



"The mission of the Council is to represent the citizens of Cook Inlet in promoting environmentally safe marine transportation and oil facility operations in Cook Inlet."

October 14, 2016

Young Ha
Alaska Department of Environmental Conservation
555 Cordova St., 2nd floor
Anchorage, AK 99501

SUBJECT: Comment on Cook Inlet Subarea Plan Revision 2

Dear Ms. Ha:

The mission of the Cook Inlet Regional Citizens Advisory Council (RCAC) is to represent the citizens of Cook Inlet in promoting environmentally safe marine transportation and oil facility operations in Cook Inlet.

We have reviewed the draft Cook Inlet Subarea Plan – Revision 2 and enclose our suggestions in the required matrix. Our comments are almost entirely administrative in nature, but are important to enhance plan clarity, accuracy, and alignment with current references and resources. An example where current information should be provided is service providers in the region; while other statements need clarification, such as specifying areas used as haulouts vs rookeries. CIRCAC believes it is critical to avoid confusion; the plan should reference the most recent guidance from the Regional Response Team updates that reflect the new Dispersant Use Guidelines, and other current documents.

Our most significant substantive concern is that the scenario used for a vessel worst case discharge does not reflect the current worst case discharge based on vessel activity in the region. This represents a gap in planning of almost 100,000 bbl and should be addressed with an updated scenario that also includes current equipment and vessels.

We are aware of proposed changes to the way subarea planning is managed in Alaska and will be providing further comment in that regard. However, we hope our comments provided for this document will be helpful in ensuring that the best quality information is incorporated into any new documents or processes going forward.

We also look forward to sharing the Cook Inlet Geo-spatial Resource Information Database (GRID) when completed. We believe this tool will be a much more efficient means of providing up-to-date information about the types of resources and support infrastructure that were identified as requiring update in this plan.

Thank you for your consideration. If you wish to discuss further, our Director of Operations may be reached at (907) 283-7222 or via email at SteveCatalano@circac.org.

Sincerely,


Michael Munger
Executive Director

Members

Tourism Organizations

Alaska Native Groups

Environmental Groups

Recreational Groups

Aquaculture Associations

Commercial Fishing Organizations

City of Kodiak

City of Kenai

City of Seldovia

City of Homer

Kodiak Island Borough

Kenai Peninsula Borough

Municipality of Anchorage

Comments on Cook Inlet Subarea Contingency Plan
 Submitted by Cook Inlet Regional Citizens' Advisory Council
 October 14, 2016

No.	Point of Contact	Organization	Page #	Line #	Specific Wording Change	Rationale for Recommended Change	Severity	Review committee Adjudication
1.	Vinnie Catalano	CIRC AC	vi	13	Replace "Oil Pollution Act" with "OPA"	Consistency within the text	A	
2.	Vinnie Catalano	CIRC AC	viii	4	Replace "...SCP concentrates on issues..." with "...the SCP..." or "the SCPs..." (the latter if intending to refer to all in Alaska)	Improve syntax	A	
3.	Vinnie Catalano	CIRC AC	viii	4	Replace "SCP provides..." With "SCPs provide..."	Grammatical correction	A	
4.	Vinnie Catalano	CIRC AC	x	27	Add bold font to "Section" in "Geographic Response Strategies Section"	Formatting consistency within the text	A	
5.	Vinnie Catalano	CIRC AC	xv	1-2	Add punctuation to reduce run-on sentence. "The National Strike Force (NSF) was created in 1973 as a Coast Guard "Special Team" under the National Oil and Hazardous Substances Pollution Control Plan (National Contingency Plan). The NSF was..."	Run-on sentence	A	

