Inlet exceeds 18.5 trillion gallons or an annual average of 50.6 million gallons per day (gpd). According to the Service, the principal sources of pollution in the marine environment are as follows:

- Discharges from industrial activities that do not enter municipal treatment systems
- Discharges from municipal wastewater treatment systems
- Run-off from urban areas, mining operations, airports, military sites and agricultural areas.
- Accidental Spills or discharges of petroleum and other products.

There is also an additional natural source of pollution, which the Service does not discuss in depth: the discharge of toxic pollutions from volcanic activity. Since 1980, three volcanic eruptions have occurred in the Cook Inlet basin, resulting in widespread ash distribution, mudflows, and corrosive precipitation, all of which may have had a short term affect on Cook Inlet water quality. The three most active volcanoes are Mt. Redoubt, Mt. Spur, and Mt. Augustine.

Permitted Discharges

The permitted discharges to Cook Inlet can be summarized as follows:

Municipal wastewater discharges – 42 million gpd
Industrial wastewater discharges due to oil and gas development –
 Production water – 7.36 million cubic meters = 5.33×10^6 gpd
 Drilling cuttings and wash water – 21,300 gpd
 Deck drainage – 25,100 gpd
 Sanitary wastes – 6,100 gpd

Domestic wastes – 6,900 gpd
Desalination wastes – 20,100 gpd
Uncontaminated ballast water – 79,200 gpd
Uncontaminated bilge water – 7,900 gpd
Muds, cuttings, cement at sea floor – 174,400gpd
Noncontact cooling water – 800,000 gpd
Fire control system test water – 8,800 gpd

Source: ODCE for Cook Inlet NPDES permit (converted to gallons from cubic meters)

Industrial waste discharges due to seafood processing facilities

Cook Inlet Fish Processors – 10,600,000 lbs per year.

Source: DEC estimates based on annual reports submitted for NPDES permit coverage.

Suspended Solids Discharged in Cook Inlet (per year)

The following data on suspended sediments provide perspective on the overall affect of industrial and municipal activity on Cook Inlet. Percentages in parentheses are the comparison of estimated annual industrial/municipal output to the total estimated annual output produced by the three rivers noted:

Suspended sediments - Knik, Matanuska & Susitna Rivers = 36,343,000 tonnes

Suspended solids discharged from municipalities = 2,030 tonnes (0.005%)

Suspended solids discharged from refineries = 30 tonnes (0.00008%)

Suspended solids discharged oil & gas drilling fluids /cuttings = 930 tonnes (0.002%)

Note: “tonnes” refers to metric tons

The Service noted in their October 2000 Environmental Impact Statement (EIS):

It seems likely that over time a qualitative effect from municipal, commercial and industrial activities in the Inlet on the water quality and substrate may affect Cook Inlet beluga whales. However, NMFS cannot, at this time, translate that qualitative likelihood into a statement of impact on the beluga whale population, or to the health of beluga whales in the Inlet.....Accordingly, NMFS concludes that the cumulative impacts of activities other than subsistence harvest are minimal.

Minerals Management Service studies of Cook Inlet water quality (1996) found that levels of hydrocarbons in the water column were generally low and often less than the method detection limit.

Since 1999, produced water discharges have increased at some oil and gas facilities, have decreased at some, and have stopped discharging altogether at others. **It should also be noted that no new development or production facilities will be authorized to discharge produced water under EPA’s proposed NPDES General Permit.**

3. Ballast Water Discharges

All vessels, foreign and domestic, trading in Cook Inlet waters are subject to mandatory federal ballast water exchange regulations (33 C.F.R. 151, Part D). These regulations require that the entire amount of ballast water loaded at the port of origin is exchanged with sea water during the voyage. The only exceptions in the regulations are for crude oil tankers in the coastwise trade and military vessels.

The sources for potential ballast water discharges to Cook Inlet waters are:

- Crude Oil Tankers
- Oil Product Tankers
- Liquefied Natural Gas (LNG) Ships
- Non-tank vessels

The only two companies that currently have approved State contingency plans to bring crude oil or oil products into Cook Inlet waters aboard tanker ships are Union Oil Company of California (Chevron) and Tesoro Alaska. These two companies could theoretically discharge ballast water from the lower 48 into Cook Inlet waters, but commercial considerations and cargo routing make this scenario unlikely. One facility near Drift River on the west side of Cook Inlet is permitted by the EPA to treat ballast water from the tanker trade in Cook Inlet. Very little discharge has occurred in recent years from this facility.

4. Municipal Wastewater Discharges

There are a number of municipal wastewater facilities that have the potential to ultimately discharge into Cook Inlet. There are also a number of smaller community systems and sewage outfalls that have the potential to ultimately discharge into Cook Inlet. The following wastewater treatment facilities (WWTF) are permitted under ADEC's wastewater regulations (18 AAC 72):

- Anchorage Point Woronzof Asplund WWTF
- Girdwood WWTF
- Settlers Bay Village Subdivision WWTF
- Eagle River WWTF
- Palmer WWTF
- Homer WWTF
- Kenai WWTF
- Soldotna WWTF

The Municipality of Anchorage operates the Point Woronzof sewage treatment plant under a National Pollutant Discharge Elimination System (NPDES) permit from the Environmental Protection Agency (EPA). This permit was originally issued in 1998 and was good for five years. The permit has been extended administratively since 2003, and the EPA is currently in the process of renewing the permit. This sewage treatment plant has approval from the EPA to discharge primary treated sewage through a Clean Water Act Section 301(h) waiver. This discharge is addressed in State water quality standards through a site-specific standard for the Pt. Woronzof facility.

The Service noted in their 2006 Status Review that municipal wastewater discharges may also include “*emerging pollutants of concern*” (EPOCs), which include endocrine disruptors, pharmaceuticals, personal care products, and prions. Recent national studies (outside of Alaska) by the Environmental Chemistry Branch, Environmental Sciences Division of the EPA showed unexpected levels of prescription drugs in sewage discharges. These emerging pollutants are being studied by the EPA, in order to determine specific regulatory authorities under which these pollutants would be tested for. The EPA and Alaska water quality standards do not currently regulate these “*emerging pollutants of concern*.” However, there is no evidence of high levels of discharge of “*emerging pollutants of concern*” in Cook Inlet or of any impact from these or any other pollutant on the Cook Inlet stock of beluga whales.

