

Interim, Partial Claim for Assessment Costs Enbridge Line 6B Pipeline Discharge



January 29, 2013

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1. Executive Summary

This document provides information regarding the Trustees' plans to assess injuries to natural resources resulting from the discharge of oil by Enbridge Energy into Talmadge Creek, the Kalamazoo River, and adjoining floodplains. This Interim, Partial Claim for Assessment Costs provides information regarding the assessment procedures and methods that the Trustees have proposed. It also provides a schedule of when assessment work will be conducted along with cost estimates by federal Trustees.

The Trustees are assessing two broad categories of injuries and losses: 1) ecological and 2) human use service losses. For both of these categories, Trustees are evaluating injuries and service losses caused by the discharge of oil, as well as injuries and losses as a result of response and remedial activities undertaken because of the discharge of oil. Ecological injuries and service losses under review include floodplain habitat; in-stream habitat losses to aquatic organisms; impacts to the fluvial geomorphology of the river (e.g. erosion of shoreline, banks and river bottom); and impacts including mortality to birds and other organisms directly affected by oil. Human use loss assessment will focus on recreational service losses as a result of closure of the river to all public use. Section 4 outlines more specific information regarding the assessment methods that will be used for each of these categories.

Trustees anticipate that assessment work will take approximately 18 months to complete once funding has been received. A schedule of when assessment reports will be complete is provided in Section 5. Federal Trustees estimate their costs to total \$980,091.

2. Assessment Claim Overview

2.1 Claimant (Trustee) Information and Coordination

The following officials or their designees are acting on behalf of the public as Trustees for natural resources:

1. The Director of the Michigan Department of Environmental Quality (MDEQ);
2. The Director of the Michigan Department of Natural Resources (MDNR);
3. The Attorney General of the State of Michigan;
4. The Regional Director of the U.S. Fish and Wildlife Service (FWS), Region 3, as Authorized Official, acting on behalf of the Secretary of the U.S. Department of the Interior (DOI);
5. The Director of the Office of Response and Restoration, National Oceanic and Atmospheric Administration (NOAA), acting on behalf of the Secretary of Commerce;
6. The Tribal Council Chairperson for the Nottawaseppi Huron Band of the Potawatomi Tribe (NHBP); and
7. The Tribal Chairman for the Match-E-Be-Nash-She-Wish Band of the Pottawatomi Tribe (the Gun Lake Tribe). (The Trustees).¹

¹ This Interim, Partial Claim details the activities and the contributions of all signatories to the Memorandum of Understanding establishing the Trustee Council responding to this matter. The participation of the State of Michigan Trustees (the MDEQ, DNR, and the Michigan Attorney General) is detailed in this document, but the State of Michigan Trustees are not requesting any funds in this Interim, Partial Claim to the National Pollution Funds Center. Similarly, the Nottawaseppi Huron Band of the Potawatomi Tribe and the Match-E-Be-Nash-She-Wish Band of the Pottawatomi Tribe are signatories to the Memorandum of Understanding establishing the Trustee Council, and the Tribes' activities and

The authority for the Trustees to act is detailed in Section 3.1 of this document.

The Trustees entered into a Memorandum of Understanding (MOU) in December 2010 that formed a Trustee Council to address the injuries to natural resources resulting from the discharge of oil by Enbridge into Talmadge Creek, the Kalamazoo River, and adjoining floodplains (details regarding the incident are provided below in Section 2.2; details regarding Responsible Party entities are provided in Section 2.3). The MOU is intended to provide a framework for the coordination and cooperation of the Trustees in the assessment of damages, the recovery of such damages, and the use of any damages recovered to restore, rehabilitate, replace and/or acquire the equivalent of the injured natural resources. The MOU is also intended to ensure coordination of Trustees' concerns and activities with removal, remedial, corrective, or other response actions carried out by others in an effort to abate and/or minimize continuing and residual injury and to achieve or enhance restoration of injured natural resources. Currently the DOI's FWS is performing the responsibilities of the Lead Administrative Trustee, as detailed in Section VIB. of the MOU.

The administrative record has been established and is available online at:
<http://www.fws.gov/midwest/es/ec/nrda/MichiganEnbridge/adminrecord.html>

2.2 Incident Description

On or about July 25, 2010, Lakehead Line 6B, a 30-inch diameter pipeline owned by Enbridge Energy, ruptured near Marshall, Michigan, discharging crude oil into a wetland adjacent to Talmadge Creek.

The oil flowed through Talmadge Creek into the Kalamazoo River, a Lake Michigan tributary. The Kalamazoo River was in floodstage at the time of the discharge, and the oil flowed down the river and into its floodplain for approximately 38 miles, to Morrow Lake. Enbridge has estimated that the discharge was 20,082 barrels or 843,444 gallons of oil.

The Kalamazoo River is bordered by wetlands, floodplain forest, residential properties, farm lands and commercial properties between Marshall and the Morrow Lake dam. This discharge affected, and continues to adversely affect and threaten natural resources within the natural resource Trustees' jurisdictions.

In accordance with the Oil Pollution Act (OPA) and National Contingency Plan, after the spill a Unified Command was organized under the authority of the Federal On-scene Coordinator (United States Environmental Protection Agency), with the MDEQ participating as the state's representative for the response effort. The MDEQ will also be responsible for the long-term remediation and restoration of areas affected by the spill to the extent provided by state law requirements. Currently, Enbridge is anticipating decommissioning remedial and restoration work no later than January 1, 2019.²

Following the spill in July 2010, county health agencies closed public access to 39 miles of the river system to protect public health and safety during the cleanup. On April 18, 2012, a three-mile portion

contributions to the assessment of injuries to natural resources as part of the Trustee Council are included as background to this Interim, Partial Claim, but no funds are being requested for or on behalf of the Tribal Council members or for activities or costs of the Bureau of Indian Affairs.

² Enbridge Schedule of Work submitted to MDEQ on June 15, 2012.

was opened from Perrin Dam in Marshall to Saylor's Landing near 15 Mile Road and the Kalamazoo River. On June 21, 2012, the remainder of the river was opened for public use, although certain areas remained buoyed to exclude the public from active work areas posing a safety risk. In addition, the Michigan Department of Community Health issued a Fish Consumption Advisory and a Swimming Advisory, both of which were lifted on June 28, 2012.

