

Cook Inlet Risk Assessment  
Quarterly Project Report to Cook Inlet Regional Citizens Advisory Council

July 7, 2014

The goal of the risk assessment is to answer the following questions:

- What can go wrong?
- How likely is it?
- What are the impacts?
- Can the impacts be mitigated?

The risk assessment will examine the current types and sizes of vessels plying Cook Inlet and dominant accident types, and attempt to identify future oil spill risks based on vessel size, type and frequency. The first phase of the risk assessment will be limited to a semi-qualitative analysis. The study will rely primarily on historical data, expert opinion, and lessons learned from prior studies. Study results will provide a basis for the identification and initial ranking of risk reduction measures.

An update by project task is provided below. Project tasks are based on the original workplan.<sup>1</sup>

***Task 1- Provide for Project Communications***

All project communication is directed through the project website at <http://www.cookinletriskassessment.com/index.html>. The website was activated in March 2011 and has been updated on an as needed basis since activation. (In December 2013 it was converted to Joomla for easier maintenance due to software changes with the previous program being used.) Private websites for the Management Team and Advisory Panel have also been updated on an as needed basis. The email contact list has been expanded to include individuals that have expressed an interest in being kept informed of the projects progress. Project newsletters were sent in February, March, April, July, August, and September, October, November, and December 2013; and February 2014.

Team members have made presentations on this project at the Alaska Forum on the Environment in Anchorage, AK and Clean Pacific in Long Beach, CA. This task is ongoing throughout the project.

***Task 2- Facilitate and Provide Administrative Support to the Management Team and Advisory Panel***

The first Advisory Panel meeting was held in Anchorage on October 20, 2011 with Management Team participation. The purpose of the meeting was to present

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<sup>1</sup> [http://www.cookinletriskassessment.com/documents/110426CIRADraftWorkPlan\\_rev2.pdf](http://www.cookinletriskassessment.com/documents/110426CIRADraftWorkPlan_rev2.pdf)

administrative procedures and operations, orient the members to the project work plan and provide an overview of the draft Vessel Traffic Study. Meeting summaries are posted on the Project websites.

A second meeting of the Advisory Panel was held in Anchorage on April 23, 2012. The purpose of this meeting was to review the draft report from Task 4.

The third Advisory Panel meeting was held on February 20, 2013 in Anchorage. At this meeting, Advisory Panel members reviewed and refined the list of proposed risk reduction options.

An Advisory Panel meetings is tentatively planned for early September 2014 when the research and analysis is completed for the risk reduction options that required further consideration. Two webinars will complement these in-person meetings as needed.

The Management Team continues to meet on an as-needed basis, most recently in early April when they reviewed the project status and identified next steps.

### ***Task 3- Conduct a Traffic Study***

Cape International Services<sup>2</sup> was sub-contracted to perform the vessel traffic study and began analysis of the AIS vessel traffic data during the 2<sup>nd</sup> quarter of 2011. A draft report was submitted to the Management Team and Advisory Panel at their first meeting in October. Following the October meeting, the report was released for public review and comment. The public comment period ended on November 30<sup>th</sup>. Comments and suggestions received were incorporated into the final report. This task was completed February 7, 2012. The final report can be downloaded at: <http://www.cookinletriskassessment.com/documents/120206CIVTSvFINAL.pdf>.

### ***Task 4- Prepare a Baseline Spill and Accident Causality Study***

The Glosten Associates<sup>3</sup> was sub-contracted to perform this task and began reviewing data associated with the studies during the 4<sup>th</sup> quarter of 2011. A draft report was presented to the Advisory Panel and Management Team on April 23, 2012. The Advisory Panel members and public provided comments on the report. The final report was issued June 30, 2012 and posted on the project website at: [http://www.cookinletriskassessment.com/documents/CIRC\\_Task4RiskAssessmentRptRev-29June2012.pdf](http://www.cookinletriskassessment.com/documents/CIRC_Task4RiskAssessmentRptRev-29June2012.pdf)

### ***Task 5- Coordinate and Facilitate a Consequence Analysis Workshop***

The Consequence Analysis Workshop was held in Anchorage on October 30-31, 2012. The meeting information is available online at:

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<sup>2</sup> <http://www.capeinternationalservices.com/>

<sup>3</sup> <http://www.glosten.com/>

<http://www.nukaresearch.com/projects/cira/meetings.html>. Forty experts participated in the workshop, representing a range of expertise and experience with Cook Inlet's wildlife, fisheries, subsistence resources, oceanography, spill response, shipping, salvage, ports, and other resources and features. This included 14 members of the Advisory Panel (including some alternates).

The Consequence Analysis Report was finalized with Management Team approval in February 2013 after extensive review by the subject matter experts, Advisory Panel, and public. It is posted on the project website at:

[http://www.cookinletriskassessment.com/documents/130222\\_CIRA\\_CAWS\\_v1\\_lr.pdf](http://www.cookinletriskassessment.com/documents/130222_CIRA_CAWS_v1_lr.pdf)

### ***Task 6- Identify Risk Reduction Options***

At a February 22 meeting in Anchorage, the Advisory Panel considered a list of 23 risk reduction options (RRO). Fifteen members of the Advisory Panel participated in the meeting, along with the Management Team and 16 members of the public or other organizations and agencies.

