National Pollution Funds Center Determination

Claim Number and Name:	N10036-OC30, *Deepwater Horizon* 2015 Second Assessment Plan
Claimant:	National Oceanic and Atmospheric Administration
Claim Type:	NRDA, Upfront Assessment Costs
Amount Requested:	$74,443,850
Offer Amount:	$72,541,800
Determination Date:	July 23, 2015
NPFC Claim Manager:	[redacted]

Summary of the Incident and Claim

On April 20, 2010, the *Deepwater Horizon* mobile offshore drilling unit exploded and sank, discharging an estimated 3.19[1] million barrels of oil into the Gulf of Mexico (GOM) until the well was capped on July 15, 2010. Responders to the discharge applied approximately 1.84 million gallons of dispersants[2] to keep, or delay, the oil from reaching sensitive shorelines. The U.S. Coast Guard designated the source of the spill as an offshore facility located on an area leased by BP Exploration & Production, Inc. (BP). BP accepted the designation and advertised its claims process pursuant to the Oil Pollution Act (OPA).

Upon notification of the spill, the Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), along with the Department of the Interior, Fish and Wildlife Service (FWS), Environmental Protection Agency (EPA), Department of Agriculture (USDA)[3], and five Gulf Coast states[4], acting as natural resource trustees designated under OPA and appropriate state laws, initiated an assessment of natural resource damages resulting from the discharges and response to discharges of oil. By September 2010, the trustees observed over 950 miles of oiled shoreline habitat, 400 oiled sea turtles, and 1,500 oiled birds[5]. Numerous other natural resources at risk, including fish, marine mammals, oysters, and aquatic habitats, were identified. The trustees continue to work together to develop and implement plans to assess the nature and extent of these losses and appropriate restoration alternatives.

On April 23, 2015, NOAA presented the NPFC with a claim for costs to implement their assessment and restoration planning activities in 2015. The claim totaled $84,462,300, presented as the costs with respect to NOAA's Sixth Interim, Partial Claim for Assessment and Restoration Planning (NOAA's Second 2015 Assessment Plan or Plan). The Plan describes 22 assessment activities, many of which are a continuation of assessment, injury

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1 In re Deepwater Horizon, MDL 2179 (E.D. La., January 15, 2015)

2 1.07 million gallons on the surface and 771,000 gallons sub-sea. "The Ongoing Administration-Wide Response to the Deepwater BP Oil Spill." *Deepwater Horizon Incident Joint Information Center,* September 9, 2010.

3 On September 10, 2012, through Executive Order 13626, the President designated the EPA and USDA as additional natural resource trustees specifically for the *Deepwater Horizon* oil spill. Federal Register, Vol. 77, No. 178, Pgs. 56749-56752, September 13, 2012.

4 The state trustees are Louisiana, Mississippi, Alabama, Florida, and Texas.

5 *Federal Register,* Vol. 75, No. 190, Pgs. 60800-60802, October 1, 2010

quantification, and restoration planning efforts initiated in 2011, 2012, 2013, 2014, or 2015 with funds provided by BP or the NPFC. NOAA subsequently reduced the claim sum certain for the 22 assessment activities to $74,443,850, withdrawing one activity[6] and reducing the amount claimed for another[7,8].

This determination presents the NPFC's findings with respect to claimed costs for the 21 assessment activities presented in the claim.

Jurisdictional Information

The NPFC first considered whether the claimed damages arose from an incident as defined by OPA. 33 U.S.C. §2701 *et seq*. To be covered, the incident must involve a discharge, or a substantial threat of discharge, of oil from a vessel or facility into navigable waters of the United States after August 18, 1990. Based on the information summarized above, the NPFC determined that the activities included and approved in this determination are for natural resource damages resulting from an OPA incident.

Claimant Eligibility

Federal natural resource trustees are designated by the President pursuant to OPA (33 U.S.C. §2706 (b)(2)), with responsibility to assess damages to natural resources under their trusteeship and develop and implement plans to restore, rehabilitate, replace, or acquire the equivalent of those injured natural resources. 33 U.S.C. §§2706(c)(1)(A) and (C).

NOAA submitted this claim for natural resource damage assessment (NRDA) costs. NOAA, under the authority of the Secretary of Commerce, is an appropriate federal natural resource trustee pursuant to the President's designation of federal trustees under OPA, Executive Order 12777 (56 Fed. Reg. 54757, October 22, 1991), and Subpart G of the National Oil and Hazardous Substances Pollution Contingency Plan (40 C.F.R. §300.600).

General Claim Presentment Requirements

Claims to the Fund must be presented in writing to the Director, NPFC, within three years after the date on which the injury and its connection with the incident in question were reasonably discoverable with the exercise of due care, or within three years from the date of completion of the NRDA under OPA (33 U.S.C. §2706(e)), whichever is later. 33 U.S.C. §2712(h)(2), 33 C.F.R. §136.101(a)(1)(ii). This claim is for costs to implement a damage assessment plan to determine the nature and extent of damages to natural resources resulting from the incident and appropriate actions to restore those damages. The assessment was not complete when the claim was received on April 23, 2015; therefore, the claim was received within the period of limitations for claims.

[6] *Activity 12: Continued Assessment and Analysis of Nearshore Oyster Injury*
[7] Activity 4: Fish and Plankton
[8] June 23, 2015, and July 7, 2015, emails from NOAA to NPFC

In accordance with OPA, the OSLTF is available to pay claims for uncompensated removal costs and damages. 33 U.S.C. §2712(a)(4). Covered damages include natural resource damages. 33 U.S.C. §2702(b)(2)(A), which are for injury to, destruction of, loss of, or loss of use of natural resources, including the reasonable costs to assess those damages. 33 U.S.C. §2702(b)(2)(B). Costs are determined with respect to plans adopted under 33 U.S.C. §2706(d)(2) that are developed and implemented after adequate public notice, opportunity for a hearing, and consideration of all public comments. 33 U.S.C. §2706(c)(5). NOAA states that the Plan that forms the basis of this claim was published on the NOAA Gulf Spill Restoration website on March 19, 2015, thereby meeting this requirement[9]. NOAA states that it has not received any comments from the public on the Plan[10].

Claim Presentment to the Responsible Party

With certain exceptions, claims to the NPFC for damages must be presented first to the responsible party (RP). 33 U.S.C. §2713(a). If a claim is presented in accordance with §2713(a) and is not settled by payment by any person within 90 days after the date upon which the claim was presented, the claimant may elect to commence an action in court or present the claim to the OSLTF. 33 U.S.C. §2713(c)(2).

NOAA presented its Plan and claim for implementation costs to BP on January 15, 2015[11]. The Plan identified NOAA's estimated future costs to implement 22 assessment activities for addressing injured natural resources and services caused by the oil spill. For each of the 22 activities, NOAA's Plan describes the assessment or restoration planning activities, need for the activity and how it connects to the NRDA process, deliverables to be produced, level of effort, principal investigators, timeframe[12], and cost estimates for contractors and NOAA personnel. The cost to implement the 22 assessment activities, as presented to BP, was $84,462,300. NOAA verified that all costs included in their Plan are separate and distinct from all previous funding requests and claims to both BP and the NPFC[13].

BP and NOAA met on March 11, 2015, to discuss this claim[14]. BP subsequently responded to NOAA in writing on March 31, 2015, agreeing to fund certain activities[15]. On April 23, 2015, more than 90 days after presenting its claim to BP, NOAA presented this claim to the NPFC. The NPFC notified BP on April 23, 2015, that this claim had been received[16]. BP responded to the NPFC, by letter on May 15, 2015, stating that BP would fund certain assessment activities if NOAA agreed to certain conditions spelled out in a signed cooperative agreement[17]. NOAA responded to BP and the NPFC stating, "NOAA would ask

[9] April 23, 2015 letter from NOAA to NPFC
[10] July 21, 2015 email from NOAA to NPFC
[11] January 15, 2015 letter from NOAA to BP transmitting their Sixth Interim, Partial Claim for Assessment Costs.
[12] NOAA states in their plan that they will use deliverables from previous assessment activities to complete work in this claim.
[13] April 23, 2015 letter from NOAA to NPFC and NOAA's second 2015 Assessment Plan, page 8.
[14] May 15, 2015 letter from BP to the NPFC and April 23, 2015 letter from NOAA to NPFC
[15] March 31, 2015 letter from BP to NOAA provided to the NPFC in BP's May 15, 2015 correspondence.
[16] April 23, 2015 RP notification letter from NPFC to BP
[17] BP included NOAA as a cc on this email.

that the NPFC continue to adjudicate its claim since the presentment window has passed and it is uncertain if NOAA will be able to accept the BP conditions for funding NOAA's assessment activities[18]."

