

MANAGING THE RESOURCE CONSULTATION PROCESS: A CASE STUDY FROM THE JIREH GROUNDING RESPONSE

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ABSTRACT 300265:

The grounding of the 202-foot freight vessel JIREH, which occurred on June 21, 2012 on the Mona Island Natural Reserve in Puerto Rico, triggered a three month long response in what is arguably the most environmentally sensitive location in Puerto Rico and much of the Caribbean. Prior to, during, and after the response, the Federal On-Scene Coordinator worked closely with United States Government and Commonwealth of Puerto Rico agencies to ensure all natural and historic resource consultation mandates required under Federal law were initiated properly. This paper explores how the Endangered Species Act, Magnuson-Stevens Fishery Conservation and Management Act, and National Historic Preservation Act consultation requirements were applied before the JIREH response through development of the Puerto Rico and U.S. Virgin Islands Area Contingency Plan, during the response through multiple informal Emergency Consultations, and post-response through Formal Consultations. This examination will serve to highlight, through the lens of the JIREH response, the complexities of pre-planning for resource consultations, the challenges experienced by the Federal On-Scene Coordinator during an event, and provide recommendations to ensure resource consultation requirements are applied consistently and transparently in the future.

INTRODUCTION:

The freight vessel JIREH was a Honduran-flagged, steel hull freight vessel with a length of 202 feet. On June 21, 2012, the JIREH ran hard aground on the southwest coast of Mona Island, a Commonwealth natural reserve located 40 miles west of the main island of the Commonwealth of Puerto Rico. The six crewmembers and 78 passengers onboard were Haitian, and reported that they were transiting from Port-au-Prince, Haiti to St. Martin to transport their cargo (mangos, feed grain, nuts, cement blocks, beer, water, and energy drinks). The JIREH was in a significant state of disrepair. It was apparent by the material condition of the vessel that it had been some time since it received the appropriate maintenance to keep it seaworthy. Vessel schematics found on board from 1963 when the JIREH was built did not match its structure at the time of the grounding, indicating that it had been altered significantly throughout its service life. The JIREH's poor structural integrity, including its free communication with the ocean post-grounding, significant volume of oil onboard, and its location in arguably the most

environmentally sensitive location in Puerto Rico and the Caribbean represented a substantial pollution threat to the environment and navigable waters of the United States.

Mona Island is also archeologically sensitive based on known shipwrecks and historical artifacts in the area. Direct impacts to archeological sites did not occur during the grounding but potential impacts existed if the vessel was to discharge oil or release hazardous substances.

In the absence of a viable Responsible Party, the United States Coast Guard (USCG) Sector San Juan Federal On-Scene Coordinator (FOSC) opened the Oil Pollution Act of 1990 Oil Spill Liability Trust Fund and the Comprehensive Environmental Response, Compensation, and Liability Act Superfund to initiate clean-up and eventually conduct vessel removal operations. Following the Incident Command System, an Incident Management Team (IMT), led by a Unified Command (UC), was established in San Juan, Puerto Rico to manage the response. The Unified Command included representatives from the USCG, Puerto Rico Department of Natural and Environmental Resources (DNER), and the Puerto Rico Environmental Quality Board (EQB). An Environmental Unit was established under the IMT's Planning Section, with representatives from National Oceanic and Atmospheric Administration (NOAA), United States Fish and Wildlife Service (USFWS), and DNER. The Environmental Unit was led by the NOAA Scientific Support Coordinator (SSC).

During the course of the response, the Unified Command ensured that all gross oil, oiled cargo, and hazardous materials were removed from the JIREH. Following approval from the Commandant of the United States Coast Guard, the Unified Command also managed the vessel's removal from its grounding location and disposed of it in Puerto Rico to eliminate the immediate and long-term chronic threat to the marine environment posed by residual oil and other hazardous materials.

Grounding Site

The JIREH grounded on a limestone shelf just north of Carabinero Beach on the coast of Mona Island. There were over 18 threatened or endangered species in the vicinity of the grounding site. The sand beaches both north and south of the vessel were designated critical habitat for nesting Green, Hawksbill, and Leatherback sea turtles. The closest beach was 500 yards west of the grounded vessel. Multiple listed coral species were also colonized in the vicinity of the JIREH. The vessel, while hard aground, lay perilously close to shore. In addition to the federally listed species, there were numerous plant and animal species inhabiting the island and surrounding waters that are protected under Commonwealth of Puerto Rico laws.