10.	Vinnie Catalano	CIRC AC	A-2	D	Include text identifying each Borough's Office of Emergency Management (OEM).	The text should outline the local emergency management structure. The OEM and the LEPC are the two bodies that would represent a Borough and/ or local governments.	S	
11.	Vinnie Catalano	CIRC AC	A-7	23	Rewrite the sentence. "When the Responsible Party (RP) is identified, the RPOSC is usually a senior representative of the RP and is designated the Incident Commander (IC).	To make the sentence read better.	A	
12.	Vinnie Catalano	CIRC AC	A-7	24 - 25	Delete Responsible Party and remove parenthesis from (RP).	(RP) has already been established as the acronym for Responsible Party.	A	
13.	Vinnie Catalano	CIRC AC	A-7	"Note"	Correct to: "NIIMS"	The acronyms NIIMS should be correctly spelled to avoid confusion.	A	
14.	Vinnie Catalano	CIRC AC	A-8	4	Add "(EPA)" after "Environmental Protection Agency"	To allow use of the acronym "EPA" elsewhere in the document.	A	
15.	Vinnie Catalano	CIRC AC	A-8	LO SC	Clarify statement in Second paragraph concerning the LOSC will serve as the ultimate command authority for public safety issue...	The statement identifies the LOSC as the entity having ultimate command authority over public safety. Presumably the Unified Command (FOSC/SOSC) has ultimate authority for the public safety, worker safety, and environmental issues.	S	
16.	Vinnie Catalano	CIRC AC	A-9	1- 2	Delete use of acronym within parenthesis- (RAC); Oil Spill Response Organizations to Oil Spill Removal Organization.	Use of acronym twice. and correct terminology as per the USCG Response Resource Assessment Branch wording	A	

17.	Vinnie Catalano	CIRC AC	A-9	12 - 28	Ensure the language within this section reflects the proposed revised language stated in Non-Tank Vessel Response Plan Amendment of 18 AAC 75.405 through 75.420 as applicable	Language should reflect that contained in regulation.	S	
18.	Vinnie Catalano	CIRC AC	11	Scope of Activities	Include "...to large-sized oil and hazardous material spill."	The opening paragraph limits the scope of Activities to only Oil spills. This is not the intended use of the plan; or is it?	S	
19.	Vinnie Catalano	CIRC AC	12	24 - 29	Include CIRCAC notification and participation	This section should include something about CIRCAC notification, participation, similar to the agencies, as well as CIRCAC's ability to support stakeholder outreach.	S	
20.	Vinnie Catalano	CIRC AC	13	2	Correct text spacing on last word in paragraph	Typo	A	
21.	Vinnie Catalano	CIRC AC	13	33-36 Notifications	Change order of notifications from "local, state, and federal" to "Federal, State, and Local." Change to: "The FOSC and their agency personnel will ..."	Not all local agencies may have notification or reporting requirements. Federal and State requirements vary but it generally always requires some sort of notification. Consider making the same change in preceding portions of the document as well. The USCG or the EPA will be the lead agency to fill the FOSC position.	S	
22.	Vinnie Catalano	CIRC AC	14	3	Delete "identify responsible party"	Not very likely that on-scene responders would need to or would be trying to identify the RP. More likely that for a medium to large spill the FOSC and or the SOSC would have already made that identification.	S	

23.	Vinnie Catalano	CIRCAC	14	10 - 11	Reword text to “FOOSC/SOSC will advise the RP of the legal responsibilities regarding the spill and any investigation that may follow.”	The current wording puts notifying the RP of legal responsibility on what sounds like personnel in the field. For a medium to large spill the RP or their representative and the FOOSC/SOSC are most likely already in contact and may already be in the command center.	S	
24.	Vinnie Catalano	CIRCAC	16	28	Add text that reiterates mechanical recovery is the primary tactic to be employed; only when mechanical recovery is impractical or not possible should non-mechanical response options be employed.	While it is true non-mechanical response options have a small window of opportunity and the process should be assessed early on, it does not mean non-mechanical response options are the first response option to be used.	S	
25.	Vinnie Catalano	CIRCAC	17	Note:	Reword text to read: “ Temporary storage of waste products and recovered product may be limited in some areas.”	Due to the presence of two OSROs, several oil field supply companies, oil field equipment providers, and a refinery, storage and disposal do not often present a problem.	S	
26.	Vinnie Catalano	CIRCAC	17	8 Public affairs	Add text to include CIRCAC participation in the JIC	Following the guidance in the CIRCAC section of the CISCOP document and in the Unified Plan CIRCAC is envisioned to be part of the JIC.	S	
27.	Vinnie Catalano	CIRCAC	17	13-20	Correct text to indicate Section H of the CISCOP and Annex O of the Unified plan. Remove reference to the Aleutians Subarea.	Correct plan references	A	