Based on the above facts, the NPFC finds that NOAA's claim to the NPFC for 2015 assessment costs was presented to the RP in accordance with OPA.

Claimant's Burden of Proof and Adherence to NRDA Regulations

Under OPA, trustees bear the burden of proving their entitlement to the amount claimed for compensation of natural resource damages. 33 C.F.R. §136.105(a). To satisfy this requirement the claimant must submit their plan, which forms the basis of their claim, along with other supporting information so the NPFC can determine that work and associated costs are reasonable and appropriate. After reviewing the claim, Plan, and supporting information, The NPFC has determined that NOAA has proven entitlement to $72,541,800 of the $74,443,850 claimed. 33 U.S.C. §2706(e)(2)

NPFC Review of Claim Activities and Associated Costs

NOAA's Plan and claim, as revised, identify 21 assessment activities for which the cost to conduct injury assessment activities in 2015 are claimed. The total cost claimed to implement these activities is $74,443,850.

In general, for each activity, NOAA seeks funding to: (1) collect and/ or interpret data; (2) review technical reports generated by 2014 assessment activities[19] and continue to write the draft damage assessment and restoration plan (DARP) that will be released to the public for review; (3) maintain and update NOAA's data management systems for natural resource injuries and restoration projects; and (4) carry out administrative tasks, including contract management and maintaining the Administrative Record for those assessment activities that NOAA is responsible for.

The NPFC reviewed NOAA's Second 2015 Assessment Plan and, on May 19, 2015 and June 12, 2015, requested additional information from NOAA. Specifically, the NPFC requested that NOAA provide: (1) an accounting of funds received for all claimed assessment activities that were initiated prior to this claim; (2) an explanation of how claimed costs are separate and distinct from other claims submitted to and paid by the NPFC; (3) information about the additional costs of cotrustee participation necessary to implement the Plan submitted in support of this claim; and (4) confirmation that NOAA will be tracking and reporting all NOAA labor costs by activity.

NOAA responded on June 8, 2015 and June 23, 2015, providing: (1) an accounting of funds provided to NOAA for the claimed activities from both BP and the NPFC starting in 2012; (2) a description of how work in this claim is separate and distinct from other claims submitted to and paid by the NPFC; (3) an estimate of $23,000,000 for other trustee (e.g.,

[18] May 22, 2015 email from NOAA to BP with cc to NPFC

[19] These assessment activities were approved and funded by the NPFC through claim N10036-OC18.

EPA, USDA, FWS, state trustee) costs to participate in the assessment and restoration planning activities described in NOAA's Second 2015 Plan[20], and (4) confirmation that NOAA will track Agency costs as one activity and that they only broke out the costs among the activities to facilitate adjudication.

Below are the NPFC's findings specific to the activities for which costs are claimed.

Offshore Benthic Habitat and Communities

Activity 1: Benthic Oil Injury Footprint Around the Macondo Wellhead

Starting in 2011 and continuing in 2014, NOAA assessed injuries to offshore benthic resources and habitats consisting of soft bottom sediments, hard ground corals, and benthic megafauna through a series of studies. Soft bottom sediment assessment activities focused on the collection, identification, enumeration, and analysis of sediment infauna. Hard ground coral assessment activities focused on taking and analyzing photographic images to determine species composition, spatial extent, and health of deep sea corals and evaluating coral tissue samples for hydrocarbons. Benthic megafauna activities focused on collecting and analyzing field data to determine red crab injury in terms of overall abundance and reproductive potential. These assessment activities have been funded by both BP[21] and the NPFC[22].

NOAA's Second 2015 Plan describes work in 2015 to analyze 157 samples[23,24] collected cooperatively with BP in 2014; quantify injury to offshore benthic resources and habitats based on the data collected, analyzed, and presented in the draft technical reports; and write the draft DARP section focused on offshore benthic injuries[25] for public review. This requires extensive coordination among contract scientists, data managers, and trustees.

NOAA claims $1,849,500 ($1,490,000 contract costs and $359,500 agency costs) for this activity to analyze samples ($547,400), interpret, coordinate, and review collected data with trustees ($1,101,200), and report results ($200,900).

After reviewing NOAA's Second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) the assessment activity described above is appropriate and will lead to injury quantification, and (2) costs claimed for this activity are reasonable and appropriate for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $1,849,500 for the Benthic Oil Injury Footprint Around the Macondo Wellhead assessment activity are

[20] NOAA is not claiming costs for other trustees to participate in implementation of their Plan nor is the NPFC approving or paying these costs.
[21] June 8, 2015 email from NOAA to NPFC
[22] Assessment activities were funded through claims N10036-OC08 and N10036-OC18.
[23] 117 sediment cores for macrofauna and 40 sediment cores for meiofauna
[24] The costs to collect these samples were not part of NOAA's 2014 claim to the NPFC (N10036-OC18) submitted on October 30, 2013.
[25] Specifically, soft bottom sediments, hard ground corals, and benthic megafuana

compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, 15 C.F.R. §§990.51, 990.52, and 990.27.

Activity 2: Mesophotic Reefs

NOAA is assessing injury to the mesophotic reefs along the continental shelf at depths of 60 to 90 meters. Assessment activities to date have focused on photographic and video documentation of reef health and enumeration of resident planktivorous fish abundance. Two well-studied mesophotic reefs (Alabama Alps and Roughtongue Reef) are in an area where surface oil and dispersants were present, and have shown persistently low abundances of resident planktivorous fish. In 2014, additional follow-up imagery was collected[26,27].

NOAA's Second 2015 Assessment Plan describes work to analyze imagery collected in 2014; quantify injury to mesophotic reefs based on the data collected, analyzed, and presented in the draft technical reports; and write the draft DARP section focused on mesophotic reefs. Completing each section of the draft DARP for public review requires extensive coordination among contract scientists and data managers, and extensive coordination with trustees.

NOAA claims $575,400 ($412,300 as contract costs and $163,100 as agency costs) for this activity to analyze imagery ($192,800), interpret, coordinate, review collected data with the cotrustees ($293,900), and prepare a report with results ($88,700).

After reviewing NOAA's Second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) Mesophotic Reef assessment activity described above is appropriate and will lead to injury quantification, and (2) costs claimed for this activity are reasonable and appropriate for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $575,400 for the Mesophotic Reef assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, 15 C.F.R. §§990.51 and 990.52.

Activities 3 and 4 - Water Column (in general)

Since the spill, NOAA has implemented several assessment studies to assess the nature and extent of injuries to water column resources using research vessels, remotely operated underwater vehicles, aircrafts, and satellites[28], reporting that they have considerable data showing PAH levels during the response were above literature-based thresholds for injury[29]. The resources and habitat assessed include the vast array of the aquatic natural resources within the nearly 700 kilometers of surface, deep sea, and shoreline waters in the northern

[26] NOAA collected time-lapse photos to document reef fish (NOAA's second 2015 Assessment Plan, Page 22).

[27] NOAA identified a pre-spill photograph dataset (Mississippi/Alabama Pinnacle Trend Ecosystem Monitoring Program) that it will analyze and compare to photographs taken in 2014 (NOAA's second 2015 Assessment Plan, Page 22).

[28] NOAA 2015 Assessment Plan, page 15

[29] Letter from NOAA to the NPFC dated April 11, 2012

GOM that were exposed to oil from the *Deepwater Horizon* incident. These assessment studies, and the large amounts of data that they produced, will be described in the draft DARP and other technical materials released for public review[30].

Activity 3: Transport, Fate, and Effects Modeling

With funding from both BP and the NPFC, NOAA has implemented several assessment studies[31] to model the volume and extent of water contaminated by PAHs and dispersant chemicals and the associated level of injury resulting from exposure based on expected species composition, abundance, and toxicity thresholds.