The facilitation team drafted descriptions of the risk reductions proposed for immediate or ongoing implementation. Additional research, sometimes informed by Advisory Panel members, was conducted to develop the descriptions. The risk reduction options are summarized in two separate but complementary documents:

- RROs for Immediate or Sustained Implementation (approved by Management Team after Advisory Panel review in early July 2013):  
<http://www.cookinletriskassessment.com/documents/130708RROsforImmediateorSustainedImplementation.pdf>
- Analysis of RROs Requiring Further Consideration (contained within updated project work plan approved by Management Team in August 2013):  
<http://www.cookinletriskassessment.com/documents/130814SummaryofWorkPlanforCIRAAug13-Sep14.pdf>

### ***Task 7- Evaluate Risk Reduction Options***

Additional research and analysis are underway for the risk reduction options that required further consideration:

- ***Towing Analysis.*** The Glostén Associates completed their analysis of the availability of tugs of opportunity and an assessment of the potential for a drifting vessel to self-arrest. At the direction of the Management Team, Nuka Research shared the extensive comments received on the studies from the Advisory Panel and a former Alaska Marine Pilot with The Glostén Associates and provide them an opportunity to revise the studies or otherwise respond to the comments. Glostén Associates have indicated that they will not revise the studies, but provided additional clarification by way of response to the

comments. Nuka Research will contact The Glostén Associates to discuss the Management Team's concerns with the results to date.

Nuka Research is developing an analysis of the areas of Cook Inlet and how long it would take for a large vessel to drift into shoreline or another hazard based on winds and currents. This will be shared with the Management Team on the July 9 call.

- ***Construct Cross-Inlet Pipeline from Drift River to Nikiski.*** The Glostén Associates estimated the reduced probability of an oil spill based on reducing the number of tanker transits across the Inlet based on input Nuka Research received from Capt. Jack Jensen of Tesoro (an Advisory Panel member).

Nuka Research has identified a method for developing a spill rate estimate from the proposed pipeline, but this requires additional information. After several follow-up efforts, Tesoro provided some of the information initially promised. Nuka Research has shared this information with Northern Economics under a confidentiality agreement, and is awaiting a re-assessment of any remaining outstanding data needs. Northern Economics is on track to have their analysis completed by the middle of August.

- ***Enhance Situational Awareness by Transmitting Weather Information via AIS.*** Nuka Research prepared a preliminary list of interview/survey questions and summary materials for this task. However, the Marine Exchange of Alaska indicates that most vessels' AIS software does not support receipt of the broadcasts. The Management Team directed that this task should be concluded with a summary of the issue and potential opportunity, but no evaluation is possible at this time. This will be included in an overall project summary.
- ***Improve Ice Monitoring Capability.*** Pearson Consulting met with representatives of the Canadian and U.S. Coast Guard at the Arctic Marine Oil Technical Seminar in June to discuss ice radar programs and systems currently being utilized and/or tested. The U.S. Coast Guard recently published a report on ice navigation with radar for vessels in the Great Lake region. The Canadian Coast Guard continues to test ice navigation radar technology for vessels. Neither organization has focused efforts on shore based ice radar stations, as is the case with the University of Alaska Fairbanks Barrow Sea Ice Observing station. A literature review and draft scope of work will be provided to the Management Team in early August.
- ***Encourage Third Party Inspections or Audits of Workboats.*** Nuka Research developed a summary of the responses received from five of seven companies queried about their use of voluntary safety management systems for workboats. This will be included in the final report.

In addition, the Management Team approved the Facilitation Team to take the first steps on RROs that were identified for immediate or sustained implementation:

- ***Launch Harbor Safety Committee for Cook Inlet.*** Pearson Consulting and Nuka Research developed a preliminary process for the establishing a Harbor Safety Committee, in coordination with Cook Inlet RCAC. A draft scoping document, including key questions related to the Committee's composition and relationship to other committees, was send to the Management Team for their review and input. The Management Team will convene to discuss the relationship of this potential Harbor Safety Committee to the Subarea Committee and next steps for the Committee. A meeting is planned for July 22 in Anchorage.
- ***Update Coast Pilot and AWOIS Databases.*** These items will be incorporated into a work plan for the planned Harbor Safety Committee, per the Management Team on July 9, 2014. Due to staff turnover at NOAA, they could not be organized in the spring before the busy summer season, and they represent tasks of an on-going nature that fit well with a sustained Harbor Safety Committee.
- ***Ice monitoring demonstration project.*** Depending on the results of the research into options to enhance ice monitoring, a demonstration project may be implemented to test new technology or current ice monitoring methods may be enhanced. This will become a task under the auspices of the planned Harbor Safety Committee.

The final Advisory Panel meeting has been scheduled for September 4, at which the participants will review the risk reduction options and develop their final recommendations.

***Task 8- Prioritize Risk Reduction Options and Prepare Phase I Final Report***

This task will be conducted after Task 7. The outline for the final report is in draft form, and it will be completed by the end of September.