28.	Vinnie Catalano	CIRAC	17	13-20	<p>Recommend using text from the Unified Plan,” Imperiled, structurally damaged, or leaking vessels may need to be brought into a harbor or anchored or moored in protected waters to make repairs to stop the loss of oil or other hazardous substances. Likewise, vessels that have lost power or steering may need to be brought into a place of refuge for repairs to prevent a shipwreck that could result in the loss of fuel, hazardous substances, or other cargo. Taking these actions would help prevent or minimize potential adverse effects to the public, the environment, and resource users.”</p>	<p>Paragraph does not speak to the heart of the PPOR program. Potential Places Of Refuge are meant to provide stricken vessel with a safe haven in protected waters in order to affect repairs; and minimize environmental impact.</p>	S	
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29.	Vinnie Catalano	CIRC AC	10	16	Add “The GRS provide unified (public, responders, and agencies) priorities and response tactics for the protection of selected sensitive areas for assisting first responders to an oil spill. The GRS list the sensitive resources of an area and the response strategies, equipment, personnel and logistical information necessary to protect the identified sensitive areas. Because the Alaska Department of Environmental Conservation, the Environmental Protection Agency, and the U.S. Coast Guard already have approved the GRS, they can serve as pre-approved strategies for the Unified Command during the emergency phase of an oil spill response. See section G of this plan.”	This section should provide some introduction to the program and what should be expected of its background, content, and application.	S	
30.	Vinnie Catalano	CIRC AC	18	29-on.	Remove references to areas outside of Cook Inlet Subarea, i.e. Valdez, Cape Spencer, Cordova, Yakutat, Prince William Sound.	Including out of area references will confuse personnel unfamiliar with the CI Subarea. While many areas can and are affected by larger weather patterns moving through the area those out of areas weather patterns are not those of the CI Subarea.	S	
31.	Vinnie Catalano	CIRC AC	19	3	Correct wording to read “...vessel was a large tramper...” Or “...the vessel was a non-tank vessel that was not required to be of double hull construction”	typo	A	

32.	Vinnie Catalano	CIRC AC	20	22	Reword text to read “A large unit located at the ADEC warehouse in Anchorage and two large units...”	To provide clarity of the location and in relation to each other.	S	
33.	Vinnie Catalano	CIRC AC	A-32	10	Reconsider content due to pending study by CIRCAC and Safeguard Marine to closely examine self-arrest using ship simulators, local experts to develop likely scenarios for common vessels in CI and peer reviewed by SME panel discussion.	This study and its methodology should provide a more definitive view of self-arrest in CI.	S	
34.	Vinnie Catalano	CIRC AC	All	Page numbers	Change page numbers to be consistent Existing page numbers: A-1 through A-10, 11 through 31 then a-32. This discrepancy exists in TOC and on pages of text.	Numbering should be consistent. A-1 through A-32.	A	
35.	Vinnie Catalano	CIRC AC	B-3	4	Replace 7 th Edition, 1993 with most current edition-2015	Use of the most up-to-date sources should be standard	S	
36.	Vinnie Catalano	CIRC AC	B-7	2	Replace Sample Community Profile with descriptive language for each section	To prevent confusion over the sample communities being in CI Subarea	S	

37.	Vinnie Catalano	CIRC AC	B-9 through B-107		Fact check ALL winter temperature ranges	Many of the Temperature ranges /averages seem extremely mild; presenting a skewed expectation that could affect operational and personnel safety. Being prepared for 14 to 27 degrees above zero is very different from being prepared for 14 to 27 degrees below zero, for personnel and equipment. Suggest consistent use of "range" or "average." Recommend using temperature ranges to best inform responders.	S	
38.	Vinnie Catalano	CIRC AC	B-11		Add-Boat launching from this location occurs during the summer months. Launching from the beach location is not possible without assistance.	It should be noted that the Anchor River boat launch is seasonal but small boats may be launched in the river. From the ADNR web page- "Anchor River Enterprises, is a private company that provides tractor assisted boat launching services at Anchor River SRA under a permit issued by Alaska State Parks. Launch price is \$65 (cash) or \$70 (credit card). During 2014, this service will be provided at the following times: May 1 - May 15 6:00 a.m. - 10:00 p.m. May 16 - August 15 4:00 a.m. - 10:00 p.m. August 16 - September 1 6:00 a.m. -10:00 p.m."	S	
39.	Vinnie Catalano	CIRC AC	B-23	Under "Economy"	Remove Clam Gulch Lodge.	Lodge is no longer operating.	S	