NOAA has completed the majority of work associated with modeling contaminants in the water column; however, NOAA requests funds with this activity to refine the model estimates for the thickness of oil on the water surface. During initial data processing, information regarding the locations where thick, emulsified oil was located was lost. NOAA now needs to update the algorithm to analyze the raw data that retains the location where thick oil was found. In addition to the funds requested to model the thickness of oil on the water surface, NOAA also requests funds to interpret, coordinate, and review data with trustees and report results by writing the draft DARP section focused on transport, fate, and effects modeling, including oil-on-water evaluations using technical reports from 2014. This requires extensive coordination among contract scientists, data managers, and trustees.

On June 12, 2015, the NPFC requested NOAA provide additional information. Specifically, the NPFC requested that NOAA: (1) distinguish the work claimed in this activity from the first 2015 claim (N10036-OC27) paid for by the NPFC, as well as (2) provide a justification to support a determination that the new proposed method or algorithm will produce valid and reliable results.
NOAA responded on June 23, 2015, stating, "The end product or milestone with funding from NC0036-OC27 will be a version of the water column technical section that incorporates the first round of editorial edits from agency partners and a list of substantive technical comments that NOAA will subsequently address. The end product or technical milestone for the 6th IPC is completing the process of iterative co-trustee review, focused primarily on addressing editorial, formatting, and layout issues associated with releasing a large package of technical information to the public" and "The algorithms for this work are essentially the same, however the underlying data are not. In the initial stages of examining the surface oil, the available imagery at that time was used. These datasets were of poor or degraded quality as these images had been pre-processed to facilitate use of the data in the heat of the response…The initial work was hampered by poor data quality and thus provided a less robust output product. With the addition of the new, unprocessed imagery, the delineation and the confidence of the product has been significantly improved[32]."

[30] NOAA's Second 2015 Assessment Plan, page 24
[31] These studies include the Oil Fate Modeling and Comparisons with Observational Data; Hydrodynamic Modeling; Exposure and Injury Modeling and Data Inputs funded by the NPFC.
[32] June 23, 2015 email from NOAA to NPFC responding to request for additional information.

NOAA claims $919,900 ($296,900 as contract costs and $623,000 as agency costs) for this activity to refine model estimates using new raw data ($50,000), interpret, coordinate, and review collected data with trustees ($549,500), and report results ($320,400).

After reviewing NOAA's Second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) Transport, Fate, and Effects Modeling assessment activity described above is appropriate and will lead to injury quantification, and (2) costs claimed for this activity are reasonable and appropriate for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $919,900 for the Transport, Fate, and Effects Modeling assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, 15 C.F.R. §§990.51 and 990.52.

Activity 4: Fish and Plankton

NOAA is developing detailed information on the spatial and temporal abundance of water column organisms in the spill area using a combination of historical data gathered by the Southeast Area Monitoring and Assessment Program and field data gathered by NOAA during 2010 and 2011. This information will be used in the SIMAP[33] modeling effort to assess total injury to fish and plankton.

On June 12, 2015, the NPFC requested NOAA explain how the funds claimed are separate and distinct from the funds claimed and paid by the NPFC in NOAA's previous 2014 claim. On June 23, 2015, NOAA responded stating, "NOAA is withdrawing $3,830,424 of the requested funds that were associated with completing the processing of plankton and nekton samples collected in 2010 and 2011[34]." NOAA also submitted a revised budget that included $1,756,850 for lab shutdown costs, not previously identified.

On June 30, 2015, the NPFC again requested additional information seeking clarification of NOAA's response submitted on June 23, 2015. Specifically, the NPFC requested that NOAA provide (1) an explanation how the $1,756,850 for lab shutdown costs included in the revised budget table was presented to BP and (2) a justification for the additional $362,526 claimed for the coordination, data review, and interpretation task, given that NOAA is no longer analyzing 2,400 samples. NOAA responded on July 7, 2015, withdrawing the $362,526 and stating, "We understand that the term "lab shutdown" was not used in our Claim and may cause confusion… As stated in our Claim, previous BP funding supported both the plankton processing and the nekton processing programs in 2012 pursuant to the cooperative DWH NRDA Plankton Processing Plan and Nekton Plan, respectively. Following the culmination of the processing phase, the laboratories will use the requested funding for the removal and/or storage of all subsamples and related documentation under appropriate chain of custody. Decommissioning (i.e., shutting down) the plankton and nekton laboratories is the inevitable next step of the plankton and nekton programs, and

[33] The Spill Impact Model Application Package (SIMAP) provides detailed predictions of the three-dimensional trajectory, fate, biological effects, and other impacts of spilled oil and fuels.

[34] June 23, 2015 email from NOAA to NPFC responding to request for additional information.

"retention of samples" and adherence to chain of custody & data management requirements were part of both processing plans."

NOAA's Second 2015 Assessment Plan presented to BP did not describe the work or include costs associated with lab shutdown; therefore, the NPFC has determined that NOAA has not presented these costs to BP as required by 33 U.S.C. §2713(a). All claimed costs ($1,756,850) associated with lab shutdown are denied. If NOAA seeks reconsideration of this claim (see section of this determination titled: "Reconsideration of denied costs") it must submit additional information that demonstrates that the costs were presented to BP.

The remaining claimed costs of $2,999,726 are for NOAA to complete final data interpretation, identify peer reviewers and complete peer review of the draft DARP section, and write the draft DARP section focused on fish and plankton resources. BP and the NPFC previously funded the analyses of nearly 6,900 samples and NOAA now needs to complete the work described above to incorporate the results into the draft DARP; therefore, the NPFC finds that it is reasonable to fund this work.

After reviewing NOAA's Second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) Fish and Plankton assessment activity described above is appropriate and will lead to injury quantification, and (2) costs claimed for to document results and incorporate into the draft DARP are reasonable and appropriate for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $2,999,726 for the Fish and Plankton assessment activity are compensable from the Fund and the costs for lab shutdown totaling $1,756,850 are denied. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, 15 C.F.R. §§990.51 and 990.52.

Activity 5: Aquatic Sea Turtle Injury Quantification

Since 2010, NOAA has undertaken efforts to determine the number of oceanic and neritic sea turtles exposed to oil and injured by the *Deepwater Horizon* incident using data from direct capture efforts and aerial surveys[35].

NOAA's Plan describes remaining work as the need to integrate the exposure and injury assessment findings. NOAA will review data from the response and BP, coordinate with the trustees to assess injury quantification, and write and facilitate peer review of the draft DARP section focused on sea turtles that will be made available for public review. This requires extensive coordination among contract scientists, data managers, and the cotrustees.

NOAA claims $1,546,600 ($1,066,500 as contract costs and $480,100 as agency costs) for this activity to review data from the response and BP ($65,000), coordinate with trustees ($313,900), write the draft DARP section focused on sea turtles ($1,091,200), and peer review of the draft DARP ($76,500).

[35] Data NOAA collected includes: tissue samples, external swabs PAHs and PAH metabolites, abundance and distribution data, dive records, PAH levels of sea turtle prey, and toxicity information.

After reviewing NOAA's Second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) Aquatic Sea Turtle Injury Quantification assessment activity described above is appropriate and will lead to injury quantification, and (2) costs claimed for this activity are reasonable and appropriate for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $1,546,600 for the Aquatic Sea Turtle Injury Quantification assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, 15 C.F.R. §§990.51 and 990.52.

Activities 6, 7 and 8 – Marine Mammals (in general)

NOAA's assessment of potential injuries to marine mammals involves a number of activities in nearshore, coastal, and oceanic waters. In 2010, NOAA began assessing both live and dead marine mammals to quantify injury resulting from the *Deepwater Horizon* incident and scale appropriate restoration. Specifically, NOAA has collected data from health assessments, longitudinal, reproductive, and aerial surveys, stranding counts, remote biopsies, satellite tagging, and genetic tests.

NOAA reports that findings to date from live animal studies and strandings response have documented heightened mortality, a high incidence of reproductive failure, and a number of health issues due to the *Deepwater Horizon* incident[36,37]. Specifically, dolphin health assessment studies Barataria Bay have found endocrine, respiratory, and hepatic disease consistent with the adverse health effects reported from experimental oil exposure studies[38].