2.3 Responsible Party Information

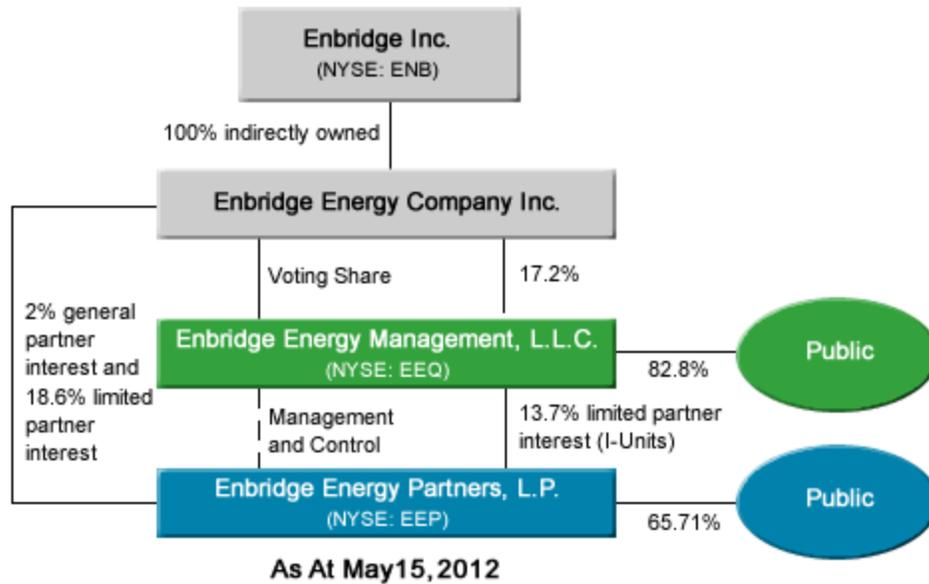
Enbridge Energy, Limited Partnership (EELP), owns and operates the Line 6B pipeline that runs through Michigan and that ruptured in July 2010, spilling crude oil that caused injuries to natural resources being assessed by the Trustees.³

EELP is a wholly owned subsidiary of Enbridge Energy Partners, L.P., a Delaware master limited partnership headquartered in Houston, Texas (www.enbridgepartners.com, NYSE: EEP) (the Partnership). The Partnership owns and operates crude oil and natural gas transportation systems in the United States. Its principal crude oil system is the largest transporter of oil from western Canada. The system's deliveries to refining centers and connected carriers in the United States account for approximately 13 percent of total U.S. oil imports; while deliveries to Ontario, Canada satisfy approximately 70 percent of refinery demand in that region. The Partnership (EEP) listed total assets at \$10.4 billion and operating income at \$127 million for the year ending December 31, 2010.

Enbridge Energy Management, L.L.C. (www.enbridgemanagement.com) manages the business and affairs of the Partnership and its sole asset is an approximate 14 percent interest in the Partnership. Enbridge Energy Company, Inc., an indirect wholly owned subsidiary of Enbridge Inc. of Calgary, Alberta, (NYSE: ENB) (TSX: ENB) (www.enbridge.com) is the general partner of Enbridge Energy Partners, L.P., and holds an approximate 23 percent interest in the Partnership.

The corporate structure depicted in the diagram below is from the Enbridge.com website (Enbridge Energy, Limited Partnership, is not depicted in the chart, but is a wholly owned subsidiary of EEP):

³ Other Enbridge entities with ownership and/or operational interests in Line 6B include Enbridge Pipelines (Lakehead) LLC; Enbridge Energy Partners, L.P.; Enbridge Energy Management LLC; Enbridge Energy Company, Inc.; Enbridge Employee Services Inc.; Enbridge Operational Services, Inc.; Enbridge Pipelines Inc., and Enbridge Inc.



2.4 Components of Claim and Amount of Costs and Damages Claimed

The Trustees are assessing two broad categories of injuries and losses: 1) ecological and 2) human use service losses. For both of these categories, Trustees are evaluating injuries and service losses caused by the discharge of oil as well as injuries and losses as a result of response and remedial activities undertaken because of the discharge of oil.

Ecological injuries and service losses under review include floodplain habitat; in-stream habitat losses to aquatic organisms; impacts to the fluvial geomorphology of the river (e.g. erosion of shoreline, banks and river bottom); and impacts including mortality to birds and other organisms directly affected by oil.

Human use loss assessment will focus on recreational service losses as a result of closure of the river to all public use. River closure affected all water based and floodplain based recreational uses including swimming, boating, fishing, boat-based hunting, wading, trapping, picnicking, wildlife watching, and exercising along the river.

The Trustees have not completed assessment efforts, pending completion of response. As a result, the costs and damages have not been estimated. Data collection and analysis is ongoing, and may result in the identification of additional natural resource damage assessment (NRDA) activities by the Department or its co-Trustees or, alternatively, the decision may be made to not pursue an activity identified in this Claim. The Department expressly reserves its ability to supplement the assessment and restoration planning procedures identified herein. The need for any additional studies and assessment activities and their relationship to existing data collection efforts and analyses and data management will be clearly identified in any future assessment claims. This Interim,

Partial Claim is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity, by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

2.5 Statute of Limitations

Claims for natural resource damages sought under OPA must be brought within three years after the date of completion of the natural resources damage assessment. (OPA § 1017, 33 U.S.C. § 2717(f)).

3. Adherence to Assessment Regulations

3.1. Trustee Authority

Natural Resource Trustees are authorized to (1) assess natural resource injuries resulting from a discharge of oil or the substantial threat of a discharge and response activities, and (2) develop and implement a plan for restoration of such injured resources pursuant to Section 1006 of the Oil Pollution Act (OPA), 33 U.S.C. §§ 2701, *et seq.*, Section 311(f) of the Clean Water Act, 33 U.S.C. § 1321(f), and other applicable Federal and State statutory and common law, including but not limited to, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. Part 300, Subpart G, and the OPA Natural Resource Damage Assessment Regulations (Regulations), 15 C.F.R. Part 990, as well as Executive Order 12580, 52 Fed. Reg. 2923 (January 23, 1987), as amended by Executive Order 12777, 56 Fed. Reg. 54757 (October 19, 1991), Executive Order 13016, 61 Fed. Reg. 45871 (August 28, 1996), Executive Order 13286, 68 Fed. Reg. 10619 (February 28, 2003), and the Michigan Natural Resources and Environmental Protection Act (NREPA), MCL 324.101 *et seq.* Trust resources include those that belong to, are managed by, held in trust by, appertain to, or are otherwise controlled by the United States, any State, an Indian Tribe, or a foreign government. 33 U.S.C. § 2701(20).