40.	Vinnie Catalano	CIRC AC	B-36	Under Emergency Services	Replace “Multiple medical clinics are located in Eagle River,” with “The Girdwood Medical Clinic provides year round medical care at 131 Lindblad Avenue Girdwood, Alaska, 99587”	Misinformation-Suggest identifying provider located in Girdwood.	S	
41.	Vinnie Catalano	CIRC AC	B-41	Paragraph #3	Remove Sound Aviation, Grant and Homer Air	Sound aviation is located in Anchorage. Grant no longer operates in Homer. Homer Air is gone.	S	
42.	Vinnie Catalano	CIRC AC	B-41	Under Spill Response	Add- CISPRI maintains a response equipment depot in Homer and a sea otter rehabilitation facility in Seldovia. Add- Seldovia to the ADEC connex locations. Add_ Seldovia maintains a volunteer oil spill response organization with trained responders and equipment.	CISPRI maintains equipment in Homer. ADEC Connex in Seldovia and SOS Response Team has helped with responses in Homer Harbor. It is a local asset.	S	
43.	Vinnie Catalano	CIRC AC	B-42	Under Emergency Services	Remove Girdwood	Trooper post listed in Girdwood is closed or closing	S	
44.	Vinnie Catalano	CIRC AC	B-73		Add-Boat launching from this location occurs during the summer months. Launching from this location is not possible without assistance by tractor and is weather and surf dependent.	Seasonal boat launching by tall wheeled tractors at this location; use of standard over-the-road vehicle is unpredictable at best, due to surf and water depth.	S	
45.	Vinnie Catalano	CIRC AC	B-77	Spill response support	ADEC maintains a spill response connex in Seldovia. Seldovia maintains a volunteer oil spill response organization with trained responders and equipment.	More assets are nearby.	S	

46.	Vinn e Catal ano	CIRC AC	B- 84	Pop ulat ion	Remove “76” add- “266”	The count was from the Seldovia Village which is a Designated Census Area	S	
47.	Vinn e Catal ano	CIRC AC	B- 84	Tra nsp orta tion	Remove “Homer Air”	Out of business	S	
48.	Vinn e Catal ano	CIRC AC	B- 85	Ho usi ng	Remove current listing of housing option and add: Central Suites of Seldovia , Coal House Bungalow, Harbor’s Edge Vacation Rental, Laid Back Inn...Seldovia, Sea Parrot Inn, Seldovia Fishing Adventures B&B, The Seldovia Harbor Inn, Seldovia Rowing Club, Bridge Keepers Inn	These are currently housing options in Seldovia.	S	
49.	Vinn e Catal ano	CIRC AC	B- 108	11	Include “Vessels listed were operating in the Subarea at the time of this update; vessel availability will change as existing contracts expire and new contracts are initiated.”	Using a list of named vessels (Tug, Barge, and Workboat Inventory Tables) is very useful, however contracts change and vessels change with them. The existing statement about availability does not adequately reflect the issue.	S	
50.	Vinn e Catal ano	CIRC AC	B- 109	2	Include “Vessels listed were operating in the Subarea at the time of this update; as stated above, vessel availability will change as existing contracts expire and new contracts are initiated.”	The existing statement about Vessels does not adequately reflect the issue.	S	
51.	Vinn e Catal ano	CIRC AC	B- 117	Not e	Include “Nikiski”	McGahan Airport in Nikiski is a large uncontrolled airport in close proximity to the OSK dock and the Rig tenders dock (both good out load points) and is home to two charters services; fixed wing and rotor wing.	S	