NOAA also reports significantly higher numbers of marine mammal carcasses on Gulf beaches were observes from April 2010 through May 2013, with histopathology evaluations of 2013 strandings from Mississippi and Louisiana indicating adrenal abnormalities, bronchopneumonia, *Brucella* sp. infections, chronic lung disease and other long-term health issues associated with oil exposure[39]. These findings are consistent with those from the live animal health assessments that show severe ill health. Further, a recent study[40] found many of the dolphins died with rare lesions linked to petroleum exposure. In their Plan, NOAA also states, "Analyses to date suggest that this UME is not due to any of the common causes of previous Gulf UMEs, such as morbillivirus or biotoxins, and oil cannot be ruled out as a causal effect in cetacean mortalities that have occurred since the Incident[41]."

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36 NOAA's Second 2015 Assessment Plan, page 34

37 [redacted], et al. (2015) Adrenal Gland and Lung Lesions in Gulf of Mexico Common Bottlenose Dolphins (*Tursiops truncatus*) Found Dead following the *Deepwater Horizon* Oil Spill. PLoS ONE 10(5): e0126538. doi:10.1371/journal.pone.0126538

38 NOAA's Second 2015 Assessment Plan, page 34-35

39 March 6, 2014 email from NOAA to NPFC

40 [redacted], et al. (2015) Adrenal Gland and Lung Lesions in Gulf of Mexico Common Bottlenose Dolphins (*Tursiops truncatus*) Found Dead following the *Deepwater Horizon* Oil Spill. PLoS ONE 10(5): e0126538. doi:10.1371/journal.pone.0126538

41 NOAA's second 2015 Assessment Plan, page 41

In 2014, NOAA completed its final health assessment, where they reported continued poor overall body condition and lung disease in some animals, although at a lower prevalence than found in 2011[42,43].

Activity 6: Estuarine and Coastal Dolphins

With this claimed activity NOAA plans to complete data collection and analyses and to establish and document pathway and injury by: (1) conducting a follow-up reproductive survey on the animals collected from Barataria Bay in 2014, (2) conducting a live-capture health assessment in Mississippi Sound (follow up to the 2013 study), and (3) laboratory analysis[44]. This information will then be used to update and establish trustee estimates of injury and prepare the draft DARP sections on dolphin injuries. This will require extensive coordination among contract scientists, data managers, and the cotrustees.

NOAA claims $2,595,900 ($1,301,200 as contract costs and $1,294,700 as agency costs) for this activity to conduct a reproductive survey ($83,100), conduct health assessments in Barataria Bay ($920,000), conduct lab analysis ($103,700), quantify injury ($254,300), and write the draft DARP section on dolphins ($1,234,800).

After reviewing NOAA's Second 2015 Assessment Plan and the additional claim information provided by NOAA, the NPFC finds that the: (1) Estuarine and Coastal Dolphins assessment activity described above is appropriate and will lead to injury quantification, and (2) costs claimed for this activity are reasonable and appropriate for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $$2,595,900 for the Estuarine and Coastal Dolphins assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, 15 C.F.R. §§990.51 and 990.52.

Activity 7: Coastal and Estuarine Cetacean Strandings

With this claimed activity, NOAA plans to collect data from stranded cetaceans (primarily bottlenose dolphins) in Louisiana, store and manage the recovered carcasses, coordinate findings with the cotrustees, and integrate the data from this activity in to the draft DARP sections focused on marine mammals.

NOAA claims $2,584,300 ($2,084,800 as contract costs and $499,500 as agency costs) for this activity to collect data ($1,756,800), store and manage carcasses ($490,000), coordinate with the cotrustees ($58,200), and report results ($279,300).

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[42] NOAA's Second 2015 Assessment Plan, page 35

[43] [redacted] et al. (2014a) summarized findings from 2011 health assessments. The authors also responded to questions in a supplemental journal response (Schwacke et al., 2014b).

[44] This includes analyses on skin, blood, urine, feces, blowhole, and blubber as well as a tooth extraction to determine age.

The NPFC requested that NOAA provide additional information. Specifically, the NPFC requested that NOAA provide the locations where NOAA planned on collecting stranded marine mammals and where the samples being analyzed were collected. NOAA responded on June 23, 2015, stating, "The support for enhanced stranding network coverage (i.e., collecting samples, etc) was requested only for Louisiana."

After reviewing NOAA's Second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) Coastal and Estuarine Cetacean Strandings assessment activity described above is appropriate and will lead to injury quantification, and (2) costs claimed for this activity are reasonable and appropriate for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $2,584,300 for the Coastal and Estuarine Cetacean Strandings assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, 15 C.F.R. §§990.51, 990.52, and 990.27.

Activity 8: Oceanic Marine Mammals

In 2014 NOAA implemented a study to assess the potential impacts to oceanic marine mammals by integrating health and survival data from the estuarine dolphin activity[45], inhalation risk evaluations[46], marine mammal abundance surveys[47], and telemetry data[48].

With this claimed activity, NOAA plans to use the results from previous studies to quantify injury to oceanic marine mammals stemming from the *Deepwater Horizon* incident. NOAA will assess and integrate the analytical and observational results from previous studies. The end product for this activity is a draft DARP section on oceanic marine mammals for public review. This will requires extensive coordination among contract scientists, data managers, and with the cotrustees.

NOAA claims $596,700 ($339,200 as contract costs and $257,500 as agency costs) for this activity to integrate results from previous studies ($199,900), write the draft DARP section, and coordinate with the cotrustees ($396,800).

After reviewing NOAA's Second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) Oceanic Marine Mammals assessment activity described above is appropriate and will lead to injury quantification, and (2) costs claimed for this activity are reasonable and appropriate for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $596,700 for the Oceanic Marine Mammals assessment activity are compensable

[45] Funded through claim N10036-OC18
[46] Funded through claim N10036-OC18
[47] NOAA has measured abundance through shipboard observations and underwater acoustic arrays that detect mammals through sound waves.
[48] NOAA tracked the movements and behavioral changes of sperm whales in 2010-2012 through satellite tagging.

from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, 15 C.F.R. §§990.51 and 990.52.

Activity 9: Completion of Shoreline Injury Quantification

NOAA has completed studies[49] at more than 200 shoreline sites across the GOM involving field observations and measurements of the nature and extent of oiling, condition of vegetation (e.g., percent live and dead vegetation, canopy height, chlorophyll content, and rate of erosion due to lack of vegetation), and animal life[50].

With this claimed activity, NOAA plans to use the results from previous studies to quantify injury to shoreline habitat stemming from the *Deepwater Horizon* incident. NOAA will coordinate the results with the cotrustees and draft the section of the DARP focused on shoreline habitat that will be made available for public review. This will require extensive coordination among contract scientists, data managers, and the cotrustees.

NOAA claims $901,100 ($382,100 as contract costs and $519,000 as agency costs) for this activity to analyze and integrate data ($113,500), coordinate with the cotrustees ($366,100), and write the draft DARP section ($421,500).

After reviewing NOAA's Second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) Completion of Shoreline Injury Quantification assessment activity described above is appropriate and will lead to injury quantification, and (2) costs claimed for this activity are reasonable and appropriate for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $901,100 for the Completion of Shoreline Injury Quantification assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, 15 C.F.R. §§990.51, 990.52, and 990.27.

Activities 10, 11, 12, and 13 – Oysters (in general)

NOAA is assessing potential injuries to oysters by measuring abundance and biomass, evaluating reproductive condition, and estimating larval recruitment in nearshore and subtidal waters affected by *Deepwater Horizon* oil. These efforts, which began in 2010 and 2011[51] and continued in 2012[52], 2013[53], and 2014[54], have shown reduced adult and juvenile oyster abundance and spat recruitment across the full spatial footprint of the *Deepwater Horizon* oiling area. NOAA states that it has also undertaken laboratory assessment of oil

[49] Studies include: Shoreline Oiling, Coastal Wetland Vegetation, Coastal Wetland Fauna, Shoreline Change, and Marsh Response Injury

[50] 2014 Assessment Plan, page 104

[51] NOAA indicates that BP provided $289m for 2010 and 2011 assessment activities in 17 resource categories, one of which was oysters.