By undertaking a NRDA, the Trustees consider the extent of injuries to natural resources, including the functions and services provided by the injured resource, while determining the appropriate ways of restoring the injured resources and compensating for these injuries. Under OPA, natural resources are defined broadly to include "land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources. 43 C.F.R. § 11.14. Trustees use the information gleaned from the NRDA to develop and implement plans for the "restoration, rehabilitation, replacement, or acquisition of the equivalent of the natural resources under their trusteeship." Trustees may seek damages for these injuries, including the reasonable costs of the assessment. 33 U.S.C. § 2702(b)(2)(A).

The federal Trustees are designated pursuant to the NCP, 40 C.F.R. § 300.600 and Executive Orders 12580 and 12777. For this incident, the federal Trustees include the United States Department of the Interior, acting through the U.S. Fish and Wildlife Service and the Bureau of Indian Affairs, and United States Department of Commerce, acting through the National Oceanic and Atmospheric Administration. State Trustees for Michigan are designated by the Governor of Michigan pursuant to the NCP, 40 C.F.R. § 300.605, and include the Michigan Department of Attorney General, the Department of Environmental Quality, and the Department of Natural Resources. Tribal Trustees are designated pursuant to the NCP, 40 C.F.R. § 300.610.

3.2. Summary of Preassessment Activities

The Trustees conducted numerous studies and surveys to collect ephemeral data concerning on-site conditions immediately after the spill and during response that would otherwise be lost or altered. Enbridge participated in many of these preassessment surveys.

3.2.1. Preassessment Activities for Ecological Impacts

Trustees and Enbridge cooperatively drafted a work plan for a floodplain survey to document the extent and degree of oiling within the floodplain. Trustees and Enbridge staffed joint teams to conduct the work. A report summarizing this work has been completed.

Trustees and Enbridge cooperatively drafted a work plan for a rapid vegetation assessment in August 2010 to characterize the types of habitat and vegetation present within the floodplain. Trustees and Enbridge repeated the rapid vegetation assessment in fall 2011. Enbridge has prepared a draft report of the 2011 work, and recently shared it with Trustees, for Trustees' review and comment.

Trustees and Enbridge cooperatively drafted work plans for the collection and chemical analysis of surface water, sediment, and mussel tissue samples for oil constituents such as polycyclic aromatic hydrocarbons (PAHs) as well as other indicator chemicals. Trustees and Enbridge staffed joint teams to collect the samples and Enbridge contracted with a laboratory for analysis. Trustees compared the analytical results to various water quality criteria and guidelines, and in some instances, scientific literature for information on adverse effects levels of oil constituents on relevant biota. These quick comparisons helped provide context for the analytical results to determine if additional sampling was necessary.

Trustees and Enbridge cooperatively drafted a work plan to document exposure of fish to oil/PAHs and document potential biochemical and physiological responses of exposure. In August 2010, at the request of the FWS, U.S. Geological Survey (USGS) performed a gross pathological assessment of general fish health on fish collected from the oiled area and a reference area and calculated a Health Assessment Index (HAI) for those fish. They also collected and preserved tissue and bile samples for future histological, biochemical, and chemical analyses. Trustees and Enbridge also collected and preserved bile samples from fish collected by the State of Michigan in October 2010.

The State's standard fish community assessment and benthic macroinvertebrate surveys were conducted shortly after the spill, and were repeated in the summer of 2011. These surveys were performed in accordance with standardized procedures used by the MDEQ and MDNR for ordinary monitoring efforts, and as such, were performed by state personnel accompanied by Enbridge NRDA representatives. Reports summarizing these efforts have been completed as part of the state agencies' response support. Full reports are pending further data analysis.

Trustees and Enbridge cooperatively developed a mussel shell survey work plan to document crushed and broken shells that likely resulted from response activities in the river. Trustees and Enbridge staffed joint teams to conduct the work. A report summarizing this work has been completed.

Trustees obtained wildlife data that were collected as a part of response activities. These data identify the number, species, and locations of birds, turtles, frogs, and other biota that were found dead or oiled, as well as the number and species of biota that were rehabilitated and released, or died during rehabilitation. This information has not yet been fully compiled into a report, though Enbridge has compiled summary statistics.

MDEQ worked with Enbridge to compile and reconcile multiple datasets, including the Trustees' floodplain survey and various observations collected for response/remediation purposes, into a single geographic information system database to document the extent of oiling and the nature and extent of impacts from response/remedial activities within the floodplain.

3.2.2. Preassessment Activities for Human Use Impacts

Within days after the spill, Trustees and Enbridge informally assessed human activity and recreational use/access locations along the impacted portion of the river. Trustees also gathered and compiled readily available information on pre-spill recreational use along the affected portion of the river, including information on angling, park use, and shoreline use.

The NHBP conducted preliminary interviews with tribal elders to evaluate whether further study of cultural use losses was warranted.

3.3. Notice of Intent to Conduct Restoration Planning

On March 1, 2012, Trustees issued the Notice of Intent (NOI) to Conduct Restoration Planning for the Natural Resource Damage Assessment and Restoration (NRDAR) case associated with the Enbridge Line 6B Oil Spill in Marshall, Michigan. In it, Trustees communicated the determination that Trustees have jurisdiction to conduct a NRDA and that doing so is appropriate. Based on information collected since July 2010, Trustees have made a preliminary determination that natural resources and services have been injured. These injuries are expected to continue and response actions are not expected to address the injuries. However, feasible restoration alternatives exist to address such injuries. As such, Trustees stated their intent to proceed with an NRDA to identify natural resource injuries and proposed restoration alternatives. The NOI was distributed to the public via agency websites, through informal meetings with stakeholders, and media outlets. The NOI was provided to the responsible party electronically and via FedEx.

3.4. Coordination between Trustees and Responsible Party

Immediately after the spill, Trustees and Enbridge cooperatively developed and implemented certain preassessment study plans (See 3.2.1). In 2011, Trustees corresponded and met with representatives from Enbridge to discuss entry of a Funding and Participation Agreement, but consensus on language was not reached and no Agreement was executed. Trustees formally invited Enbridge's participation on March 1, 2012, in a letter to Enbridge Energy enclosing the Trustees' Notice of Intent to conduct restoration planning and invitation to participate in Natural Resource Damage Assessment.