5. Industrial Wastewater Discharges

Oil and gas development has taken place in Cook Inlet since 1957, and at present there are over 200 oil wells in production and three production plants on the shores of Cook Inlet. The majority of industrial wastewater discharges permitted by EPA and ADEC are associated with oil and gas facilities located in or adjacent to Cook Inlet. There are also a number of seafood processors who have discharges permitted by EPA and ADEC. The following oil and gas facilities are on platforms located in or immediately adjacent to Cook Inlet:

- Chevron Nikiski Refinery
- Tesoro Alaska Kenai Refinery
- Unocal Swanson River
- Unocal Trading Bay Production Facility
- Unocal Anna Platform
- Unocal Baker Platform
- Unocal Bruce Platform
- Unocal Dillon Platform
- Unocal King Salmon Platform
- Unocal Dolly Varden Platform
- Marathon Oil Spark Platform
- Phillips Tyonek Platform A
- Marathon Oil Spur Platform
- Unocal Granite Point Platform
- Unocal Grayling Platform
- Unocal Monopod Platform
- Unocal Steelhead Platform
- Forest Oil Osprey Platform
- Cook Inlet Pipeline Co. Drift River Facility

Much of the Cook Inlet oil and gas activity is permitted through the EPA’s NPDES General Permit for oil and gas operations in Cook Inlet. The reissued general permit is also proposed to cover additional oil and gas leases that are located in nearby federal waters adjacent to Cape Douglas and the Barren Islands. The January 2006 *EPA Ocean Discharge Criteria Evaluation for the Cook Inlet NPDES Permit* report provides critical baseline information and updates

regarding water quality issues in Cook Inlet. The NPDES permit also includes data on existing approved mixing zones, the parameters in the mixing zones, as well as effluent water quality data. ADEC issued a Certificate of Reasonable Assurance (401 Certification) for this EPA NPDES permit on May 18, 2007, and this ADEC document will be released with the final NPDES permit.

6. Non-Point Source Pollution and Impaired Waters that Flow to Cook Inlet

There are a number of waters that flow into Cook Inlet that are considered impaired according to water quality regulations. The bulk of the impaired waters are listed due to non-point source pollution, including fecal coliform pollution associated with urban run-off or land development. The following waters adjacent to Cook Inlet are in the impaired water category:

<u>Anchorage</u>	<u>Wasilla</u>
Campbell Creek	Cottonwood Creek
Campbell Lake	
Chester Creek	<u>Palmer</u>
Fish Creek	Matanuska River
Furrow Creek	
Lake Hood/Spenard Lake	<u>Eagle River</u>
Jewel Lake	Eagle River
Little Campbell Creek	
Little Rabbit Creek	<u>Kenai</u>
Little Survival Creek	Kenai River
Ship Creek	
University Lake	
Westchester Lagoon	
Cheney Lake	

Urban growth and development has the potential to increase the percentage of impervious surface coverage in the Cook Inlet drainage. The percentage of impervious surface coverage of lands can affect the ability to control non-point source pollution from reaching Cook Inlet. Site specific studies have been performed on the Kenai Peninsula and on the Chester Creek watershed in Anchorage regarding this issue, but a lack of data for surrounding areas and a poor match with nationwide urban stormwater data make it difficult to make any predictions on the effects of future development on non-point source discharges. There is no scientific information showing that any appreciable impacts on the Cook Inlet stock of beluga whale is likely from nonpoint source pollution.

The Eagle River Flats in Fort Richardson, near Anchorage are also listed as impaired due to the presence of white phosphorus due to sustained military munitions activity in the area. This impairment is not new, and there is no scientific information indicating any appreciable effect on the Cook Inlet stock of beluga whales.

Nonpoint source pollution in Cook Inlet has not significantly increased since 2000 and is subject to increasing storm water discharge control requirements.

7. Water Quality Monitoring and Assessment

The Clean Water Act (CWA) mandates that each state develop a program to monitor the quality of surface and groundwaters and prepare a report describing the water quality. The U.S. Environmental Protection Agency (EPA) then compiles and summarizes the information from all the state reports and sends this information to Congress. The process for developing information on the quality of the nation's water resources is contained in several sections of the CWA: Section 305(b) requires that the quality of all waterbodies be characterized; Section 303(d) requires that states list any waterbodies that do not meet water quality standards.

As part of these efforts, ADEC has been monitoring water quality levels for the Kenai River, which ultimately empties into Cook Inlet. In past years, hydrocarbon levels have been exceeded slightly for 1 to 2 days during peak river use in summer, attributable in part to the use of sport fishing boats with outboard engines. In the 2006 Integrated Report, the Kenai River was placed on the Category 5/Section 303(d) list of impaired waters for non-attainment of the petroleum hydrocarbons water quality standard. As part of this process, ADEC and other involved agencies will be developing a restoration plan for improving the water quality in the Kenai River. Regulatory actions have already been implemented in 2007 to reduce hydrocarbons from outboards on the Kenai River. In addition, ADEC also has water quality records of Kenai Peninsula streams, which includes data on temperature. Temperature of water bodies can have an affect on the fish reproduction, timing of fish runs and fish mortality.

In 2006, ADEC published a report *Alaska Monitoring and Assessment Program: The Condition of Southcentral Alaska's Bays and Estuaries Technical Report and Statistical Summary*. This report provides a regional survey of water quality, sediment and biological indicators. These can provide a baseline of the ecological condition of this region, which includes many sampling locations within Cook Inlet and surrounding areas. Metals, petroleum hydrocarbons, and other general water quality parameters were analyzed that may be useful in assessing potential impacts to Cook Inlet's beluga whales. No scientific information available to date demonstrates that water quality is having any appreciable affect on the Cook Inlet stock of beluga whales.