[52] The NPFC's July 5, 2012, July 27, 2012, determinations approved $2.1m for NOAA's 2012 oyster assessment activities.

[53] NOAA indicates that BP provided $18.9m for 2013 oyster assessment activities.

[54] The NPFC's April 17, 2014 determination approved $16.1m for NOAA's 2014 oyster assessment activities.

toxicity, which has shown that very low concentrations of oil kill oyster larvae, prevent normal fertilization from occurring, and produce developmental abnormalities in embryos and free-swimming larvae that ultimately lead to death[55].

NOAA's assessment of oyster injuries resulting from the incident is complicated by low salinity conditions in the GOM caused by large volumes of freshwater from flooding events and the opening of floodwater diversion structures. NOAA acknowledges that low salinities are a known source of mortality to oysters, but states that GOM oyster populations have historically been subject to natural disasters or flood control actions, and typically rebound within 18 to 24 months[56]. Data collected in 2013 indicates that neither oyster abundance nor recruitment have returned to pre incident levels, which NOAA believes is attributable to recruitment failure resulting from the *Deepwater Horizon* incident[57].

NOAA claims $11,706,300 to continue oyster assessment activities in 2015. The proposed work focuses on monitoring oyster abundance, biomass, and recruitment to document the continued loss and/or extent of recovery and data analyses and integration to complete the identification and quantification of oyster injury resulting from the incident. NOAA also plans to write the draft section of the DARP for oysters for both trustee and public review.

Activity 10: Continued Assessment of Subtidal Oyster Injury (Abundance and Biomass)

Under this activity, NOAA claims costs to assess the abundance and biomass of spat, seed, and market-sized oysters in subtidal habitats in Louisiana, Mississippi, Alabama, and Florida in 2015. Specifically, NOAA will sample the 149 subtidal sites that were sampled in 2011, 2012, 2013, and 2014 and 20 new sites[58]. NOAA will analyze all of the data and document findings in technical reports. NOAA will coordinate these findings with trustees and the public. Results will be used to model the exposure and injury to subtidal oysters and determine the nature and extent of injury, findings that will be presented in the trustees' DARP[59].

The NPFC notes that NOAA requests funds for continued study when analyses of 2014 efforts have not been completed. NOAA's Plan justifies this effort stating: "Given the conditions we observed in 2013, multiple years of good recruitment would need to occur to achieve recovery of oyster abundance. Sampling in 2015 is needed because, even if good recruitment were observed in 2014, one year of recovery data would not be sufficient to calculate the recovery curve necessary to quantify injury. Continued assessment of adult, spat, and seed oysters is a critical component in the quantification of the continuing oyster injury from the DWH Incident and is absolutely necessary to inform a determination of restoration needed to compensate for injuries[60]."

[55] NOAA Second 2015 Assessment Plan, page 52
[56] February 7, 2014, email from NOAA to NPFC
[57] NOAA's second 2015 Assessment Plan, page 52
[58] NOAA's Second 2015 Assessment Plan, page 55
[59] NOAA's activity 13 below claims funds to write the draft DARP section focused on oysters.
[60] NOAA's Second 2015 Assessment Plan, page 54

NOAA claims $3,850,100 ($3,779,300 as contract costs and $70,800 as agency costs) to complete fieldwork ($3,312,800), analyze collected data ($140,000), coordinate, review, and interpret data ($4,900), and report and document results ($392,400).

After reviewing NOAA's Second 2015 Assessment Plan and claim information provided by NOAA, the NPFC finds that the: (1) Continued Assessment of Subtidal Oyster Injury (Abundance and Biomass) assessment activity described above is appropriate and will lead to injury quantification, and (2) costs claimed for this activity are reasonable and appropriate for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $3,850,100 for the Continued Assessment of Subtidal Oyster Injury (Abundance and Biomass) assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, 15 C.F.R. §§990.51, 990.52, and 990.27.

Activity 11: Continued Assessment of Subtidal Oyster Injury (Recruitment)

Under this assessment activity, NOAA plans to continue to monitor oyster larval recruitment rates and adult oyster reproductive condition in subtidal habitats to characterize the intensity and duration of oyster population recruitment and its recovery to pre incident levels. Specifically, NOAA will sample 135 subtidal sites in Louisiana, Mississippi, Alabama, and Florida in 2015. Many of these sites were previously sampled in 2011, 2012, 2013, and 2014. NOAA will analyze the collected data that will help establish the trajectory of oyster recruitment recovery. NOAA will coordinate these findings with the cotrustees and public. Results will be used to model the exposure and injury to subtidal oysters and determine the nature and extent of injury, findings that will be presented in the trustees DARP[61].

On June 8, 2015, the NPFC requested NOAA provide evidence of injury or lack of recovery from the 2014 assessment studies funded by the NPFC. NOAA responded on June 23, 2015, stating, "…maps show the first potential indication of recovery in oyster settlement, particularly in the areas of Barataria Bay and Breton Sound (Louisiana); however there remained significant areas of poor recruitment in much of Louisiana, Mississippi Sound, and Alabama… The Trustees collected data on fall oyster recruitment in 2014; however, these data are still being processed and thus we cannot comment at the moment on whether these trends continued into Fall 2014."

NOAA claims $7,224,100 ($7,094,900 as contract costs and $129,200 as agency costs) to complete fieldwork ($6,050,800), analyze collected data ($430,800), coordinate, review, and interpret data ($11,200), and report and document results ($731,300).

After reviewing NOAA's Second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) Continued Assessment of Subtidal Oyster Injury (Recruitment) assessment activity described above is appropriate and will lead to injury quantification, and (2) costs claimed for this activity are reasonable and appropriate for the proposed level of effort given the complexity of the incident relating the nature and

[61] NOAA's activity 13 below claims funds to write the draft DARP section focused on oysters.

extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $7,224,100 for the Continued Assessment of Subtidal Oyster Injury (Recruitment) assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, 15 C.F.R. §§990.51, 990.52, and 990.27.

Activity 12: Continued Assessment and Analysis of Nearshore Oyster Injury

NOAA withdrew this assessment activity from consideration on June 23, 2015[62].

Activity 13: Completion of Oyster Injury Quantification

As stated above, NOAA has completed several oyster assessment studies since 2010, which produced large amounts of data. NOAA claims funds to manage and analyze these large datasets; coordinate data review and interpretation with the cotrustees, and prepare and refine technical reports to complete the draft DARP section focused on oysters. This will require extensive coordination among contract scientists, data managers, and the cotrustees.

On June 8, 2015, the NPFC requested NOAA describe the difference in work between activities 10,11, and 13. NOAA responded on June 23, 2015, stating, "The oyster claim is careful to distinguish the first three oyster activities (Tasks 10 - 12) as activities that generate data sets from field work (top of p. 53), while Task 13 includes the activities for oyster injury quantification (e.g., statistical analysis, modeling, and report preparation)."

NOAA claims $632,100 ($286,200 as contract costs and $345,900 as agency costs) for this activity to analyze data ($82,400), coordinate data review and interpretation ($267,900), and report and document results ($281,800).

After reviewing NOAA's Second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) Completion of Oyster Injury Quantification assessment activity described above is appropriate and will lead to injury quantification, and (2) costs claimed for this activity are reasonable and appropriate for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $632,100 for the Completion of Oyster Injury Quantification assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, 15 C.F.R. §§990.51 and 990.52.

Activity 14: Lost Human Use

NOAA is leading trustee efforts to assess potential lost human use of natural resources injured by the spill, which includes disruptions in recreational boating, fishing, beach activities, bird watching, and passive losses[63,64]. Over 39,885 square miles of GOM federal

[62] June 23, 2015 letter from NOAA to NPFC responding to request for additional information.

[63] Passive losses are estimates of the value people place on simply knowing that something exists, even if they will never see it or use it.

waters were closed to fishing[65], with NOAA reporting that residents and non-residents of Gulf States make more than 150 million recreational trips to the GOM each year, and, in 2009, approximately 23 million of these recreational trips were individual fishing trips[66,67].