JIREH RESPONSE PROCESS:

First Response Phase

The first phase of the response, from June 21 to August 1, 2012, included removal of gross quantities of oil and hazardous materials from the JIREH. Because response efforts themselves posed a threat to endangered species, informal consultation was initiated by the UC through the Environmental Unit following the Endangered Species Act (ESA) emergency consultation procedures pursuant to Title 50, Code of Federal Regulations, Section 402.05 (50 CFR 402.05). During this phase of the response, NOAA support was provided to assist with

boom anchoring placement surrounding the JIREH in order to mitigate any impacts to coral. The decision was also made to relocate coral colonies in the vicinity of the grounded vessel to minimize impacts during response operations. During this time the final disposition of the vessel was heavily considered and all options were weighed in order to determine the best course of action. Factors that were taken into consideration included: characterization of the threat, character of the potential discharge, resources at risk, and alternatives to complete removal and disposal of the JIREH.

Characterization of Threat to the Environment

Under 33 CFR 1.01-80 (d)(3), if a discharge or a substantial threat of a discharge of oil or a hazardous substance is of such a size or character as to be a substantial threat to the public health or welfare of the United States (including, but not limited to fish, shellfish, wildlife, other natural resources, and the public and private beaches and shorelines of the United States), then the FOSC is to direct all Federal, State, and private actions to remove the discharge or to mitigate or prevent the threatened discharge. In accordance with these regulations, the FOSC determined through emergency consultation with natural resource trustee agency officials that the JIREH posed a substantial threat to the welfare of the United States based on: (1) the quantity of residual oil that would remain onboard once gross oil recovery was completed, (2) the character of the potential discharge, and (3) the natural resources at risk in the immediate area of the vessel.

Quantity of Oil Onboard

Resolve Marine Group, one of the Oil Spill Removal Organizations contracted for the response, provided a conservative estimate that approximately 270 gallons of residual diesel and lube oil would remain onboard once they had completed gross oil removal. Although it was a relatively small amount of oil, it was not discounted as a substantial threat to the environment due to the significant amount of resources at risk.

Character of the Potential Discharge

The majority of oil that would have remained onboard was diesel fuel oil. Through a review of the impacts of diesel fuel oil on ecological systems and organisms, it was determined that a substantial threat to the environment would continue to exist if the residual oil remained onboard the JIREH. This was supported by several findings, including:

In general, the most toxic components of fuel oils are the polycyclic aromatic hydrocarbons (PAHs). Lighter fuel oils such as diesel possess moderate to high concentrations of these PAHs, making them acutely toxic to biological organisms. Diesel fuel oil is also particularly hazardous because it is highly soluble in water and therefore quickly disperses into the water column. Several studies have been conducted that support this finding. For example, it was reported that herring eggs exposed to both weathered and non-weathered oils may suffer any number of conditions, including malformations, genetic damage and mortality at concentrations as low as 9.1 micrograms per liter of oil (Carls et al, 2002). The lethal concentrations of fuel oils was noted as being far greater in confined areas similar to the nearshore environment where the JIREH was located.

In a separate study conducted by the National Research Council (NRC), it was found that “even small amounts of petroleum can seriously damage marine life and ecosystems. The

impact of an oil spill is not directly related to the size of the spill, since even a small spill in an ecologically sensitive area can have long-term impacts...A spill's influence also depends on the type and amount of toxics present in the petroleum product being released. The riskiest toxics are a class of organic compounds known as PAHs, which can harm marine species even at very low concentrations." (Lazaroff, 2002)

A field study was also conducted to determine specifically what degree of petroleum exposure would be harmful to coral reefs. Scientists exposed colonies of coral to an average of 0.15 parts per million (ppm) of #2 fuel oil over a three month period to simulate a chronic discharge into the marine environment. At 0.15 ppm, there was a notable inhibition of coral growth and regeneration, killing a portion of the coral colony. After the study, hydrocarbon pollution was still evident in contaminated corals after one to two weeks in clean, flowing seawater. (Loya, 1980)

Natural Resources at Risk

The FOSC consulted with the Puerto Rico DNER, the Department of the Interior, and NOAA. Their responses and concern made it abundantly clear that the JIREH was aground in a very environmental sensitive area and posed a substantial threat to the critical habitat and many endangered and threatened species living there. Their feedback was supported by a recent study of the Hawksbill turtle, one of the critically endangered resources at risk on Mona Island, which provided evidence that oil pollution has a greater impact on this species of turtle than on any other sea turtle species (Meylan and Redlow, 2006).