Trustees developed an Interim, Partial Claim for Natural Resource Damage Assessment Costs pursuant to 33 U.S.C. § 2713 for contractor costs associated with assessing recreational use. That assessment plan was presented to Enbridge via a letter on April 4, 2012. On June 20, 2012, Enbridge Energy responded and declined to participate.

Trustees developed an Interim, Partial Claim for Natural Resource Damage Assessment Costs pursuant to 33 U.S.C. § 2713 for costs associated with assessing vegetation. These costs were for field work and

for developing a report on the data collected. That assessment plan was presented to Enbridge via a letter on July 26, 2012. On October 10, 2012, Enbridge Energy responded and declined to participate.

Table 3-1. Summary of Interim, Partial Claims for Natural Resource Damage Assessment Costs pursuant to 33 U.S.C. § 2713 that Trustees have presented to Enbridge.

Type of Assessment Claim presented	Amount requested	Date Trustees presented Enbridge with Claim	Date Enbridge responded to Trustees	Answer from Enbridge
Recreational Use	\$167,100	April 4, 2012	June 20, 2012	Declined to participate
Vegetation Survey	\$636,479	July 26, 2012	October 10, 2012	Declined to participate

3.5. Coordination between Trustees and Remedial/Response Agencies

Response agencies notified Trustees when the incident occurred. Trustees worked with Response agencies to ensure NRDA field crews were able to safely access the site. Trustees shared information with Response agencies that was used for their operational decision-making. Where possible, Trustees obtained relevant Response data (e.g. water and sediment chemistry results) for our data needs rather than collecting data independently.

4. Proposed Assessment Procedures

4.1. Proposed Assessment Methods

4.1.1. Assessment Methods for Ecological Impacts

Preassessment activities identified ecological injuries and service losses, including injuries to floodplain habitat, in-river injuries to fish and other aquatic biota and aquatic habitat, impacts to the fluvial geomorphology of the river, and impacts, including mortality, to birds, turtles and other biota that were directly oiled. Based on preassessment outcomes, Trustees will focus future assessment effort toward these affected resources, but may expand in the future based on the scope and ongoing nature of the Response and potential for new injuries to be identified.

Trustees will compile analytical data from Response activities and obtain MDEQ's toxicity-based cleanup thresholds for oil constituents in soil, sediment, and water in order to evaluate their utility for NRDA. In addition to the toxicity thresholds developed by MDEQ, Trustees will identify adverse effects levels from the scientific literature, and will use these levels along with measured chemistry results to assess the potential toxic effects of the oil on relevant biota. If warranted, chemistry exceedances of the adverse effects levels will be analyzed over space and time to quantify the toxic effects of the oil. The anticipated federal Trustees' costs associated with this activity are included in Trustees' budget estimates of this Interim, Partial Claim for Assessment Costs. Additionally, federal Trustees' costs associated with writing summary reports of chemistry data are included in the budget of this Interim, Partial Claim for Assessment Costs.

Trustees will continue to track remedial activities in order to understand and document the nature, location, duration, and scope of the physical impacts of the spill cleanup efforts. Physical (and, if warranted, toxicological) impacts to habitat will be quantified using habitat equivalency analysis (HEA). Trustees will also track regulatory wetland and stream mitigation and analyze the need for compensatory restoration using HEA calculations. See Section 4.3 for more details on HEA. The anticipated federal Trustees' costs associated with this activity are included in Trustees' budget estimates in this Interim, Partial Claim for Assessment Costs.

Trustees have tasked the USGS with histological analyses of gill, spleen, and head kidney fish tissue samples collected in 2010. These analyses will identify any pathological lesions that might have occurred due to oil exposure. If adverse health impacts to fish are observed, Trustees may also task USGS with chemical analysis of PAH metabolites in bile samples from these fish, which would document exposure to PAHs from the oil spill and could be used to link abnormalities noted in the histological examination with the spill. A report on these analyses will be developed with the assistance of the USGS. The USGS's efforts associated with this effort are being funded by previously obtained initiate funding. Therefore, only federal Trustees' staff time associated with assisting USGS with drafting and finalizing the report, and incorporating the results into a HEA are included in Trustees' budget estimates in this Interim, Partial Claim for Assessment Costs. If the results warrant further additional analyses, Trustees will submit another interim assessment claim for that assessment activity.

Trustees intend to continue to obtain and interpret results of state monitoring programs (e.g. fish community Status and Trends and benthic invertebrate Procedure 51 surveys) and Response/Remediation assessments (e.g. erosion monitoring). The multi-year monitoring programs will assist in estimating the rates of recovery of the natural resources. The anticipated federal Trustees' costs associated with estimating rates of recovery and incorporating data into a HEA are included in Trustees' budget estimates in this Interim, Partial Claim for Assessment Costs.

Trustees had intended to repeat the 2010 and 2011 rapid vegetation assessment across a spectrum of treated and untreated sites in 2012, and to analyze the resulting data to develop a report on vegetation impacts, including invasive species colonization and recovery rates. On July 26, 2012, Trustees presented Enbridge with an Interim, Partial Claim for Natural Resource Damage Assessment Costs pursuant to 33 U.S.C. § 2713 for costs associated with conducting a vegetation assessment in 2012. The end of the 90 day presentment period fell outside an appropriate window for data collection in 2012 due to an abnormally hot and dry summer. Therefore, Trustees are evaluating the necessity of implementing the study in 2013. This Interim, Partial Claim for Assessment Costs includes only the federal Trustees' costs associated with developing an interim claim as well as incorporating the 2010 and 2011 data into a HEA.

Trustees intend to use wildlife data collected as part of preassessment activities and response activities along with information on discrete mortality events to estimate wildlife losses, including but not limited to mortality and reproductive impacts. A resource equivalency analysis (REA) approach will be used to estimate the amount of restoration needed to address impacts to birds. See Section 4.3.2 for more details on REA. The Trustees also intend to evaluate appropriate scaling techniques to estimate the amount of restoration needed to address injuries to turtles. Given the relatively limited literature on the effects of oil on turtles and the significant number of turtles that were oiled as a result of the spill, the Trustees

intend to consult with turtle experts who will focus on both the types of injuries that may have occurred and the types of restoration that can address those injuries. This Interim, Partial Claim for Assessment Costs includes federal Trustees' costs associated with working with resource experts as well as coordinating and conducting an Avian REA and a Turtle REA.