With funds provided by both the NPFC and BP, the trustees assessed direct/recreational use losses of natural resources using generally accepted natural resource damage assessment methods that involved on-site sampling, surveys, and benefits transfer models to determine the number and dollar value of lost and/or diminished value trips resulting from the spill.

To assess the total value of lost human use resulting from this incident, which includes both direct/recreational and passive losses[68], the trustees adopted a three-phased approach. In phase 1, NOAA assembled a team of experts in the fields of environmental and natural resources economics, survey research, econometrics, and other social sciences[69]. In phase 2, NOAA worked to develop the total value assessment by training surveyors and conducting focus groups, one-on-one interviews, pre-tests of citizens, and data validation efforts[70]. In phase 3, NOAA refined and administered the final survey using injury information and results from pre-tests, and conducted quality assurance/ quality control on completed work to date. Phase 3 is ongoing and once completed the results will be included in the draft DARP section for lost human use.

Under this activity, NOAA request funds to finalize technical memos that summarize previous work and results; coordinate with cotrustees and public; maintain the administrative record for this activity; conduct a review of BP generated data and published literature; prepare expert reports, and finalize the draft DARP section focused on Lost Human Use for public review. This will require extensive coordination among contract scientists, data managers, and the cotrustees.

NOAA claims $4,872,000 ($3,149,200 as contract costs and $1,722,800 as agency costs) for this activity to finalize technical memos ($1,391,000), coordinate with cotrustees and public ($604,000), maintain the administrative record ($1,181,000), review BP generated data and published literature ($1,441,000), prepare expert reports ($221,000), and finalize the draft DARP section focused on Lost Human Use ($34,000).

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64 *Federal Register*, Vol. 75, No. 190, Pgs. 60800-60802, October 1, 2010: http://edocket.access.gpo.gov/2010/pdf/2010-24706.pdf

65 Unified Command for the BP Oil Spill, "The Ongoing Administration-Wide Response to the Deepwater BP Oil Spill," September 9, 2010: http://www.restorethegulf.gov/release/2010/09/09/ongoing-administration-wide-response-deepwater-bp-oil-spill

66 Natural Resource Damage Assessment, April 2012 Status Update for the *Deepwater Horizon Oil Spill* http://www.gulfspillrestoration.noaa.gov/wp-content/uploads/FINAL_NRDA_StatusUpdate_April2012.pdf

67 NOAA National Marine Fisheries Service. 2010. Fisheries of the United States 2009. http://www.st.nmfs.noaa.gov/st1/fus/fus09/index.html

68 NOAA designed the direct/recreational use loss and total value loss assessment to be complimentary, whereby the direct/recreational assessment efforts will be used to inform and validate part of the injury scenario for the total value assessment survey.

69 Claim to NPFC N10036-OC14 ($3,846,347.56)

70 Claim to NPFC N10036-OC06 ($32,980,000)

After reviewing NOAA's Second 2015 Assessment Plan and claim information provided by NOAA, the NPFC finds that the: (1) Lost Human Use assessment activity described above is appropriate and will lead to injury quantification, and (2) costs claimed for this activity are reasonable and appropriate for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $4,872,000 for the Lost Human Use assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, 15 C.F.R. §§990.51 and 990.52.

Activity 15: Completing Toxicity Assessment for Aquatic Organisms

In 2012, NOAA initiated studies to assess the concentrations at which *Deepwater Horizon* oil and dispersants released into the water column during the incident adversely affect
Animal and plant health and the environment. These studies focus on representative species in the GOM, with the objective to correlate an adverse effect with exposure to the discharged oil and dispersants and determine the concentrations, or thresholds, at which the effect occurs. As such, these proposed toxicity studies serve the fundamental purpose in the overall damage assessment of explaining or predicting levels of injury to natural resources associated with a range of exposure conditions.

In 2014, the NPFC funded efforts by NOAA to conduct toxicity testing and establish toxicity thresholds for 25[71] water-column species, provide coordination and data review, and draft technical reports. NOAA has published several reports pursuant to these efforts in peer-reviewed journals[72] that document the relationship between *Deepwater Horizon* oil toxicity levels and degree of injury to fish observed from the laboratory testing.

Under this activity, NOAA plans to analyze all the toxicity testing results and interpret that data by applying the toxicity results observed in the laboratory to the empirical and modeled toxicity conditions that occurred in the GOM because of the spill. NOAA will also conduct additional toxicity testing on species not included in prior tests[73], and repeat some previous toxicity tests for data verification. NOAA will also coordinate with trustees, model the exposure and injury to aquatic resources and determine the nature and extent of injury, findings that will be presented in the trustees DARP, and manage collected samples.

On June 8, 2015, the NPFC requested that NOAA further explain how the costs claimed relate to work claimed in the 2014 claim. NOAA responded on June 23, 2015, stating, "The toxicity costs in this claim are unique. Any lab work would be to conduct new toxicity tests that had not been covered in previous claims. A large part of the toxicity costs are for data analysis, review, and incorporation of test information into injury quantification across resource categories."

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[71] Amberjack, Amphipods, Blackfin Tuna, Blue Crab, Bluefin Tuna, Cobia, Comb Jelly, Eastern Oyster, Fiddler Crab, Goggle Eye, Glass Shrimp, Inland Silverside, Killifish, Mahi-Mahi, Moon Jelly, Pacific Mackerel, Polychaete Worm, Red Drum, Red-Eared Slider, Sea Urchin, Sheepshead Minnow, Southern Flounder, Snapping Turtle, Speckled Sea Trout, and Yellowfin Tuna

[72] Assessment Plan, page 80

[73] Algae, Copepod, Diatom, Marsh Periwinkle, and Mysid Shrimp

NOAA claims $2,814,300 ($2,209,000 as contract costs and $605,300 as agency costs) for this activity to analyze data ($1,910,700), report and document results ($279,200), manage collected samples ($112,600), and coordinate with cotrustees ($511,800).

After reviewing NOAA's Second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) Toxicity to Aquatic Organisms assessment activity described above is appropriate and supports NOAA's effort to quantify injury and plan appropriate restoration, and (2) costs claimed for this activity is reasonable for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $2,814,300 for Toxicity to Aquatic Organisms are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, and 15 C.F.R. §§990.53 and 990.55.

Activity 16: Analysis, Interpretation, and Integration into Exposure Assessment

Since 2010, NOAA has collected tens-of-thousands of oil, sediment, tissue, and water samples in offshore, nearshore, and shoreline waters. In 2014, the NPFC funded the analysis of 7,497 samples. Sample analyses were described as work to analyze the presence and concentration of contaminants such as PAHs[74] and VOCs[75]. Oil and contaminant analysis was described as work to fingerprint oil and other contaminants.

Under this activity, NOAA plans to analyze an additional 350 samples for PAHs, dispersants chemicals (specifically dioctyl sodium sulfosuccinate[76]), VOCs, and petroleum biomarkers. NOAA will analyze 100 samples from shoreline and oyster sampling work and newly stranded oil collected nearshore following storm events; 150 samples will come from other trustees, many at BP's request[77]; and 100 samples that were previously analyzed and now require more in-depth forensic analysis. The analysis and evidence of exposure will be considered in injury determination that will be presented in the draft DARP (i.e. deep benthic, offshore water column and surface waters, nearshore, and shoreline).

On June 8, 2015, the NPFC requested NOAA identify the samples being analyzed as newly collected samples or samples previously collected through other assessment activities funded prior to 2015. NOAA responded on June 23, 2015, stating, "The claimed costs for shoreline samples are based primarily on past sampling events, thus are not connected to the scope of activities described in the Shoreline activity in N10036-OC30."

NOAA claims $3,458,300 ($3,405,900 as contract costs and $52,400 as agency costs) for this activity to complete analyses ($946,900) and report results ($2,511,400).

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74 Poly-aromatic hydrocarbons are contaminants that occur in oil, coal, and tar deposits.

75 Volatile organic compounds are organic chemicals that enter the surrounding air and may be dangerous and cause harm to the environment.

76 Dioctyl sodium sulfosuccinate is a detergent and hazardous substance found in Corexit 9500, which is a dispersant used during the response of the Deepwater Horizon oil spill.