Alternatives to Address Threat

Two options were considered to mitigate this substantial threat to the Mona Island Natural Reserve: (1) steam clean the JIREH in-situ, or (2) refloat the vessel for removal and destruction. Steam cleaning the vessel in-situ would have required opening, flushing, steam cleaning, and vacuuming out all contaminated spaces, including all tanks, oil contaminated equipment, piping systems, and contaminated engine room and cargo hold spaces. This process would have been very expensive and time consuming due to the remote location of the vessel, nature of seas in the immediate area, logistics to Mona Island, and the material and equipment that would have to be mobilized to Puerto Rico to conduct such a thorough cleaning. Moreover, the footprint required to conduct this operation would have been much larger and consequently more stressful to the environment than the alternative. Vessel removal and destruction could be performed a lot quicker with a much smaller footprint, and at a comparable or less monetary cost. Vessel removal would also have eliminated the potential for the JIREH to become a dumping site or hazard to divers and visitors to Mona Island.

Taking all of these factors into consideration, the FOSC made the decision to submit a formal request for removal and destruction of the JIREH to the Commandant of the Coast Guard in accordance with the USCG Instruction, *Vessel Removal/Destruction under Federal Water Pollution Control Act or Comprehensive Environmental Response Compensation & Liability Act* (Commandant Instruction 16465.5). The Commandant subsequently approved the request, allowing the UC to move forward with removal of the vessel.

Second Response Phase

The second phase of response operations, from August 2 to October 6, 2012, included vessel removal operations. The initial plan to complete vessel removal and disposal was to temporarily refloat the vessel, tow it to approximately 12 nm south of Mona Island, and scuttle it in deep water. The Environmental Unit provided Best Management Practices (BMPs), which were followed by the Operations Section to ensure that vessel removal operations were conducted with minimal environmental impact.

However, during the passing of Tropical Storm Ernesto from August 22-25, 2012, the JIREH's condition deteriorated to the point where the vessel could not be refloated without removing part of the superstructure to lighten the vessel and reduce the ground force reaction while installing float bags to increase the vessel's buoyancy. The Unified Command reviewed and approved the updated Vessel Removal Plan that reflected these changes in tactics. An attempt to refloat the vessel was made on September 6, 2012, but it failed because the vessel's structural integrity could not bear the load necessary to allow the needed ground force reduction to occur and proved to be entrenched in her grounding location. When she was pulled upon simultaneously by the on-scene tug vessel and a 100 ton lift crane, the tow lines sheared through three of JIREH's structural frames. At this point, the decision was made by the Unified Command to move forward with vessel removal by cutting up the JIREH in-situ and disposing of the pieces via a scrap facility in Puerto Rico. The Environmental Unit was engaged to provide consultation on the revised Vessel Removal Plan and update BMPs to reflect the change in tactics. On October 6, 2012, the final sections of the JIREH were removed from Mona Island. NOAA conducted a final dive survey to inspect the condition of the sea floor and coral colonies in the vicinity of the grounding site.

Summary of Takes

During the course of the response, NOAA relocated over 980 corals from the vicinity of the response area in an effort to prevent damage from occurring to them due to operations or the shifting of the JIREH. The relocation of these corals were considered beneficial takes since the purpose of the relocation process was to protect them from sustaining damage. There were also potentially three adverse takes to ESA listed species during the response. Adverse takes occur when a listed species or habitat has been adversely affected or damage. Of the coral colonies identified for relocation, two were endangered *Acropora palmata* corals. One of these colonies was located alongside the starboard hull of the JIREH. It was successfully relocated and considered a beneficial take. On July 14, 2012, a second *Acropora palmata* colony take was reported. The colony was located by the port bow of the JIREH. NOAA divers were not able to relocate this colony and it sustained physical damage by oil boom that became wedged under the bow during heavy weather. On September 15, 2012, *Acropora palmata* colonies were observed during a site survey for anchor deployment off the stern of JIREH. One colony had debris (lines) wrapped around a few branches and suffered some damage. Debris was removed from this colony and no other action was taken. A formal consultation was initiated with NOAA after the response concluded to address these takes. To date, the FOSC is still awaiting a determination regarding the adverse takes to corals.