Trustees will also consider injury assessment for resources such as amphibians, mussels, ground water, in-stream aquatic vegetation beds, channel morphology changes, and other special habitat features such as vernal pools, if additional information warrants their consideration. Trustees are not seeking funding for their assessment at this time.

4.1.2. Assessment Methods for Human Use Impacts

Trustees have developed and submitted to the National Pollution Funds Center (NPFC) a Recreational Use Assessment Plan that was presented to Enbridge in April 2012 to survey recreational use in the affected area in 2012. On June 20, 2012, Enbridge declined to fund or participate in the Recreational Use Assessment and the Trustees submitted the plan to the NPFC for adjudication. The Trustees implemented portions of the plan with limited internal funding from the FWS.

The Recreational Use Assessment Plan provides more detailed information regarding how data will be collected and used to determine damages. In summary, total damages will be determined using a site-specific travel cost model to estimate the change in value between actual and baseline conditions. A report will be developed to document assessment work and results.

The Recreational Use Assessment Plan assumes that data collection will continue through November 2013. As the Recreational Use Assessment Plan included only contractor costs, this Interim, Partial Claim for Assessment Costs includes the federal Trustees' staff costs associated with planning, coordinating, and providing oversight of the 2012 field efforts, as well as assisting the contractor with drafting and finalizing the associated report in December 2013. If recreational use has not returned to baseline levels in 2013, then the Trustees will consider continuing data collection in 2014, at which time Trustees would develop an associated interim claim.

The Nottawaseppi Huron Band of Potawatomi developed a plan for preliminary evaluation of impacts to tribal uses of natural resources. The plan includes interviews with tribal resource specialists, small group interviews with tribal members regarding the effects of the oil spill on current and future use and perception of the natural resources, and an analysis and interpretation of the resulting data. No funds are being requested for this plan as part of this Interim, Partial Claim for Assessment Costs.

4.2. Natural Recovery Estimation

As required under 15 CFR 990.52(c), the Trustees will estimate the rate at which natural recovery would occur without restoration, but including incident response actions. The annual state monitoring programs for fish and macroinvertebrates and the Trustees' Rapid Vegetation Assessment all provide multiple years of data and can be compared with pre-spill data to estimate the rate of return of those resources to baseline conditions. In addition, Trustees will coordinate with remedial agencies to obtain monitoring data.

4.3. Restoration Scaling Approaches

4.3.1. Habitat Equivalency Analysis

A HEA may be used to scale restoration alternatives to compensate for injuries. A HEA computes habitat injuries in terms of discounted service-acre years (DSAYs) to represent the geographic scope and severity of ecological services lost, modified by the duration of injury and discounted over time. Similarly, HEA computes the value of a habitat restoration project in terms of DSAYs to represent the geographic scope and duration of the services it provides, modified by the time the project requires to reach full function and discounted over time. Trustees will use HEA to ensure that the restoration projects chosen adequately compensate the public for losses.

4.3.2. Resource Equivalency Analysis

A REA may be used for specific resources that recover at a significantly different rate than their habitat, or that may have had injuries that are not well represented by the level of injury to habitat. Trustees are considering this approach for turtles and birds.

4.3.3 Reasonable Worst Case Estimates of Injury

In cases where accurate calculation of injuries requires significant data collection or analysis which would unduly increase the cost of the assessment, Trustees may estimate injuries and restoration requirements using a hypothetical reasonable worst case scenario. This allows faster progress towards implementation of restoration and allows funds to be directed toward restoration rather than towards additional assessments. Trustees may consider this approach for injuries to mussels, turtles, and other resources as warranted.

4.4. Quality Assurance and Chain of Custody

Because all work performed for the NRDA must meet high standards of professional performance and technical rigor, highly qualified and experienced experts will design and implement the work. Work products will be developed to meet or exceed generally accepted technical standards, methods, and procedures used in the field of NRDA.

Chain of custody forms were used for field-collected samples. Laboratories performing chemical analyses were required to provide data validation packages, which were evaluated by Trustees and Enbridge.

5. Schedule of Assessment Work

The schedule of major actions proposed in the Enbridge Line 6B Interim Assessment Claim is provided in Table 5-1, below. Components of the Assessment Claim were separately presented to Enbridge in order to proceed expeditiously toward claim development and restoration planning. Those activities already occurring and continuing under separate presentment to the OSLTF are identified within the

table by the symbol *. The 18 month time period reflected by this schedule is consistent with the estimated future costs of the Trustees detailed in Section 6.

Completed activities supporting the Assessment Claim include:

- Notice of Intent to Conduct Restoration Planning, issued March 1, 2012
- Report on Floodplain Oiling
- Mussel Shell Survey Report
- Monitoring for alkylated PAHs in selected areas of the affected waterways
- Rapid Vegetation Surveys, data collection 2010 and 2011

Table 5-1: Preliminary Schedule of Enbridge Line 6B NRDA Proposed Activities. This schedule assumes that funding will be in place by May 1. Deliverables will be delayed if funding takes longer to secure.

Proposed NRDA Action	Proposed Report Deadline
Summary report of regulatory criteria/guidelines and adverse effect levels from scientific literature	July 30, 2013
Turtle Expert Scoping Session and meeting summary	November 30, 2013
PAHs in Water column survey report	November 30, 2013
PAHs in Mussels and co-located sediments survey report	December 31, 2013
PAHs in fish spawning habitats survey report	January 31, 2014
Summary report of PAH concentrations in water and sediment as measured by response and NRDA	May 30, 2014
Recreational Use *	February 28, 2014
Vegetation Survey Report, inclusive of data from 2010 - 2013*	March 31, 2014
Restoration Planning Workshop and meeting summary	May 31, 2014
Avian REA summary report	August 30, 2014
Turtle REA summary report	September 31, 2014
In-Stream HEA summary report	September 15, 2014
Floodplain/non-river HEA summary report	October 15, 2014
* data being collected via a separate interim up-front assessment claim	

6. Cost Documentation

6.1. Future Costs

In addition to the specific assessment tasks described in detail in Section 4 on Proposed Assessment Procedures, federal Trustees' costs will include staff time for Trustees' administrative activities, restoration planning, and public involvement. The timeframe covered by this Interim, Partial Claim for Assessment Costs is 18 months from the receipt of Enbridge or NPFC funding.