Other Potential Developments Affecting Cook Inlet

Plans were announced in 2006 regarding development of Cook Inlet's Beluga coal fields as part of the Chuitna Coal Project. This project is located 45 miles west of Anchorage and involves coal to liquids fuel technology. This project is currently in the preliminary permitting stages. In June 2006, the EPA released the Draft Scoping Document for a Supplemental Environmental Impact Statement (EIS). The effects of this proposed development will become clearer once the EIS process is completed and plan are solidified in anticipation of applying for a permits. There may be issues related to noise from construction, loading conveyors, and vessel traffic, that are not regulated by ADEC, but these impacts can be limited by other agencies under either direct authorities or through the ACMP program..

Fish Tissue Monitoring

ADEC has been involved in a fish tissue monitoring project, which included some sampling of fish in Cook Inlet. ADEC's Fish Tissue Testing Program was put into place to determine the safety of Alaskan seafood, including subsistence species. These fish tissue test results include fish that are eaten by beluga whales in Cook Inlet. Results from the program so far include tissue samples from 119 fish from Cook Inlet, with the following species sampled: pacific cod (6), pacific halibut (28), lingcod (18), walleye pollock (11), yelloweye rockfish (7), salmon (26), and spiny dogfish (1). Tissue samples were analyzed for arsenic, cadmium, chromium, nickel, lead, selenium, methylmercury, and total mercury. In almost every case, statewide average and median metal concentrations were higher than those for Cook Inlet. The only notable exception was yelloweye rockfish tissue, which had higher methylmercury and total mercury concentrations than the statewide average. Even in yelloweye rockfish, the higher methylmercury and total mercury concentrations were not significantly higher than the statewide average.

ADEC Summary

The EPA's March 2006 Environmental Assessment of Reissuance of NPDES Permit for Oil and Gas Exploration, Development and Production Facilities located in State and Federal Waters in Cook Inlet, Alaska noted the following in its discussion of threatened and endangered species:

Long-term minor adverse effects on threatened and endangered species would be expected from discharge from new sources with the implementation of the draft NPDES permit under Alternative 1 (Note: This was EPA's final permit preferred alternative). The effects discussed(in the analysis] apply equally to threatened and endangered species, i.e., the threatened and endangered species that occur in Cook Inlet are not likely to inhabit waters close to the permitted activities and are therefore unlikely to be affected by discharges from oil and gas facilities. Furthermore, with respect to water quality, the Final Environmental Impact Statement (FEIS) for the Cook Inlet Planning Area oil and gas lease sales concluded that the "potential effects from either or both sales would not cause any overall measurable degradation to Cook Inlet water quality" (MMS 2003).

Similar conclusions can be made for other discharges to Cook Inlet. All discharges are subject to increasingly more stringent regulatory controls, significantly greater than those in place during the 1970s and 1980s when the majority of the development in Cook Inlet occurred. There is no scientific evidence showing any impacts on the Cook Inlet stock of beluga whales from water pollutants has occurred in the past and such impacts are even more unlikely under the more stringent standards now in place.

ALASKA DEPARTMENT OF NATURAL RESOURCES ROLE IN HABITAT PROTECTION

The following is a summary of the Alaska Department of Natural Resources' (DNR) regulatory authorities and a compilation of mitigation measures that pertain to beluga whales. This information is organized by administrative division, providing contact information.

OFFICE OF PROJECT MANAGEMENT & PERMITTING

The Office of Project Management and Permitting (OPMP) houses the Large Project Permitting section (LPP) and is tasked with responsibility and authority of administering Alaska's Coastal Management Program (ACMP).

Large Project Permitting

The LPP functions are found under AS 38.05.020(b)(9), which requires the Commissioner of DNR to coordinate permitting activities for all large resource development projects, and AS 27.05.010(b) which requires DNR to be the lead agency for permitting all large mine projects. LPP's goal is to ensure that all aspects of a large project are considered during a single review and approval process. The LPP is currently coordinating the permitting of mining, oil and gas, and transportation projects, including the Chuitna Coal Project in the Cook Inlet watershed.

LPP assigns a project manager to serve as the primary contact for a large project. The project manager coordinates the permitting activities of the state team assigned to work on the project. The Large Project Team is an interagency group, coordinated by LPP, to work cooperatively with project applicants and operators, federal resource agencies, and the Alaskan public to ensure that projects are designed, operated, and reclaimed in a manner consistent with the public interest. The project manager's primary responsibility is to ensure a coordinated process with minimum duplicity of efforts. This often involves tailoring the process to fit specific project needs.

The goal of the State's Large Project Team is to coordinate the timing and completion of the numerous permits. The team reviews all the complex technical documents generated during the process and provides coordinated comments. The team also coordinates stakeholder involvement and provides a single point of contact for the public. The team provides the public, agencies, and the applicant the opportunity to view the project as a whole.

The requirement for the federal authorizations usually triggers the requirement for an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). The State usually participates as a cooperating agency in the EIS process, and the team endeavors to dovetail the State's permitting process with the EIS process. For example, during the Pogo Mine process, the public Draft EIS included drafts of all the major State permits. This gave the public the opportunity to see how the State's management decisions could be implemented on the ground and enabled them to comment on the project as a whole.

The Large Project Team also coordinates, to the extent possible, with local governments. For example, the team has been working closely with the City and Borough of Juneau throughout the permitting and EIS process for the Kensington Mine. The City's Conditional Use Permits are critical authorizations for the mine and may place additional stipulations on the project.

Alaska Coastal Management Program

The ACMP facilitates the implementation of various beluga whale conservation measures at several distinct levels during land and resource planning processes, as well as at the level of individual project planning and development. Below is a bulleted list of these responsibilities of the Office of Project Management and Permitting (OPMP):