On July 16, 2012, a short-term disorientation effect of nesting Hawksbill sea turtles was reported by a local sea turtle researcher on Punta Arenas, Mona Island due to lighting used at the

nearby designated anchorage for vessels involved in the operations. The report stated that a higher than normal number of sea turtles were observed departing the beach without nesting. This issue was rapidly addressed and documented. A formal consultation was also initiated with the USFWS after the response concluded to address this potential take. The USFWS responded back to the FOSC in concurrence that response actions taken were not likely to adversely affect Hawksbill sea turtles given the brief period in which the disorientation event took place, how quickly it was addressed by the UC, and because no additional disorientation events were reported.

DESCRIPTION OF CONSULTATION REQUIREMENTS:

The response to the JIREH presented significant challenges for the FOSC and the Unified Command to ensure protection of natural and historic resources from response activities. Several United States regulations require that the FOSC coordinates and consults with resource trustee Federal agencies during a response so that response-related or induced effects to resources are minimized to the extent feasible during response operations. These requirements are stipulated under four regulatory mandates, including the Endangered Species Act (ESA), Magnuson-Stevens Fishery Conservation and Management Act (MSA), National Historical Preservation Act (NHPA), and Consultation and Coordination with Tribal Indian Governments-Executive Order (EO) 13175. These mandates clearly specify that consultation with the resource trustee agencies are required of the “action agency,” therefore making them the responsibility of the USCG FOSC in the case of the JIREH grounding, who is required to address response actions and the potential effects of the response actions, not the spill or effects of the spill.

Endangered Species Act (ESA) Section 7

ESA Section 7 addresses the protection of federally listed species. Consultation during a pollution response event is required by and accomplished with the United States Fish and Wildlife Service and the NOAA National Marine Fisheries Service (NMFS) Protected Species Division. Often, specific protected or critical habitat issues are also addressed under ESA since it is recognized that protection of habitat is often a critical component of protecting the species.

Magnuson-Stevens Fishery Conservation and Management Act

The MSA requires that the FOSC consult with NOAA’s NMFS Habitat Division to address protection of marine habitat deemed necessary for protection of fisheries resources and habitat, referred to as Essential Fish Habitat (EFH). Often the ESA and EFH consultation processes occur concurrently since the response actions and potential effects to species and habitat are so interrelated.

National Historic Preservation Act (NHPA)

NHPA Section 106 is a mandated consultation with the appropriate State Historic Preservation Office (SHPO) to address any cultural resource protection issues of historical or archeological significance.

Consultation and Coordination with Indian Tribal Governments – Executive Order 13175

Due to the sovereignty of Indian nations to govern themselves, the FOSC is required to consult with the Tribal Historic Preservation Office (THPO) to address response actions on lands

owned or managed by the Tribes that may affect their historic resources. THPO responsibilities are addressed within the NHPA Section 106 regulations. This was not an issue for the FOSC during the JIREH response because there were no tribal interests to consider.

General Consultation Methods

There are several supplemental documents that provide some clarity and guidance to assist FOSCs and natural resource trustee agencies during a response that involves ESA and EFH consultation requirements. Foremost is the *Interagency Memorandum of Agreement (MOA) Regarding Oil Spill Planning and Response Activities Under the Federal Water Pollution Control Act's National Oil and Hazardous Substances Pollution Contingency Plan and the Endangered Species Act – A Guidebook* (2002). Protocol highlights of the MOA are also contained in the fact sheet, *Towards a Common Goal-Coordinating Oil Spill Response Actions under the Clean Water Act (FWPCA) and the Endangered Species Act (ESA)*. These guidance documents provide consultation guidance for the three separate consultation categories: pre-spill planning, emergency response, and post-response.

Pre-spill planning consultation is accomplished using mainly informal consultation through the Area Contingency Plan (ACP) and Regional Contingency Plan (RCP) development process, facilitated by the Area Committee (AC) and Regional Response Team (RRT). In general, informal consultations entail submission of a biological assessment (BA) to the natural resource trustee agencies for their concurrence. Formal consultations are required during the pre-spill planning process if there is an anticipated effect or high potential to affect listed species during the proposed action. Formal consultations are initiated by the FOSC and/or planning body (i.e., AC or RRT) via development and submission of a BA to the natural resource trustee agencies. Submission of the BA and formal letter requesting consultation initiates the formal consultation process. In return the resource agencies must provide the initiator with a Biological Opinion (BO) that contains their opinion of whether or not the proposed response measure(s) may jeopardize listed species or habitat along with best management practices to minimize or prevent damage from occurring.