6.1.1. Estimated Future DOI-FWS Costs

Estimated FWS resource requirements consist of labor, travel, and contractor costs in the amount of \$597,901. This estimate is based on 18 months (78 weeks) of effort. The activities included in this estimate are provided in the up-front assessment plan. Over the time period covered by this estimate, some staffing changes may occur, including reassignment of personnel and changes in hourly rates. Estimates in the table below are based on present information. FWS indirect costs are estimated to be 52% of labor costs. Expenses are rounded to the nearest dollar.

The FWS shall enter into a contract with Stratus Consulting, for which Stratus will provide support to the Trustee Council and to Trustees’ technical working groups (TWGs) for assessment activities. The proposed scope of work for Stratus’ tasks is provided in Attachment 1.

Table 6-1: Projected costs associated with the U.S. Fish and Wildlife Service (FWS) conducting assessment activities as part of the Enbridge Line 6B Natural Resource Damage Assessment case

Expense Category	hours/week	cost/hour (includes benefits)	18 months (78 weeks)
Labor			
Senior Contaminants Specialist Case Manager/Contaminants Specialist	12	\$62.25	\$ 58,266
	40	\$57.19	\$178,433
Labor Subtotal			\$236,699
DOI indirect costs (16.84%)			\$ 39,860
FWS indirect costs (estimated at 52%)			\$123,083
Indirect subtotal			\$162,943
Total Labor			\$399,642
Travel			
Travel within MI			\$1,800
2 trips by air with 2 night stay			\$2,100
Total Travel			\$3,900
Contracts			
Stratus Contracting			\$194,359
Total Contracts			\$194,359
TOTAL ESTIMATED EXPENSES			\$597,901

FWS Personnel:

The Senior Contaminants Specialist position is currently being filled by Lisa Williams. Dr. Williams is a biologist at the FWS’s East Lansing, Michigan, Field Office. Dr. Williams provides supervisory support for the Case Manager. Dr. Williams participates in person or by telephone in various activities including, but not limited to, Trustees’ meetings that are technical and/or legal in nature. She also assists with document review. Dr. Williams serves as a liaison between field staff and upper management, and will provide briefings and seek approval signatures from the DOI Authorized Official, as needed.

The Case Manager position is currently being filled by Stephanie Millsap. Dr. Millsap is a biologist at the FWS’s Grosse Ile, Michigan, sub-office. Dr. Millsap coordinates and participates in Trustee conference calls and meetings as well as meetings with Enbridge. She assists with the development of assessment plans, assists with development of budgets, provides oversight of field work and data analysis, and keeps technical and financial records. In addition, she is the Contracting Officer’s Technical Representative that provides oversight of the tasks Stratus Consulting is performing for the Trustees.

Travel:

The travel estimate is based on costs for primarily day trips by FWS staff within Michigan to meet with co-Trustees, Enbridge, or to provide Trustee oversight during studies. However, two overnight trips via air are included for the purpose of briefing upper level management.

6.1.2. Estimated Future DOI-Solicitor’s Office Costs

The DOI Solicitor’s Office provides NRDA legal support for DOI bureaus, including the FWS. The Solicitor’s Office resource requirements consist of labor and travel costs for a total of \$131,970 as estimated in Table 6-2.

Table 6-2: Projected costs associated with the DOI Solicitor’s Office conducting assessment activities as part of the Enbridge Line 6B Natural Resource Damage Assessment case

	Total Hours 18 months	Hourly Rate* (salary, benefits, and indirect costs)	Total Labor	Total Travel (4 trips - Trustee mtgs, site visit, brief management)	Total Labor and Travel
Attorney Advisors (2)	1000	\$123.97	\$123,970.00	\$8,000.00	\$131,970.00

DOI Attorney Costs include activities to assess natural resource damages under OPA Sections 1002(b)(2)(A) and 1006(c), including the development of a plan for restoration, rehabilitation, replacement or acquisition of the equivalent of the natural resources under DOI trusteeship, public notice and comment activities, trustee coordination, and administrative activities.

6.1.3. Estimated Future NOAA Costs

Estimated future NOAA resource requirements consist of labor and travel costs. It is expected that the IEc contract will not be used for further aspects of this NRDA.

Labor costs will consist of the following:

- *Jessica Winter*: Case team lead for NOAA, will lead the Trustees’ Toxicological Impacts Technical Working Group and will participate in injury assessment and claim development and manage case team budget and documentation.
- *Kate Barfield*: Attorney Advisor in NOAA’s Office of General Counsel for Natural Resources, will provide legal support for NRDA.
- *Julie Sims*: Restoration Specialist, will participate in restoration planning and oversight and in assessment of physical impacts to habitat.
- *Terry Heatlie*: Restoration Specialist, will participate in injury assessment, including vegetation survey planning and implementation, and in restoration planning and oversight.
- *Jim Wright*: Environmental Engineer, will participate in restoration planning.
- *Adam Domanski*: Economist, will provide expertise in HEA.
- *Mary Baker* and *John Iliff*: Regional managers for NOAA, will provide agency oversight.
- *Cost documentation staff (rotating group)*: will compile cost documentation for assessment work.

Over the time period covered by this estimate, some staffing changes may occur, including reassignment of personnel and changes in hourly rates. Estimates in the table below are based on present information.

The hourly rates provided in the table below include all indirect costs. For NOAA, these costs are leave surcharge, benefits, credit pay, holiday pay, overtime pay, hazard pay, NOAA Space Charge, NOAA Support, Compensatory Salary, and Indirect Rate. We do not expect to incur costs for holiday, overtime, or hazard pay during this period. Information on NOAA’s indirect cost rates was published in the Federal Register; see <https://federalregister.gov/a/2011-26637>.