1. Pre-application assistance & meetings. The OPMP is tasked with arranging and scheduling meetings between a prospective developer and the agency personnel that would be reviewing, critiquing, and writing permits to authorize a given development project. These meetings provide an invaluable opportunity for industry to meet face-to-face with agency scientists and resource managers. Oftentimes beluga issues are brought to an applicant's attention at these meetings. Thus, when a developer is made aware of potential wildlife conflicts and/or potential adverse impacts of their planned project ahead of time, the finalized plan of operation or facility footprint is substantially modified before permit applications are even filed. At these meetings, prospective applicants are made aware, if they are not already, of the need to design and site facilities so as to be consistent with statewide standards and district enforceable policies. Applicants are also made aware of the (oftentimes) many distinct special-interest groups that need to be "kept in the loop" for the planning/approval process. This list typically includes subsistence oversight groups, Native Tribes, Native Councils, commercial or recreational fishing interests, environmental groups, etc.
2. Requirements/Standards for what review materials need be submitted. Applicants need to provide OPMP and review participants with:
 - (1) completed Coastal Project Questionnaire;
 - (2) map(s) identifying the location of the project and adjacent facilities, diagrams, technical data, and other relevant material;
 - (3) description of any man-made structures or natural features that are at or near the project site;
 - (4) an evaluation of how the proposed project is consistent with the state standards and with any applicable district enforceable policies, sufficient to support the consistency certification;

These materials are of paramount importance in assisting agency personnel as well as the public review a given project for its potential impacts to coastal uses and resources. It is partially with these materials that a review participant can suggest alternative measures that will improve a proposed development project. Similarly, the requirement imposed by the coastal consistency review process for federal agencies to submit consistency evaluations along with draft plans (for example, OCS oil & gas leasing plans) enables a more thorough review and comment adjudication.

3. Public process/ public review. Most State and federal agency authorizations (permits) go through both public and agency review processes often coordinated by the OPMP. This fulfills many agencies responsibility for posting/distributing public notice. It also provides a key tool wherein US Fish and Wildlife Service, Alaska Department of Fish and Game, State agency biologists, the public, and the coastal district can raise attention to scientific, social, and/or environmental concerns relative to beluga habitats or beluga

population dynamics or health of a given proposed plan or project. Plan adoption and/or individual authorizations for a given project must, through the coastal consistency review process that is adjudicated by the OPMP, be deemed consistent with ACMP standards before said permit is issued or plan is adopted. Oftentimes the OPMP will have to negotiate and include specific alternative measures designed to minimize potentially adverse impacts to belugas into a project description before it can be deemed consistent and permits can be written.

4. Program Plans and District Enforceable Policies. The OPMP assists coastal districts develop and adopt Program Plans and District Enforceable Policies. According to statewide standards of the ACMP, as well as the local enforceable policies, the ACMP review process functions as a tool for adding restrictions or mitigating measures (in the form of Alternative Measures) to the authorizations that are issued.
5. Resolve Conflicts. The OPMP works to act as a facilitator to attempt to resolve conflicts among the resource agencies, an affected coastal resource district, &/or an applicant--before, during, or after a project is permitted.
6. Other. Where the specific aspects of an activity that would otherwise be subject to authorization by the ADEC are not subject to that department's authorization because the activity is either a federal activity or is located on federal land or the OCS, the ADEC can review, comment on, and/or add alternative measures to said activity *only* through the ACMP. Thus, the ACMP provides a very valuable role in its being the only venue for the State to comment on, allow, disallow or make modifications to certain federal actions or private activities located on federal land or the OCS. This leverage is of paramount importance in areas that also happen to be crucially important as habitat for belugas.
7. Statewide Standards. Specific statewide standards and enforceable policies that have bearing on conserving belugas and beluga habitat include:
 - ▶ **11 AAC 112.230. Energy facilities.** (a)(1) The siting and approval of major energy facilities by districts and state agencies must be based, to the extent practicable, to minimize adverse environmental and social effects while satisfying industrial requirements;
 - ▶ **11 AAC 112.230. Energy facilities.** (a)(2) The siting and approval of major energy facilities ... must be based, to the extent practicable, to be compatible with existing and subsequent adjacent uses and projected community needs;
 - ▶ **11 AAC 112.230. Energy facilities.** (a)(11) The siting and approval of major energy facilities ... must ... minimize the probability, along shipping routes, of spills or other forms of contamination that would affect fishing grounds, spawning grounds, & other biologically productive or vulnerable habitats, including marine mammal rookeries and hauling out grounds...
 - ▶ **11 AAC 112.230. Energy facilities.** (a)(12) The siting and approval of major energy facilities ... must ... allow for the free passage and movement of fish and wildlife with due consideration for historic migratory patterns;

- ▶ **11 AAC 112.230. Energy facilities.** (a)(13) Major energy facilities should be sited so that areas of particular ... environmental, or cultural value ... will be protected;
- ▶ **11 AAC 112.270. Subsistence.** (a) A project within a subsistence use area designated by the department or under 11 AAC 114.250(g) must avoid or minimize impacts to subsistence uses of coastal resources. (b) For a project within a subsistence use area designated under 11 AAC 114.250(g), the applicant shall submit an analysis or evaluation of reasonably foreseeable adverse impacts of the project on subsistence use as part of (1) a consistency review packet submitted under 11 AAC 110.215; and (2) a consistency evaluation under 15 C.F.R. 930.39, 15 C.F.R. 930.58, or 15 C.F.R. 930.76.
- ▶ **11 AAC 112.300. Habitats.** (b) (1) Offshore areas must be managed to avoid, minimize, or mitigate significant adverse impacts to competing uses such as commercial, recreational, or subsistence fishing, to the extent that those uses are determined to be in competition with the proposed use;
- ▶ **11 AAC 112.300. Habitats.** (b) (2)(B) Estuaries must be managed to avoid, minimize, or mitigate significant adverse impacts to competing uses such as commercial, recreational, or subsistence fishing, to the extent that those uses are determined to be in competition with the proposed use;
- ▶ **11 AAC 112.300. Habitats.** (b) (5)(A) Rocky islands and sea cliffs must be managed to avoid, minimize, or mitigate significant adverse impacts to habitat used by coastal species (5) rocky islands and sea cliffs must be managed to avoid, minimize, or mitigate significant adverse impacts to habitat used by coastal species;
- ▶ **11 AAC 112.300. Habitats.** (b) (6)(C) barrier islands and lagoons must be managed to avoid, minimize, or mitigate significant adverse impacts from activities that would decrease the use of barrier islands by coastal species, including polar bears and nesting birds;

DIVISION OF OIL AND GAS

Background: oil and gas areawide leasing

The purpose of areawide leasing is to provide an established time each year that the State will offer for lease all available acreage within five geographical regions. In 1999 the Division of Oil and Gas prepared a best interest finding for the Cook Inlet region. The finding is in effect for 10 years. The Cook Inlet Areawide finding covers an area of approximately 4.2 million acres.