During an emergency response, the ACP and/or the RCP form the basis for immediate guidance on response actions for the FOSC. If it is suspected that spill response activities may result in an adverse effect to listed species or habitat, the FOSC is required to request an emergency consultation with the appropriate resource trustee agencies. The Caribbean Regional Response Team (CRRT) uses a standard form, which, when completed and submitted by the FOSC, is considered notification to the natural resource management agencies and initiation of emergency consultation. These representatives are then required to provide timely recommendations to eliminate or minimize adverse effects to listed species and habitat. The emergency consultation will continue until removal operations are complete in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR 300.

If a listed species or habitat has been adversely impacted by spill response activities, referred to as an adverse take, the FOSC will initiate formal consultation after the case is closed through submission of the BA and accompanying initiation package. Pertinent information from the BO developed by USFWS and/or NMFS in response to the BA can be included in a lessons learned system at the discretion of the FOSC. The lessons learned will be used to make

improvements to the Area Contingency Plan and spill response procedures.

During and after the JIREH response, the Environmental Unit's NOAA and USFWS representatives provided the FOSC with natural resource trustee-related advice to determine if response activities directly led to adverse takes or potentially adverse takes, and if so, which events would require formal consultation. These representatives also served as liaisons between the FOSC and their home offices, who would be the recipients of the formal consultation packages and have the final decision authority regarding if takes did occur and what could be done in the future to avoid similar takes from happening. By serving as liaisons, these representatives were able to assist with getting the necessary information to the FOSC to initiate the formal consultation process.

RECOMMENDATIONS TO IMPROVE CONSULTATION PROCESSES:

Below are recommendations to address the challenges faced by the FOSC to meet consultation requirements through pre-spill planning, during an emergency response, and post-response.

Pre-Spill Planning Recommendations

After the JIREH response concluded, the Area Committee and CRRT held lengthy discussions regarding the best way to move forward with updating the outdated ACP and RCP consultations on anticipated oil spill response tactics and countermeasures as outlined in these plans. These discussions again highlighted the fact that more specific and actionable guidance than what is included in the *Inter-agency Memorandum of Agreement Regarding Oil Spill Planning and Response Activities Under the Federal Water Pollution Control Act's National Oil and Hazardous Substance Pollution Contingency Plan and the Endangered Species Act* (MOA) would be useful to guide planners and responders.

In most ACPs and RCPs where mechanical techniques are proposed to conduct an oil spill response, an informal consultation may be initiated between ACs or RRTs and natural resource trustee agencies that will be based on a "no-effect opinion." Planners must be able describe their planned actions in context of what resources are present through a Biological Evaluation (BE) and identify any potential concerns from a protected species, habitat, cultural, and tribal interest perspective.

However, application of this form of consultation is not cut and dry. Some response activities are not candidates for informal consultations because there is an anticipated effect or high potential to affect listed species during the action, for instance alternative countermeasures such as the use of dispersants and in-situ burning. These response techniques require initiation of the more rigorous formal consultation process, which includes a detailed BA with referenced studies and information to support the proposed actions and allow resource trustee agencies to develop their BO. Often, the level of expertise and time available to ACs and RRTs to develop a valid BA or other consultative effect opinion does not exist unless a paid expert consultant is used. Meeting all planning requirements with paid contractor support, however, can be cost prohibitive as most ACs and RRTs do not receive funding for this process.

Another important issue with the pre-spill planning process is that resource management agencies do not have the staff to review every ACP, review pre-spill formal consultations and develop BO's to gain pre-authorization for spill response alternative countermeasures, participate in every day-to-day response under emergency consultation procedures, and provide post-response formal consultation support and develop BOs. Understanding the demands on these representatives and the challenge faced by planning bodies across the country to identify the most realistic way forward to meet pre-spill planning consultation requirements, it is recommended that resource trustee agencies, RRTs and the NRT work together to develop one streamlined process. This will provide FOSCs and the resource management agencies with a consistent, achievable approach that will fulfill their responsibilities while offering protection to the resources as intended by the regulatory mandates requiring consultation. In some of the more complex regions, funding RRT and AC pre-spill planning consultation efforts should be considered to provide contractor support to develop more complex BAs that require more time and expertise.