77 According to NOAA, NOAA's Second 2015 Assessment Plan, page 84

After reviewing NOAA's Second 2015 Assessment Plan and claim information provided by NOAA, the NPFC finds that the: (1) Chemistry assessment activity described above is appropriate and will lead to injury quantification, and (2) costs claimed for this activity are reasonable and appropriate for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $3,458,300 for the Chemistry assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, 15 C.F.R. §§990.51 and 990.52.

Activity 17: Infrastructure and Data Update Process

NOAA claims $7,908,500 ($7,178,200 as contract costs and $730,300 as agency costs) to continue to manage, maintain, and preserve the large amount of assessment information. Information includes data from over 20,000 field event collections, comprising over a million individual data forms and associated files, seven million contaminant chemistry sample analytical records, and a half million records of instrument data, photographs, telemetry data, and observational data. NOAA continues to update these systems[78] with new data from both trustee and BP assessment activities. NOAA's Data Management Technical Working Group (DMT) maintains and accesses this information in five data management systems:

- Environmental Response Management Application (ERMA), which allows integration of datasets to produce interactive maps that facilitate visual analyses of data;
- NOAANRDA.org, which provides on-demand and user defined access to information related to different resource and habitat types and their related NRDA studies;
- QueryManager, which serves as a repository for analytical chemistry results;
- Photologger, which is searchable database of photographs taken during field events; and
- Data Warehouse, which allows the trustees to query and visualize data.

NOAA's DMT provides extensive coordination and training with trustee and BP personnel to facilitate access and understanding of the data management systems and the data housed within those systems. To fully record the data management process and any alterations to the data, NOAA must document data intake, tracking, integration into source systems, publishing, and any metadata acquired during the data management process, as well as reviewing the security level of all data systems.

After reviewing NOAA's Second 2015 Assessment Plan and claim information provided by NOAA, the NPFC finds that the: (1) infrastructure and data update process activity described above are appropriate and support NOAA's effort to quantify injury and plan appropriate restoration, and (2) costs claimed for these activities are reasonable for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic

[78] Funds previously provided allowed NOAA to develop these five systems and under this Activity NOAA will continue to maintain and update these systems.

extent of exposure of natural resources to oil, magnitude of potential injury, and amount of data NOAA needs to manage. Therefore, claimed costs of $$7,908,500 for the infrastructure and data update process activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211.

Activity 18: Address End User System/Tool Needs

NOAA has developed and maintained the data management systems described above[79] to manage a wide range of data. NOAA claims $1,717,000 ($1,668,600 as contract costs and $48,400 as agency costs) to update these systems to accommodate additional types of information not previously stored within those systems (e.g., model results) and make updates to decrease the time required for trustees to access new data and make changes to data, decrease long-term costs of updating and maintaining the systems, and improve the ability of trustees to interconnect related data within the systems.

After reviewing NOAA's second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) Address End User System/Tool Needs activity described above is appropriate and support NOAA's effort to quantify injury and plan appropriate restoration, and (2) costs claimed for these activities are reasonable for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, magnitude of potential injury, and amount of data NOAA needs to manage. Therefore, claimed costs of $1,717,000 for this activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211.

Activity 19: File Integration / Server Consolidation / Long-Term Archive

NOAA has developed and maintained electronic management systems to store the majority of the assessment information associated with the Deepwater Horizon NRDA[80]. However, there are additional data systems used by NOAA researchers to undertake and document their assessment work. Much of these systems date back to the beginning of the assessment and after five years, much of the infrastructure is reaching the end of its useful life. NOAA claims $1,041,300 ($896,100 as contract costs and $145,200 as agency costs) to provide technical support to NOAA researchers to transmit large volumes of data to the noaanrda.org repository and/or replace aging equipment[81] to ensure that the data are accessible. Specifically, contractors will coordinate with the principal investigators to ensure that the records are maintained at each source system until the centralized system (e.g., NIMO, NOAANRDA.org, etc) is complete and source systems can be shutdown. NOAA will assist in maintaining the computer systems, coordinating the move of data from the source locations to long-term repositories, and assisting in procurement efforts to obtain replacement hardware as necessary.

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[79] ERMA, NOAANRDA.org, QueryManager, Photologger, and Data Warehouse

[80] NOAANRDA.org is the core repository for data; DWH Electronic Content Management System is the core repository for documents and other Administrative Record files

[81] The NPFC requires that claimants dispose of all equipment purchased for the assessment with funds provided by the NPFC when the assessment is complete (i.e., publication of the Final DARP). The NPFC expects NOAA to provide proof of disposal when the final reports for all claims are submitted to the NPFC.

Funds claimed ($145,200) are for NOAA to write a plan summarizing their approach for the long-term archival of all *Deepwater Horizon* data, which could include the maintenance of NOAAnrda.org and/ or identifying a new repository suitable for long-term storage of data. The OSLTF is available to pay reasonable and appropriate costs necessary to carry out the trustee responsibilities to assess natural resource damages in accordance with applicable laws, regulations, and policies. In this instance, those responsibilities conclude at the adoption of a Final DARP that identifies injuries and appropriate restoration alternatives, therefore, the costs to plan any long-term archival past the publication of the Final DARP are denied[82].

After reviewing NOAA's second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) File Integration / Server Consolidation / Long-Term Archive activity described above is appropriate and support NOAA's effort to quantify injury and plan appropriate restoration, and (2) costs claimed for these activities are reasonable for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, magnitude of potential injury, and amount of data NOAA needs to manage. Therefore, claimed costs of $896,100 for the File Integration / Server Consolidation / Long-Term Archive assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211.

Activity 20: Injury Assessment and Legal Case Management

NOAA claims $5,168,200 ($1,950,900 as contract costs and $3,217,300 as agency costs) to continue contract administration tasks such as establishing and managing sub-contracts, budget planning, budget execution, and overall contract management. This activity will also allow field operations support such as vessel procurement, safety and logistics, shipping samples and equipment, and coordinating data intake teams. Lastly, funds will support Trustee Council activities[83] and NOAA attorneys providing counsel on injury assessment activities.

After reviewing NOAA's Second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) Injury Assessment and Legal Case Management assessment activities described above are appropriate and support NOAA's effort to quantify injury and plan appropriate restoration, and (2) costs claimed for these activities are reasonable for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $5,168,200 for the Injury

[82] On July 7, 2015, NOAA provided the NPFC additional information stating, "NOAA is not requesting any contract costs for long-term archival or management of data (i.e., beyond the final DARP)." Therefore, based on this statement and for the reasons described above and the NPFC finds that contract costs for this activity are compensable.

[83] According to NOAA, Trustee Council activities include: attending meetings at least monthly in person at locations across the region, extensive phone and email coordination on a wide variety of injury assessment issues, and review and comment of Trustee Council materials.

Assessment and Legal Case Management assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211.

Activity 21: Deepwater Horizon Electronic Content Management System and Oil Pollution Act Administrative Record

In 2012, NOAA developed and implemented a document repository called the ECMS, which allows NOAA to efficiently organize, locate, and retrieve documents, and search document content. The system facilitates the effort to develop and maintain an administrative record for the *Deepwater Horizon* NRDA and facilitates efforts to securely manage electronic records in compliance with Federal regulations such as Federal Information Security Management Act. In 2014, the NPFC provided funds for NOAA's continued efforts to develop, manage, and improve the ECMS and implement procedures for the identification and collection of *Deepwater Horizon* content.

NOAA claims $3,381,800 ($1,939,600 as contract costs and $1,442,200 as agency funds) to continue organized collection of documents, develop workflow processes, legal review of documents within the Administrative Record, and manage and improve the ECMS.

After reviewing NOAA's second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) *Deepwater Horizon* Electronic Content Management System and Oil Pollution Act Administrative Record assessment activities described above are appropriate and support NOAA's effort to quantify injury and plan appropriate restoration, and (2) costs claimed for these activities are reasonable for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $3,381,800 for *Deepwater Horizon* Electronic Content Management System and Oil Pollution Act Administrative Record assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211.