Prior to a sale, DNR issues a request for new information that has become available since the most recent finding for that sale area was written. Agencies and the public are given a comment period to provide new information. Based on information received, DNR will determine whether there is "substantial new information" that justifies a supplement to the finding. A supplement to the finding or a "decision of no substantial new information" is issued approximately 90 days prior to the sale. The final best interest finding for the Cook Inlet Areawide was issued on

January 20, 1999, and supplemented on May 20, 2000, February 18, 2004, and again on February 21, 2007.

The Best Interest Finding and Supplements are available on the Division's website:
<http://www.dog.dnr.state.ak.us/oil/products/publications/cookinlet/cookinlet.htm>

In 1999, the Service identified 126 tracts in Cook Inlet that are, in the Service's opinion, important beluga whale habitat. DNR worked with the Service to develop mitigation measures that would allow oil and gas exploration, development and production to go forward, while still protecting beluga habitat. Nonetheless, as a result of litigation, leasing of the tracts identified by the Service was stayed by the Superior Court in *Cook Inlet Keeper v Alaska*, Case No. 3AN-99-3343CI.

A July 28, 2000, Superior Court Order affirmed the Cook Inlet Areawide 1999 Oil and Gas Lease Sale Final Best Interest Finding and Consistency Determination in all parts, exclusive of the Cook Inlet beluga whale population issues relative to 126 tracts that were remanded for additional consideration. The Service made recommendations that allowed for a resolution of the beluga tracts.

The Service recommendations addressed all Cook Inlet lease sale tracts. They segregated the tracts into three categories: Category One contained all tracts in Upper Cook Inlet that have the highest observed use by beluga whales, including nearshore areas along the west and north shoreline, Knik Arm, and Turnagain Arm; Category Two contained all other nearshore tracts which have also been identified as concentration areas during summer periods; and Category Three contained all other sales tracts.

NMFS recommended:

- oil and gas exploration and development (permanent or temporary) should not occur in Category One tracts, unless it occurs on upland tracts;
- leasing of Category Two tracts be conditioned such that no permanent surface entry or structures occurs (other than upland areas), and that all temporary activities and structures (e.g. exploration drilling) occur only between November 1 and April 1 of each year; and
- no specific conditions for Category Three tracts.

To address these recommendations, the following "Mitigation Measures" were added to the Best Interest Finding under the "Facilities and Structures" section:

32. No permanent offshore structures will be allowed, and temporary structures will be allowed only between November 1 and April 1 of each year, within the following tracts: 126, 127, 129 thru 132, 161, 162, 175, 177, 211, 218, 257, 301, 302, 373, 376, 377, and 384.

33. No offshore facilities will be allowed, both temporary and permanent, within the following tracts: 320 thru 334, 391 thru 409, 462, 464 thru 475, 485, 486, 493, 494, 497, 498, 522, 524 thru 537, 540, 541, 544, 547 thru 552, 559, 575 thru 577, 579, 581, 582, 585, 586, 590, 593, 594, 598, 616 thru 618, 620 thru 623, 627, 655 thru 658, and 662.

The Cook Inlet Areawide tract map is available online at:

http://www.dog.dnr.state.ak.us/oil/products/publications/cookinlet/ciaw2007/CI2007_Tractmap_Med_4%20Mb.pdf

In addition, the Service recommended that a Lessee Advisory concerning beluga whales be included in the Cook Inlet Areawide Oil and Gas Lease Sale Best Interest Finding, as quoted below.

9. Endangered and Threatened Species: The Lessee is advised that the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.) protects the following endangered or threatened species and candidate species for listing that may occur in the lease sale area:

<u>Common Name</u>	<u>ESA Status</u>
a. Fin whale	Endangered
b. Sei whale	Endangered
c. Steller sea lion (western stock)	Endangered
d. Beluga whale (Cook Inlet stock)	Candidate
e. Steller's eider (Alaska breeding population)	Threatened

The National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) is the agency responsible for management of marine mammals with the exception of sea otters, polar bears and Pacific walrus that, in addition to migratory birds, are managed by the U.S. Fish and Wildlife Service (USFWS).

NMFS and the USFWS have requested that the Lessee be further advised that:

- Offshore seismic operations may result in the taking¹ of marine mammals. Such taking is prohibited by the Federal Marine Mammal Protection Act (MMPA), unless otherwise authorized. The incidental taking of marine mammals may be authorized under the MMPA, and each operator should discuss this matter with NMFS well in advance of any geophysical survey activity.
- The USFWS has determined that oil and gas exploration and development activities within three miles of the eastern shore of Cook Inlet, from Clam Gulch to the southern bounds of the lease sale area, is likely to adversely affect² Steller's eiders. Each operator is advised to consult with the USFWS well in advance of any activities in this area.

NMFS, USFWS, and ADF&G will continue annual monitoring efforts to further delineate the presence and distribution of species administered under the ESA and

¹ Under the MMPA, "take" means: harass, hunt, capture, collect, or kill attempt to harass, hunt, capture, or kill any marine mammal.

² Under the ESA, "take" means: to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. "Harm" is further defined by USFWS to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering. "Harass" is further defined by FWS as intentional or negligent actions that create the likelihood of injury to listed species to such extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering.

MMPA. The Lessee is advised to annually acquire updated information from these agencies.

In addition, lessees are required to implement oil spill prevention, control, and countermeasures plans and the use of explosives is restricted in marine waters:

Mitigation Measure 1

Oil and hazardous substance pollution control: In addition to addressing the prevention, detection, and cleanup of releases of oil, contingency plans (C-Plans) for oil and gas extraction operations should include, but not be limited to, methods for detecting, responding to, and controlling blowouts; the location and identification of oil spill cleanup equipment; the location and availability of suitable alternative drilling equipment; and a plan of operations to mobilize and drill a relief well.

Lessee Advisory 1

The use of explosives for seismic activities with a velocity of greater than 3,000 feet per second in marine waters is prohibited.