Title	Total hours (18 months)	Hourly rate	Total cost
Environmental Scientist	600	\$109	\$65,400
Attorney	300	\$180	\$54,000
Restoration Specialist A	390	\$121	\$47,190
Restoration Specialist B	150	\$84	\$12,600
Environmental Engineer	150	\$161	\$24,150
Economist	160	\$152	\$24,320
Regional Manager A	20	\$275	\$5,500
Regional Manager B	20	\$233	\$4,660
Cost doc	60	\$80	\$4,800
Total			\$242,620

The following table describes NOAA’s estimated travel costs:

Traveler	Location	Purpose	# trips	Cost/trip	Total cost
Winter	Seattle, WA to Michigan	site visits and Trustee meetings	3	\$1,000	\$3,000
Barfield	Silver Spring, MD to Michigan	site visits and Trustee meetings	3	\$800	\$2,400
Sims	Local travel (Ann Arbor, Marshall, and Lansing area)	site visits, Trustee meetings, and public meetings	6	\$75	\$450
Heatlie	Local travel (Ann Arbor, Marshall, and Lansing area)	site visits, and Trustee meetings	2	\$75	\$150
Domanski	Silver Spring, MD to Michigan	Trustee meetings to provide HEA expertise	2	\$800	\$1,600
Total					\$7,600

Total NOAA cost estimate for both labor and travel: \$250,220.

7. Restoration Planning

7.1. Restoration Goals

Under OPA, Trustees are authorized to develop and implement a plan to restore impacted resources. The purpose of this effort is to ensure restitution for the injuries to natural resources and the services they provide. Restitution may take the form of resource restoration, rehabilitation, replacement, or acquisition of equivalent natural resources and/or services. NRDA restoration projects should not include legally mandated requirements and restoration projects that would otherwise occur.

7.2. Restoration Project Identification

As required by 15 CFR 990.53(a)(2), Trustees will consider a reasonable range of restoration options before selecting their preferred alternatives. Appropriate restoration alternatives will be identified through literature reviews and discussions with Trustees, resource management units and local watershed improvement consortia, including (but not limited to):

- USFWS;
- DNR;
- MDEQ;
- The Nature Conservancy of Michigan;
- NOAA;
- NHBP;
- Gun Lake Tribe;
- Kalamazoo River Watershed Council, and
- Local Governmental Authorities

7.3. Restoration Criteria and Project Selection Process

Natural resource damage regulations under OPA require Trustees to consider six criteria when evaluating restoration options. The Trustees for this case will use the criteria to select restoration projects and project locations that reflect the geographic area affected by the spill and address the diversity of resource injuries that resulted from it. If the Trustees conclude that two or more alternatives are equally preferable based on these factors, the Trustees will select the most cost-effective alternative. Trustees will base their selection on the following six criteria:

1. Relation to natural resource injuries and service losses

Trustees will evaluate the degree to which a project helps to return injured natural resources and services to conditions that were present prior to the spill, or compensates the public for interim service loss. Projects should demonstrate a clear relationship to the resources and services injured. Projects located within the area affected by the spill are preferred, but projects located within the Kalamazoo River watershed that provide benefit to injured resources in the affected area will also be considered. The Trustees will aim for a diverse set of restoration projects and project locations, addressing an array of resource injuries.

2. Avoidance of adverse impact

Trustees will evaluate projects for the extent to which they prevent future injury as a result of the incident and avoid collateral adverse impacts. All projects should be in compliance with all laws and regulations prior to implementation.

3. Project cost and cost effectiveness

Trustees will consider short- and long-term costs of a project against the relative benefits to natural resources and service losses. Projects that return the greatest and longest lasting benefits for the cost will be preferred. Trustees will also consider the time necessary before project benefits are achieved, and the sustainability of those benefits. Projects will be reviewed for their public acceptance and support, and consideration given to projects that leverage the financial resources of partner organizations.

4. Likelihood of success

Trustees will consider the technical feasibility of achieving restoration project goals and take into account the risk of failure or uncertainty that project goals can be met and sustained. Trustees will generally not support projects or techniques that are unproven or projects that are designed primarily to test or demonstrate unproven technology.

5. Multiple resource and service benefits

Trustees will consider the extent to which projects provide benefits that address multiple resource injuries or service losses, or that provide ancillary benefits to other resources or resource uses. Projects that provide multiple benefits will be preferred.

6. Public health and safety

Trustees will ensure that projects will not pose an unacceptable risk to public health and safety.

This Interim, Partial Claim for Assessment Costs includes the federal Trustees' costs associated with developing and reviewing restoration project ideas and evaluating them in accordance with the restoration criteria.

7.4. Development of Restoration Plan/Environmental Assessment and NEPA Compliance

OPA requires that damage claims be based upon a plan developed with opportunity for public review and comment. To meet this requirement, Trustees plan to develop a Draft and Final Restoration Plan/Environmental Assessment (RP/EA) and any other necessary NEPA documents, with an opportunity for public review of and comment on the draft plan.

The RP/EA shall include:

1. A summary of injury assessment procedures used;
2. A description of the nature, degree, and spatial and temporal extent of injuries resulting from the incident;
3. The goals and objectives of restoration;
4. The range of restoration alternatives considered, and a discussion of how such alternatives were developed and evaluated;
5. Identification of the Trustees' tentative preferred alternative(s);
6. A description of past and proposed involvement of the responsible party in the assessment; and
7. A description of monitoring for documenting restoration effectiveness, including performance criteria that will be used to determine the success of restoration or need for interim corrective action.

The RP/EA is not included in the 18-month timeline covered by this claim, but Trustees' actions during these 18 months will result in progress toward the RP/EA.

8. Personnel and Points of Contact

8.1. DOI

Technical Contact:

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8.2. NOAA Personnel

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8.3. State

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ATTACHMENT 1

Stratus Revised Scope of Work and Cost Estimate for Support to U.S. Fish and Wildlife Service
on Enbridge Spill Natural Resource Damage Assessment Upfront Assessment Claim

Memorandum

To: Stephanie Millsap, U.S. Fish and Wildlife Service
From: Kaylene Ritter, Stratus Consulting Inc.
Date: 10/23/2012
Subject: Revised Scope of Work and Cost Estimate for Support to U.S. Fish and Wildlife Service on Enbridge Spill Natural Resource Damage Assessment Upfront Assessment Claim

1. Introduction and Background

On July 26, 2010, an oil spill occurred on Talmadge Creek in Marshall Township, Calhoun County, Michigan from a pipeline owned by Enbridge Inc., the responsible party (RP). To date, more than 1 million gallons of crude oil have been recovered through spill response activities. Oil discharged from the pipeline traveled down the creek into the Kalamazoo River. The spill occurred during a period of high flow, which resulted in an extensive distribution of oil in the Kalamazoo River floodplain, in addition to exposure in the river. Consequently, a variety of natural resources, including surface water, sediment, fish, benthic invertebrates, migratory birds, other wildlife, and their habitats, were exposed to the oil.