Activity 22: Restoration Planning

In its first 2015 Assessment Plan, NOAA requested funds to complete a draft Programmatic Environmental Impact Statement (PEIS)/DARP that was ready for trustee review, including costs to identify and evaluate restoration alternatives and compile information from injury reports prepared by technical teams. NOAA's Second 2015 Assessment Plan identifies $16,412,700 ($9,067,900 as contract costs and $7,344,800 as agency costs) to complete a draft PEIS/DARP for public review. The Plan identifies the following five cost categories: Leadership, Management, and Oversight; Finance; Damage Assessment and Restoration Plan, Programmatic Environmental Impact Statement, and Associated Regulatory Compliance; Data Management; and Communications. All of these claimed costs are specific to NOAA's efforts to: (1) complete analysis of all restoration alternatives, (2) select the preferred restoration alternatives, (3) complete a draft PEIS/DARP that will be made available for public comment, and (4) prepare for public meetings.

Leadership Management and Oversight: NOAA requests $1,481,800 to oversee restoration planning activities that integrate analysis, interim products (e.g., technical reports), and trustee input on draft documents. This work includes providing overall direction to NOAA staff and communicating status of ongoing restoration planning efforts with cotrustees, and members of the public, and Members of Congress. These funds will also be used for NOAA to work with the cotrustees to finalize and agree to the long-term governance standards for implementing restoration projects, which requires protocols, internal controls, and periodic audits[84].

Finance: NOAA requests $604,500 as agency costs to continue planning, executing, tracking, and documenting expenditures and manage contracts for the restoration planning efforts. This category also includes funding for an accounting firm to provide independent review of cost documentation and provide audit services necessary to manage a case of this size.

Damage Assessment and Restoration Plan (DARP), Programmatic Environmental Impact Statement (PEIS), and Associated Regulatory Compliance: NOAA request $13,216,300 to complete the draft PEIS/DARP that will be made available to the public. This involves analyzing, responding to, and incorporating all comments received during cotrustee review of the draft PEIS/DARP, continued incorporation of data from ongoing damage assessment studies and Early Restoration projects, final analysis of restoration alternatives, and selecting the preferred restoration alternatives (including consideration of requirements under a range of environmental statutes). This category also includes funds to prepare for public meetings associated with the release of the draft PEIS/DARP to the public (e.g. meeting facility rentals, equipment rentals, translation services, advertisements, and printing costs).

Data Management: NOAA requests $647,900 to continue funding the data management team that maintains repositories and access to all of the restoration planning data and potential restoration projects that have been collected and identified to date. The team also continues to maintain a SharePoint database of all documents relevant to restoration planning efforts. The overall efforts of the team include execution of business rules, workflows, and protocols for entry and access to data and documents.

Communications: NOAA claims $462,200 to continue funding a communications team that provides information to the public and manages its social media and the Gulf Spill Restoration website regarding restoration projects. The website is the centerpiece of this effort, as it provides avenues for the public to submit restoration project ideas; view/map all projects submitted for consideration; review and comment on the restoration planning documents; and explore the natural resource injuries that drive restoration planning decisions. As the release of the draft PEIS/DARP documents nears, the communications team will increase its planning and execution efforts to ensure the public understands the basic processes, timelines, and tools for commenting on the draft documents. Costs also include $225,000 to expand efforts to comply with Environmental Justice requirements to teach and encourage under-represented communities to participate in the public review process.

[84] These will be included in the Administrative Record for the case.

After reviewing NOAA's Second 2015 Assessment Plan and additional claim information provided by NOAA, the NPFC finds that the: (1) Restoration Planning assessment activity described above is appropriate and supports NOAA's effort to quantify injury and plan appropriate restoration, and (2) costs claimed for these activities are reasonable for the proposed level of effort given the complexity of the incident relating the nature and extent of oiling, geographic extent of exposure of natural resources to oil, and magnitude of potential injury. Therefore, claimed costs of $16,412,700 for the Restoration Planning assessment activity are compensable from the Fund. 33 U.S.C. §2706 (d)(1)(C), 33 C.F.R. §136.211, and 15 C.F.R. §§990.53 and 990.55.

Reconsideration of Denied Costs

All contract and NOAA agency costs pertaining to the activities included in this determination that are not being offered for payment are considered denied. NOAA may make a written request for reconsideration of this determination. The reconsideration request must be received by the NPFC within 60 days after the date of this determination. The request for reconsideration must be in writing and must include the factual or legal basis of the request for reconsideration, providing any additional support for the claim. Reconsideration will be based upon the information provided and a claim may be reconsidered only once. Disposition of the reconsideration will constitute final agency action. Failure of the NPFC to issue a written decision within 90 days after receipt of a timely request for reconsideration shall, at the option of the claimant, be deemed a final denial of the reconsideration . All correspondence should include the corresponding claim number N10036-OC30.

Summary

The NPFC has reviewed the claim submitted by NOAA for costs to implement its Plan for the *Deepwater Horizon* incident in accordance with OPA (33 U.S.C. §2701 *et seq*.) and associated regulations (15 C.F.R. Part 990 and 33 C.F.R. Part 136). Through this determination, the NPFC offers $72,541,800 to implement approved activities detailed in NOAA's Assessment Plan.

This offer constitutes full and final payment for the activities addressed in this determination.

Revolving Trust Fund and Return of Unused Funds to the OSLTF

As established by OPA (33 U.S.C. §2706(f)) and the NRDA regulations (15 C.F.R. §990.65), sums recovered by trustees for natural resource damages must be retained in a non-appropriated revolving trust account for use only to implement the nine activities addressed in this determination in accordance with the Plan. For this claim, the NPFC will deposit $72,541,800 into NOAA's Damage Assessment Restoration and Revolving Fund Account, which NOAA has demonstrated[85] to be a non-appropriated, revolving trust fund. NOAA shall reimburse the Fund for any amounts received from the Fund in excess of that amount required to accomplish the activities for which the claim was paid. 33 CFR 136.211(b).

[85] October 15, 2013 email from NOAA to NPFC

Cost Documentation, Progress Reporting, and Final Report

As the claimant, NOAA shall ensure that all expenditures of OSLTF funds are documented appropriately and spent according to the Plan for the activities approved in this determination. NOAA shall reimburse the Fund for any amounts received from the Fund in excess of that amount required to accomplish the activities for which the claim was paid. 33 U.S.C. §2706(f); 33 CFR 136.211(b).

One year from the date of this determination, and annually thereafter, NOAA shall provide the NPFC with a report on the status of implementation and expenditures. These annual progress reports should include:

1. Certification by NOAA that all assessment activities approved in this determination has been conducted in accordance with the Plan;
2. A progress report that includes a description of work accomplished, timeline for future activities, and any unexpected problems incurred during implementation;
3. A summary of expenditures by category (i.e., labor, consultant/contractors, and travel); and
4. A narrative description of the work accomplished by each individual and how that work fits into the overall progress of the work for the year. Enough detail should be included to determine reasonableness of costs for each employee when cost documentation is received with the final report.

NOAA shall submit a final progress report within 120 days from the date an approved activity is complete. This report should include:

1. Certification by NOAA that all expenditures of OSLTF funds were in accordance with the plan as approved by the NPFC;
2. A summary of findings;
3. Copies of final reports and/or studies;
4. Documentation of OSLTF funds remaining in the Revolving Trust Fund for this claim, including account balance and interest earned; and
5. Documentation of all expenditures as follows:
    a. Labor: For each employee –
        i. A narrative description of the work accomplished by each individual and how that work fit into the plan. Enough detail should be included to determine reasonableness of costs; and
        ii. The number of hours worked, labor rate, and indirect rate. An explanation of indirect rate expenditures, if any, will be necessary;
    b. Travel: Paid travel reimbursement vouchers and receipts;
    c. Contract: Activities undertaken, lists of deliverables, and contract invoices and receipts;
    d. Purchases/Expendables: Invoices and receipts, along with an explanation of costs; and
    e. Government Equipment: Documentation of costs, including the rate (i.e., hourly, weekly) and time for all equipment used for which costs were incurred.

With the final report(s), the NPFC will reconcile costs and all remaining funds and/or inadequately documented costs will be returned to the OSLTF.

The NPFC has prepared standardized templates with instructions to facilitate final cost reporting (attached).