Another option would be to develop regionally-based programmatic agreements for response plans. This form of informal consultation could include information formatted in matrices or tables to describe biological resources, habitat resources, cultural resources, and/or tribal resources. Referenced to each resource of interest would be response actions, effects, and best management practices to apply during an incident. A lot of this species information can be found in the Environmental Sensitivity Index (ESI) compiled by NOAA for each region around the United States. Linking into the ESI's to include response actions, effects, and best management practices may be the best way forward to combine all of the information in one location. Most of the ACPs (which typically reference ESI data in their Geographic Response Plans) and associated routine response actions could most likely be addressed with informal consultations governed by conditions and best management practices using this approach.

For alternative countermeasure response activities requiring formal consultation that meet the criteria of pre-authorized actions governed under the National Contingency Plan Subpart J, including use of dispersants, in-situ burning, and other chemical or regulated spill response countermeasures, national guidance could be developed by the NRT for standardized and consistent application of these techniques across the nation. One formal consultation process could take place to review the guidance at the national level, instead of a multitude of formal consultations taking place at the RRT and/or AC level. Afterwards, the guidance could be adopted at the RRT and Area Committee levels. If necessary, additional contractor support could be funded at the headquarters level for each involved Agency and Department to develop the necessary BA and BO to support the consultation process. This would further alleviate RRTs and ACs of the burden of coming up with the funding necessary to carry out the formal consultation process.

Finally, joint AC and RRT exercises are recommended to review prescribed emergency response and post-response consultation requirements and identify ways to improve the processes at the local and regional level. These exercises would also be very beneficial to help build better working relationships between the various agencies and planning bodies, validate response strategies outlined in the ACP and/or RCP, as well as provide more transparency into the resource protection and management process for stakeholders and port partners.

Post-Response Recommendations

Throughout the JIREH response, several challenges were identified surrounding the consultation process. The UC engaged the natural resource trustee agencies, NOAA and USFWS, early and often during the response to first determine that a formal consultation was necessary and later, how the consultation should be executed. Even though all representatives closely followed the MOA, each agency deciphered it differently or did not understand specifically how to execute their responsibilities under the MOA (this occurred internally within agencies and externally among each agency). Many discussions also took place regarding what constituted a take (i.e., potential vs. definite adverse takes and if beneficial takes counted) in order to trigger the requirement for a Formal Consultation. This dialogue and conflicting opinions on the best course of action had the potential to delay the consultation process, although all parties eventually agreed that initiation of a Formal Consultation was the best way forward to meet the spirit of the MOA. It is important to note that, as stipulated in the MOA, the FOSC has the authority to use the Oil Spill Liability Trust Fund as a funding mechanism after the response and throughout the required consultation process to cover costs associated with development of the required consultation products, including hiring contractor support for development of the BA if necessary.

The best way to ensure that FOSCs don't experience the challenges that were handled during the JIREH response would be development of an operationally-focused consultation manual that would guide them through each consultation requirement during an emergency response and post-response perspective in a step-by-step manner. The manual could provide standardized forms, itemized documentation requirements, consultation process guidance, and instructions for when and how to execute each type of consultation, including specifics for development of BAs, in a very user friendly format to ensure the necessary information is provided to natural resource trustee agencies. This would allow for FOSCs to confidently initiate and lead the formal consultation without having extensive experience in the process and eliminate the confusion that arises when multiple agencies come together with different opinions on how the process should be run. The manual could also address other FOSC responsibilities that may generally be applied inconsistently throughout the United States, such as coordinating and permitting requirements for United States Army Corps of Engineers, Marine Mammal Protection Act, Marine Sanctuaries Act, ocean dumping, contact water disposal, etc.

CONCLUSION:

Despite the myriad challenges faced during the JIREH response, it was considered a success, primarily because the two overarching goals of the Unified Command were reached: protect and minimize damage to the environment and ensure the health and safety of all responders and the public. That being said, there were also important lessons learned from the incident, with the need to improve the formal consultation process at the forefront. The fact that the formal consultation process is applied inconsistently towards planning and post-response issues throughout the country and has become a "hot topic" is indicative that natural resource trustee and response agencies need to work together to develop a more efficient and effective consultation process.

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Fact Sheet Towards a Common Goal-Coordinating Oil Spill Response Actions under the Clean Water Act (FWPCA) and the Endangered Species Act (ESA):
<http://www.epa.gov/oem/docs/oil/fss/fss02/cocanourpaper.pdf>.