52.	Vinnie Catalano	CIRC AC	B-120	6-7	Correct text to read "Appendix 15"	Section G, Appendix 16 of the unified plan lists equipment and materials suggested for deterrence kit.	A	
53.	Vinnie Catalano	CIRC AC	B-120	7-8	Correct text to read "Appendix 20"	Section G, Appendix 21 of the unified plan lists facility requirements for Oiled Wildlife Rehabilitation.	A	
54.	Vinnie Catalano	CIRC AC	B-133	6-7	Delete statement, Note "None"	Health is not listed in Unified Plan either under Tab M-Environmental or a heading titled "Health"	A	
55.	Vinnie Catalano	CIRC AC	B-137	27	Delete Gary Foley and Kion Evans. Replace with appropriate ADEC personnel.	Gary Foley and Kion Evans no longer work at ADEC.	S	
56.	Vinnie Catalano	CIRC AC	B-139		Note: It should be noted that the NOAA Ice Forecaster has access to live feed cameras positioned in and around Cook Inlet. Access to these cameras is available for use by the FOSC and SOSC.	CIRCAC maintains a dedicated closed circuit Camera system for use by the NOAA Ice Forecaster and emergency responders.	S	
57.			B-140		KBBI Frequency 890		A	
58.	Vinnie Catalano	CIRC AC	B-143	33-34	Include active link and "There are approximately 100 or more airports in the State of Alaska that are accessible by Coast Guard and other military C-130 aircraft. Airport information is updated regularly. The following website is provided for specific information regarding airports that may be used to support an oil or hazardous substance spill response. http://www.dot.state.ak.us/stwdav/AirportList.shtml#central "	In order to maintain continuity with the Unified Plan and to reduce the need to reference the Unified Plan for information pertinent to this section; the active link should be provided in this section	S	
59.	Vinnie Catalano	CIRC AC	B-143	39	Replace "...dispensing barge will..." with "...dispensing barge may..."	This statement seems to be repeated two sentences later in the text.	S	

60.	Vinnie Catalano	CIRC AC	B-128	M. Media	Include Kodiak media sources	While Kodiak is a separate Subarea, unlike Prince William Sound it is a downstream community that could be affected by a major incident within Cook Inlet.	S	
61.	Vinnie Catalano	CIRC AC	B-158	1	Include statement;” while some materials may require fax transmission, other electronic data transmission is becoming more common. Other options to consider are scan to fax or email capable devices.”	As fax machines are becoming less frequently used, various electronically transmitted data devices and various services are available for use by command center and field responders.	S	
62.	Vinnie Catalano	CIRC AC	B-158	D. Comm and Posts	Include the statement “Incident Commanders may consider the Anchorage convention center or one of the large hotels in Anchorage that have expandable banquet rooms that offer the space and utilities required for a command post.”	Offer all options for a large command post.	S	
63.	Vinnie Catalano	CIRC AC	B-159	E. Waste Storage and Disposal	Include Emerald Alaska as an available waste transport and disposal service	Offer all options waste storage and disposal.	S	
64.	Vinnie Catalano	CIRC AC	C-4	21	Suggest changing to, “An on-site survey (conducted in a minimum of Level B Personal Protective Equipment Elements, per OSHA and EPA)”	Suggest defining Level B protection (as done for Level D on p. C-12) to improve clarity	S	
65.	Vinnie Catalano	CIRC AC	C-8	14	Suggest adding reference to list of information agency personnel are instructed to collect (p. C-3)	Facility operator may be able to provide much of the information required by the agency receiving notification	A	