Permitting and Compliance Program

The Permitting and Compliance Unit within the Division of Oil and Gas approves Plans of Operation for activities on State oil and gas leases, geophysical exploration permits, and miscellaneous land use permits on all State lands and waters. Bonding requirements must be fulfilled prior to any activity. Geophysical exploration activities are governed by 11 AAC 96.

Plan of Operations applications are reviewed for compliance with stipulations and mitigation measures in the oil and gas lease. Most proposed activities in the coastal zone must meet the standards of the Alaska Coastal Management Program and go through a public comment period.

The Permitting and Compliance Unit also performs field inspections to see that operations are conducted in conformance with the terms and conditions contained in the approval.

DIVISION OF MINING, LAND AND WATER

The Division of Mining, Land and Water (DMLW) has the responsibility and authority to manage all commercial (excluding oil and gas exploration and development activities) and recreational use of State land and waters and resources on those lands. In Cook Inlet, Turnagain Arm, and Knik Arm, this includes the tidelands and submerged lands that have not been conveyed to the cities or boroughs. Although DMLW does not manage the navigable use of the marine waters, it does authorize docks, buoys, fiber optic cables, dredging, and other uses of the tide and submerged land.

The DMLW authority primarily comes from AS 38.05, AS 41.23, and AS 46.15. This DMLW authority is overlapped by the authority of the Division of Oil and Gas for oil and gas leasing and development and that of the Joint Pipeline Office for common carrier pipeline right of ways.

Land Management Plans

The DMLW is responsible for writing area plans and management plans for State lands. This is done through a public process to create the policy and guidance of how the lands will be managed. This process includes consideration of tide and submerged lands, sensitive habitats, and development needs.

Area plans provide management guidance to authorizations issued by DNR on the protection of fish and wildlife resources through two components: areawide policies and specific management units occupying State uplands or tidelands.

Areawide policies: The Kenai Area Plan applies ACMP requirements derived from District Plans as well as statewide ACMP standards for the protection of sensitive fish and wildlife, including tideland areas. In this case, the Kenai District Plan requires that “*uses and activities within or adjacent to coastal waters shall not interfere with migration or feeding of whales.*” In addition, the Kenai Area Plan has the following mitigation policy, quoted below:

C. Mitigation. The following mitigation policy will apply where coastal district mitigation policies are not in effect for state lands.

1. When authorizing the use or development of state lands, the Department of Natural Resources and the Department of Fish and Game will evaluate the requirements of the activity or development and the benefits or impacts it may have to habitat when determining stipulations or measures needed to protect fish and wildlife or their habitats. The costs of mitigation relative to the benefits to be gained will be considered in the implementation of this policy.
2. All land use activities should be conducted with appropriate planning and implementation to avoid or minimize adverse effects on fish and wildlife or their habitats.
3. The department will enforce stipulations and measures, and will require the responsible party to remedy any significant damage to fish and wildlife or their habitats that may occur as a direct result of the party's failure to comply with applicable law, regulations, or the conditions of the permit or lease.
4. When determining appropriate stipulations and measures, the department will apply, in order of priority, the following steps. Mitigation requirements listed in other guidelines in this plan will also follow these steps.
 - a. Avoid anticipated, significant adverse effects on fish and wildlife or their habitats through siting, timing, or other management options (see Table 2.3 for timing guidelines)

- b. When significant adverse effects cannot be avoided by design, siting, timing, or other management options, the adverse effect of the use or development will be minimized.
- c. If significant loss of fish and wildlife habitat occurs, the loss will be rectified, to the extent feasible and prudent, by repairing, rehabilitating, or restoring the affected area to a functional state.
- d. DNR will consider requiring replacement or enhancement of fish and wildlife habitat when steps "a" through "c" cannot avoid substantial and irreversible loss of habitat. The Department of Fish and Game will clearly identify the species affected, the need for replacement or enhancement, and the suggested method for addressing the impact. Replacement or enhancement of similar habitats of the affected species in the same region is preferable. DNR will consider only those replacement and enhancement techniques that have either been proven to be, or are likely to be, effective and that will result in a benefit to the species impacted by the development.

Replacement or enhancement will only be required by DNR if it is determined to be in the best interest of the state either through the original Best Interest Finding process (AS 38.05.0335(e)) or through the permit review process. Replacement may include structural solutions such as creating spawning or rearing ponds for salmon, creating wetlands for waterfowl, or non-structural measures such as research or management of the species affected, legislative or administrative allocation of lands to a long-term level of habitat protection that is sufficiently greater than that which they would have otherwise received, or other management practices to increase habitat productivity.

Management units: The Turnagain Arm area is affected by the Kenai area plan and the Turnagain Arm management plan. The management intent for the tidelands from the management plan requires that these areas be retained in public ownership and managed for multiple uses, with a management emphasis of protecting recreational opportunities, the high scenic values of the Seward Highway corridor, and the protection of fish and wildlife habitat. The Kenai area plan identifies specific management requirements for tidelands within the Kenai Peninsula Borough in units 503 and 504. Both of these management units recognizes the importance of this area as a summer feeding area for Beluga whales and co-designate the tidelands as Habitat/Public Recreation. DNR must ensure, when issuing authorizations within Turnagain Arm, that sensitive habitats and fish/wildlife resources are maintained and, specifically, that the summer feeding area for Beluga whales are protected.

The Knik Arm area is not affected by an area plan. The Willow Subbasin, one of our first area plans, did not provide management intent or include specific management units for tidelands and submerged lands. This plan is currently being updated and will include this information when finalized. The revision process should take over a year and once completed, DNR will have specific management requirements for this resource which will provide direction for the issuance of subsequent authorizations.

Land Use Authorizations

DMLW authorizes land uses through permits, leases, rights of way, sales, and other authorizations. All DMLW authorizations are granted in accordance with the plans or, if they deviate from the plan, a public process is conducted to allow an exception or amend the plan. These authorizations are to assure that any operation is conducted in a manner that will prevent unreasonable degradation of the land and water resources and that the management requirements of area plans are met. In addition, since these marine areas are in the coastal zone, authorizations must first be deemed consistent with the Alaska Coastal Management Program plans and enforceable policies. DMLW will consider these plans and place any restrictions or mitigating measures in the authorizations through stipulations to protect the social or environmental concerns, inclusive of critical habitats.