66.	Vinnie Catalano	CIRC AC	C-15	25	Consider updating to 2016 Anchorage All-Hazard Mitigation Plan if complete at time that SCP revision is completed	Reference to most current document (out for review as of August 2016)	A	
67.	Vinnie Catalano	CIRC AC	C-4	21	Suggest changing to, “An on-site survey (conducted in a minimum of Level B Personal Protective Equipment Elements, per OSHA and EPA)”	Suggest defining Level B protection (as done for Level D on p. C-12) to improve clarity	S	
68.	Vinnie Catalano	CIRC AC	D-2	Paragraph 2	Current-The Geographic Response Strategies (GRS) Section of the subarea contingency plans contains site-specific instructions for use by responders in protecting key sensitive areas. Add, “Although these areas have been pre-identified for protection, other sites in the area of a spill may require protection.”	At response drills/exercises GRS are frequently the only protection strategy deployed beyond free-oil recovery while other nearby sensitive sites are not protected.	S	
69.	Vinnie Catalano	CIRC AC	D-27		Humpback whales-add- “In recent years, significant numbers of Humpback whales have been feeding in Lower Cook Inlet and Kachemak Bay during the summer months.”	They used to be a rare site, but now they are observed daily during the summer.	S	
70.	Vinnie Catalano	CIRC AC	D-31	Map	Map Icons for Cape Douglas, Steep Is., Perl Is. Steep Pt. And Rugged Is. should denote if they are haulouts or rookeries	This would be important during pupping season.	S	

71.	Vinnie Catalano	CIRC AC	D-32		Add to Figure Description- The exclusion zone is habitat excluded from critical habitat designation.	“ESA section 4(b)(2) allows NMFS to consider excluding areas from critical habitat when the benefit of exclusion outweighs the benefit of inclusion, if there is no risk of extinction to the species” The use of “exclusion zone” needs clarification as a zone not included as critical habitat.	S	
72.	Vinnie Catalano	CIRC AC	D-41	Map	Chisik Island Colony	The map lists Tuxedni Island. It is Chisik Island.	S	
73.	Vinnie Catalano	CIRC AC	D-90		Change Akumwarrik Bay to Akumwarvik Bay Islands	Typo	A	
74.	Vinnie Catalano	CIRC AC	D-100		Mcneil to McNeil (2 times)	Typo	A	
75.	Vinnie Catalano	CIRC AC	E-27	14	Suggest replacing Geology section with text provided at end of table (for readability)	Provide an overview more inclusive of the whole Inlet and include mention of some past/potential geologic hazards	S	
76.	Vinnie Catalano	CIRC AC	E-37 through E-41	all	Consider reformat of left margin	Readability	A	
77.	Vinnie Catalano	CIRC AC	E-39	26	Change “MMPC” to “MMPD”	Correct acronym	A	

78.	Vinnie Catalano	CIRC AC	F-1		Change vessel WCD volume to 499,000 bbl & update scenario accordingly	Worst Case Discharge from a tanker has increased to 499,000 bbl from 380,000 with the addition of the T/V Zaliv Amerika to the Tesoro fleet that enters Cook Inlet. This is noted in the Tesoro CP. The SCP is supposed to be reflective of other contingency plans in the SCP.	C/S	
79.	Vinnie Catalano	CIRC AC	F-1	Sensitive Areas at Risk	SW winds at 40 knots would immediately drive the oil onshore and not out to the Barrens Islands as listed in the trajectory analysis.		S	
80.	Vinnie Catalano	CIRC AC	F-5	10	Include language identifying the RCAC role in this process	The Unified Plan indicates the RCAC's expected role is to provide local expertise and knowledge and their anticipated place will be within the ICS in the Operations, Planning, and JIC sections. This should be reiterated throughout the Subarea plan as appropriate to ensure the RCACs roles and responsibilities are acknowledged and utilized.		
81.	Vinnie Catalano	CIRC AC	F-6	7-12	Remove vessels that no longer work in Cook Inlet and replace with current vessels OR indicate CISPRI contract vessels with corresponding skimming systems assigned.	To provide the most accurate information about response assets to the FOSC.		
82.	Vinnie Catalano	CIRC AC	F-6		Include only vessels under current SERVS contract.	To provide the most accurate information about response assets to the FOSC.		

83.	Vinnie Catalano	CIRC AC	F-10	10	Change spill amount to be consistent within the scenario	Consistency with the estimate and with State of Alaska response planning standard criteria for exploration facilities	S	
84.	Vinnie Catalano	CIRC AC	F-10	10	Replace indeterminate length of time to 15 days.	To keep the scenario consistent with State of Alaska response planning standard criteria for an exploration facility		
85.	Vinnie Catalano	CIRC AC	F-13	Last Paragraph	Update discussion of dispersants to reflect the 2016 revision of the guidelines	Apply most up to date references; Zone 1 no longer exists as depicted	S	
86.			G-3	Paragraph 1	Change to: "These response strategies may be generalized and adapted to produce tactics that may protect other sensitive areas in the Cook Inlet Subarea."	Clarity	S	
87.			G-3	6	Change "Responders should refer to the STAR Manual for more detailed information about the GRS tactics. The STAR manual, published by ADEC, is available online at:" to "Responders should refer to / use the STAR Manual and the related training videos "Spill Tactics for Alaska Responders" for more detailed information on deploying GRS tactics. The STAR manual and videos, published by ADEC, are available online at: http://dec.alaska.gov/spar/ppr/star/docs.htm	Provide better information as an additional resource for responders.	S	

88.		G-15		Add Citation under “C” Alaska Department of Environmental Conservation, “Spill Tactics For Alaska Responders” Video 1- Safety, Video 2- Boom & Response Equipment, Video 3- Oil Spill Response Tactics & Strategies.	An additional resource for responders.	S	
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Suggested text related to Comment # 76 (replacement text for “Geology” section):

Bedrock: The rock of Southcentral Alaska was added to North America in the past few hundred million years. Much of the rock formed in other places and was carried by faults until it was loosely stuck to North America. More recently, erosion and sedimentation has created new layers of rock in low areas – notably Cook Inlet. These layers of rock continue to be deformed, and folds in them capture the oil and gas that is extracted in the Inlet.

Earth Surface: The mountains, valleys, plains, and waterways near Cook Inlet have largely been built by glaciers during a succession of ice ages. Repeated advance and retreat of glaciers have eroded bedrock and left extensive moraine and glacial river deposits. Since the last glaciation, rivers have cut into the glacially-created surfaces, coastlines have eroded, and sediment has accumulated in lakes and the ocean. These processes continue today.

Geologic Hazards: Cook Inlet is tectonically active, and prone to earthquakes, volcanic eruptions, and landslides.

The largest historic earthquake in the area was the magnitude 9.2 Good Friday Earthquake in 1964. It is unlikely another earthquake like this will happen in the next 100 years – smaller but potentially equally damaging earthquakes from shallow faults are more likely. The Castle Mountain Fault generated its last large earthquake about 650 years ago, and on average produces an earthquake every 700 years. This fault is the largest known fault breaking the surface of the earth near Cook Inlet, and could produce violent shaking throughout Cook Inlet. Smaller faults, including those that created traps for oil in Cook Inlet, could also produce very destructive earthquakes. Loss of glacier ice may be increasing the risk of earthquakes on unknown faults near those glaciers, as the changing weight adds stress to faults that aren't very active.

Volcanic eruptions are a frequent occurrence along the shores of Cook Inlet. Mt. St. Augustine, Mt. Redoubt, and Mt. Spurr have all produced eruptions in the past few decades, each with ash fall-out in populated areas. In 1989 and 2009 eruptions on Mt. Redoubt caused mud flows that impacted the Drift River Oil Facility. In the recent geologic past, these volcanoes have been prone to larger eruptions and mud slides than we have seen historically, and there is a chance similar very large eruptions could happen again. The Alaska Volcano Observatory monitors and studies the volcanoes on Cook Inlet, working to anticipate eruptions and provide advice about volcanic hazards.

Large landslides pose hazards in some areas of Cook Inlet. In the past few thousand years, the coastline of Cook Inlet has been impacted by at least three giant landslides, one resulting from failure of ancient rock layers near Chinitna Bay, one from collapse of high bluffs near Homer, and one from the collapse of a side of Redoubt Volcano during an eruption. More recently, earthquakes have triggered numerous smaller slides, at least one of which produced a damaging tsunami at the tip of the Homer Spit. Glacial retreat caused a large landslide at Grewingk Lake in 1967, which produced a tsunami nearly 200 feet tall in the lake, flattening forests for miles beyond. Landslides are a potential concern anywhere where there are very steep slopes, especially with loose sediment or weak rocks.”