DMLW's statutes and regulations are fairly general and are non-specific regarding beluga related issues. For example, the authority for attaching stipulations to DMLW permits is 11 AAC 96.040 (b) "*Each permit is subject to any provisions the department determines necessary to assure compliance with this chapter, to minimize conflicts with other uses, to minimize environmental impacts, or otherwise to be in the interests of the state.*" Leasing statutes and regulations also do not have any specific language except under AS 38.05.073 where commercial recreation leasing plans **must consider fish, wildlife** and other resources affected by the specific recreation facilities. However, an overriding statute in AS 38.04.005(b) requires that DNR must consider natural resources and conditions present on the land and seek to **minimize the adverse effect of private settlement on wildlife, fishery**, mineral, timber, and other significant resources of the land when determining how to provide for maximum use of State land consistent with the public interest.

For surface coal activities authorized by DMLW, a fish and wildlife protection plan, under 11 AAC 90.081, must be developed to **prevent or minimize disturbance and adverse impacts on fish, wildlife, and related environmental values** to protect, enhance, or mitigate effects to threatened, endangered, or important species if they can reasonably be expected to be affected by the proposed activities. The plan must include protective measures to be used during active mining operations and enhancement measures to be used during the reclamation and post-mining phases to develop aquatic and/or terrestrial habitats.

Most all other authorizations go through public and agency review process where Alaska Department of Fish and Game, OHMP, ADEC, EPA, Army Corps of Engineers, or the U.S. Fish and Wildlife Service can bring attention to any environmental concerns about a proposed project. DMLW will then address those concerns when creating the authorization. If agencies identify specific habitat or species that would be directly impacted by the proposed project, DMLW will work with those agencies to develop mitigating measures that would be required of the permit applicant.

At present, most authorizations in this area contain no specific stipulations regarding belugas, but many contain some form of hazardous substance stipulations, such as these quoted below:

- a) *All fuel, petroleum and other toxic agents stored or utilized by the processing vessel must not be transferred while moored and must be contained or confined in a manner which would prevent any spillage from entering the adjacent water body.*
- b) *The permittee shall take all reasonable precautions to prevent water pollution, erosion, or sediment on or in the vicinity of the permitted area. This includes, ensuring that the discharge of wastewater from the processing vessel shall be from a USCG-certified Type II [Marine Sanitation Devis] MSD and that the anchor systems shall be free of oil, grease and other pollutants.*
- c) *Discharges of waste petroleum products or liquid wastes of any kind, not authorized under the EPA discharge permit AK-00586-8, is prohibited.*
- d) *The Permittee is responsible for contacting the Department of Environmental Conservation (DEC) office for plan review and approval of their methods for sewage disposal and potable water.*
- e) *The buoy and running lines shall be sited so as to avoid interference with navigation for the purpose of public use and enjoyment, existing fisheries, or other authorized uses.*

OFFICE OF HABITAT MANAGEMENT AND PERMITTING

Under its Title 41 authorities, the Office of Habitat Management and Permitting (OHMP) reviews proposed development activities to evaluate effects of that activity on fish passage and fish habitat. As needed, OHMP adds conditions to its permits to eliminate or minimize these effects. Maintaining fish passage and fish habitat helps protect fish populations, some of which may be utilized by beluga whales. OHMP biologists also review, comment, and suggest stipulations for the Division of Oil and Gas lease sales and ACMP reviews.

STATE PIPELINE COORDINATOR'S OFFICE

The State Pipeline Coordinator's Office (SPCO) administers pipelines authorized under AS 38.35, the Right-of-Way Leasing Act. Typically, right-of-way leases will contain conditions and stipulations to protect fish and wildlife resources; examples of each are included below. In addition, construction and operation activities associated with common carrier pipelines on the North Slope are governed by the ACMP process, which is described above.

Example of Lease Conditions (quoted below):

11. Mitigative, Preventive, and Abatement Activities Required (a) The LESSEE will, at its own expense in accordance with the terms of this LEASE and in the manner set forth in the appropriate plans and programs developed pursuant to Stipulation 2.5.1:
- (1) maintain the LEASEHOLD and PIPELINE SYSTEM in good repair;
 - (2) promptly repair or remedy any damage to the LEASEHOLD; and
 - (3) promptly compensate for any damage to or destruction of property for which the LESSEE is liable, resulting from damage to or destruction of the LEASEHOLD or PIPELINE SYSTEM.
- (b) The LESSEE shall prevent or, if the procedure, activity, event or condition already exists or has occurred, shall abate, as completely as practicable, using the BEST PRACTICABLE TECHNOLOGY AVAILABLE and in the manner set forth in the appropriate

plans and programs developed pursuant to Stipulation 2.5.1, any physical or mechanical procedure, activity, event or condition:

- (1) that is susceptible to prevention or abatement;
- (2) that arises out of, or could adversely affect, PIPELINE activities; and
- (3) that causes or threatens to cause

(A) a hazard to the safety of workers or to the public health or safety (including but not limited to personal injury or loss of life with respect to any PERSON or PERSONS); or

(B) immediate, serious, or irreparable harm or damage to the environment (including but not limited to soil, sediments, water and air quality, areas of vegetation, fish or other wildlife populations or their habitats, or any other natural resource).

(c) Unless clearly inapplicable, the requirements and prohibitions imposed upon the LESSEE by this LEASE (including the Stipulations thereto) are also imposed upon the LESSEE's employees, and the LESSEE's agents and contractors and the employees of each of them. The LESSEE shall ensure compliance with this LEASE (including the Stipulations thereto) by its employees and by its agents and contractors, and the employees of each of them.

13. Orders and Notices (a) The COMMISSIONER may issue any order necessary to enforce or implement any provision of this LEASE. Before delivery of any such order, the COMMISSIONER shall confer with LESSEE, if practicable to do so, regarding the required action or actions included in the order. Any such order shall state in detail what is demanded of LESSEE and the reasons and basis for such demand.....

(i) In coordination with the FERC, and consistent with applicable State and Federal law, the COMMISSIONER may, by written order, require the LESSEE to make such modification of the PIPELINE SYSTEM as the COMMISSIONER determines is necessary to:

- (1) protect or maintain stability of the foundation and other earth materials;
- (2) protect or maintain integrity of the PIPELINE SYSTEM;

(3) control or prevent significant damage to the environment (including but not limited to soil, sediments, water and air quality, areas of vegetation, fish or other wildlife populations or their habitats, or any other natural resource); or

(4) remove hazards to public health and safety, including the activities of the LESSEE, the LESSEE's agents, and contractors, and the employees of each of them.

15. Temporary Suspension (a) The COMMISSIONER may, consistent with applicable State and Federal law, order the temporary suspension of any or all PIPELINE activities, if

(1) an immediate temporary suspension of the activity or the activities is necessary to protect:

(A) public health or safety (including but not limited to personal injury or loss of life with respect to any PERSON or PERSONS); or

(B) the environment from immediate, serious or irreparable harm or damage (including, but not limited to harm or damage to soil, sediments, water and air quality, areas of vegetation, fish or other wildlife population or their habitats, or any other natural resource); or

Additional Example of Lease Stipulations (quoted below):

2.5 DESIGN CRITERIA, Plans and Programs

2.5.1 The LESSEE shall submit DESIGN CRITERIA to the COMMISSIONER. The LESSEE shall also submit comprehensive plans and/or programs (including schedules where appropriate) which shall include but not be limited to the following:

(25) Human/Carnivore Interaction

Plan Purpose and Objective: This plan will provide design criteria and basic methodologies for various pipeline activities that will be used to minimize human/carnivore interactions and will describe the measures to be employed to provide employees with adequate training and knowledge to deal with the potential dangers associated with interactions between humans and bears and other carnivores.

Performance Standard: The LESSEE shall minimize the occurrence of human-carnivore interactions during pre-construction, CONSTRUCTION, operation and maintenance, and TERMINATION activities by taking measures to prevent interactions between humans and carnivores. This plan shall contain personnel safety guidelines developed in consultation with the Alaska Department of Fish and Game (hereinafter "ADF&G").

2.15.5.2 Zones of Restricted Activities

2.15.5.2.1 Activities of the LESSEE in connection with CONSTRUCTION, operation, maintenance and TERMINATION of the PIPELINE SYSTEM in key fish and wildlife areas and in specific areas where threatened or endangered species of animals are found may be restricted by the COMMISSIONER during periods of fish and wildlife breeding, nesting, spawning, lambing and calving activity, over-wintering, and during major migrations of fish and wildlife. The COMMISSIONER shall provide the LESSEE written notice of such restrictive action. At least annually, and as far in advance of such restrictions as is possible, the COMMISSIONER shall furnish the LESSEE an updated list of those areas where such actions may be required, together with anticipated dates of restriction.

2.15.5.3 Big Game Movements

2.15.5.3.1 The LESSEE shall design, construct and maintain both the buried and above ground sections of the PIPELINE so as to assure free passage and movement of big game animals.

DIVISION OF FORESTRY

The Alaska Forest Resources and Practices Act (FRPA, AS 41.17) governs how timber harvesting, reforestation, and timber access occur on state, private, and municipal land. Forest management standards on federal land must also meet or exceed the standards for State land established by the Act. The FRPA was originally adopted in 1978. Major revisions were adopted in 1990 to address riparian management on private land, enhance notification procedures for timber operations, reorganize the Board of Forestry, and establish enforcement procedures. Additional changes to the stream classification system and riparian management standards were adopted in 1999 for Region I (coastal Alaska) and in 2003 for Region III (interior Alaska). Review of the standards for Region II (southcentral Alaska) is in progress.

Purpose. The FRPA balances economic concerns for the timber industry with water quality and habitat protection needs. It protects fish habitat and water quality, ensures prompt reforestation,

and helps the timber and fishing industries provide long-term jobs. This framework provides certainty and credibility for landowners, operators, and the public.

Key provisions. The FRPA:

- Establishes a process for landowners to notify the State before beginning commercial timber operations. This is not a permit process. Tight timeframes are set for agency review of notifications, and timber operations can proceed if the agencies do not respond within the set time frame.
- Sets standards for forest management along waterbodies, including buffers, and provides flexibility to harvest valuable trees within buffers when it can be done without harming fish habitat or water quality. Harvest within buffers requires agency approval. Buffers are tailored to the conditions in each region.
- Sets standards to prevent erosion from roads and harvest areas into waterbodies.
- Requires reforestation except where land will be converted to another use, or where the harvest area is significantly composed of dead or dying trees.
- Provides one-stop shopping for forest operation compliance with state and federal clean water and coastal management standards.
- Authorizes DOF to enforce the Act through directives, stop work orders, and citations for violations.

Best management practices (BMPs). Regulations adopted under 11 AAC 95 also establish BMPs for road construction and maintenance, and for timber harvesting. These standards are designed to prevent adverse impacts to fish habitat and water quality from timber operations.

Regions and applicability. Alaska is divided into three forest practices regions. Region I covers coastal forests from Southeast Alaska through Prince William Sound, the eastern Kenai Peninsula, the Kodiak Archipelago, and parts of the Alaska Peninsula. Region II is the boreal forest south of the Alaska Range. Region III is the boreal forest in Interior Alaska.

The FRPA applies to commercial timber operations on forestland, including harvesting, road building, site preparation, thinning, and slash treatment operations on forestland. Operations must comply with the FRPA if they are larger than 10 acres in Region I or larger than 40 acres in Region II. In Region III, it applies to operations larger than 40 acres for forest landowners that own more than 160 acres in total. All commercial harvest operations that encompass or border surface waters or a riparian area also must comply with the Act, regardless of their size.

SUMMARY OF REGULATORY MECHANISM

Existing regulatory mechanisms for the protection of the Cook Inlet stock of beluga whales and its habitat are extensive. There is no scientific evidence that a failure of any of these mechanisms, other than the former lack of a mechanism to restrict harvest, contributed to the decline of the Cook Inlet stock of beluga whales. Likewise, there are no scientific data showing any of the increasingly more stringent mechanisms for conservation of the Cook Inlet stock of beluga or its habitat are inadequate for recovery of the stock from prior unsustainable harvest.