Shortly after the spill, the natural resource Trustees engaged in natural resource damage assessment (NRDA) activities. The Trustees have formed a council (the “Trustee Council”), whose members include the U.S. Department of the Interior, represented by the U.S. Fish and Wildlife Service (the “Service”) and the Bureau of Indian Affairs; the State of Michigan, represented by the Michigan Department of Natural Resources, the Michigan Department of Environmental Quality (MDEQ), and the Michigan Attorney General; the U.S. Department of Commerce, represented by the National Oceanic and Atmospheric Administration; the Nottawaseppi Huron Band of the Potawatomi; and the Match-E-Be-Nash-She-Wish Band of the Pottawatomi.

Stratus Consulting is currently supporting the Service and the Trustee Council on ongoing NRDA activities related to the spill. On October 12, 2012, Stratus Consulting submitted a proposed summary of tasks and cost estimate to the Service for work to be conducted over a period of 18 months, to be included in the Trustees’ Interim Partial Claim for Assessment Costs. The Service then requested an expansion of scope, which we are providing here. Accordingly, Section 2 of this memorandum provides a description of the tasks, revised as requested by the Service, Section 3 discusses the proposed work schedule and deliverables, and Section 4 provides an estimate of costs by task.

2. Description of Services

Upon direction from the Service, Stratus Consulting will continue to provide support to the Trustee Council and to Trustee technical working groups (TWGs). The Trustees have formed three TWGs: a toxicological impacts TWG, a physical impacts and restoration TWG, and a human services TWG. Stratus Consulting is currently providing technical and logistical support to all three TWGs. Under the work proposed herein, Stratus Consulting will continue to provide support to the Trustee Council and to the toxicological impacts TWG and the physical impacts and restoration TWG, as follows:

- ▶ Trustee Council support
 - General coordination and administrative support
 - Planning and holding a turtle summit
- ▶ Physical impacts and restoration TWG
 - Vegetative assessment work
 - Restoration planning
- ▶ Toxicological impacts TWG
 - Compilation and review of toxicological thresholds
 - Compilation, review, and analysis of available soil, sediment, and surface water data
 - General support for toxicological impacts TWG tasks.

Stratus Consulting's support for the human services TWG is being provided under a separate Statement of Work and budget. Stratus Consulting may employ subcontractors as needed to complete requested tasks, as approved by the Service.

Task 1: General Trustee Council Support

Under this task, Stratus Consulting will, upon request from the Service, provide general coordination and administrative support to the Trustee Council. Stratus Consulting will also provide support for planning and holding a Trustee turtle summit.

Coordination and Administrative Support

Stratus Consulting will assist the Service and the Trustee Council with general coordination activities, planning, and administrative support for NRDA activities related to the spill. This work may include assisting in the coordination, communication, review, and exchange of information, data, and reports between the Trustees and response agencies, and the RP. It may

also include providing logistical support for Trustee Council meetings and conference calls; preparing agendas and meeting/conference call notes; and establishing and maintaining ftp sites, web sites, databases, or other means of information and data access and management. It may also include providing support for planning and prioritizing NRDA activities. This task will involve Stratus Consulting staff participating in regularly scheduled bimonthly Trustee Council and bimonthly TWG calls, and one staff member attending the six in-person meetings the Trustees plan to hold over the 18-month period of the contract.

Turtle Summit Support

Stratus Consulting will assist the Trustee Council with planning and holding a two-day technical meeting on the impacts of the spill on turtles and potential restoration projects and ideas that could address turtle injuries. Stratus Consulting will assist with planning the meeting, including determining the location, date, venue, and other meeting logistics. Stratus Consulting will help to identify potential turtle experts who could participate in the meeting, and assist with preparing background materials for the experts to review prior to attending. Stratus Consulting will also assist with developing the meeting objectives and goals, technical content, and the agenda. Finally, Stratus Consulting will assist with preparing meeting notes summarizing the outcomes of the summit. It is anticipated that up to five experts will be identified to participate in the meeting, which will occur over two days. For costing purposes, it is assumed that all five experts will travel to attend the meeting, and that two of the experts would be outside agency researchers who will be contracted as consultants by Stratus Consulting. The cost estimate also assumes that two Stratus Consulting staff will attend the meeting.

Task 2: Support for Physical Impacts and Restoration TWG Activities

Under this task, Stratus Consulting will, upon the request of the Service, provide support for vegetation assessment work and restoration planning activities.

Vegetation Assessment Work

Shortly after the spill, the Trustees conducted a rapid vegetation assessment in the spill-impacted floodplain of the Kalamazoo River. The study was conducted cooperatively with Enbridge. In the fall of 2011, a second vegetation assessment was conducted cooperatively by the Trustees and Enbridge. Stratus Consulting assisted the Trustees in these efforts, including reviewing the 2011 work plan developed by Enbridge and providing field staff for the 2011 survey. The RP recently prepared a draft report that compiles and summarizes the results of the previous field efforts. Under this task, Stratus Consulting will review and analyze the 2010 and 2011 vegetation survey results and the draft report prepared by the RP. Stratus Consulting will also assist the Trustee physical impacts and restoration TWG with evaluating the need for additional surveys based on the results of the previous work. The estimated costs of conducting a third field survey are part of a separate claim, and thus are not included here.

Restoration Planning Work

The Trustees have developed restoration criteria to evaluate potential restoration projects. As a next step in restoration planning, the Trustee physical impacts and restoration TWG intends to compile and prioritize a list of potential restoration projects. Stratus Consulting will assist the TWG with identifying potential restoration projects, gathering information on these projects, and prioritizing them according to the Trustee-developed criteria. Potential projects will be identified through identification and review of existing watershed plans and other documents, and through consultation with local resource experts and the public. This task assumes that two Stratus Consulting staff will attend one in-person physical impacts and restoration TWG meeting.

Task 3: Support for Toxicological Impacts TWG Activities

Under this task, Stratus Consulting will, upon the request of the Service, provide support for toxicological TWG activities.

Polycyclic Aromatic Hydrocarbon (PAH) Adverse Effects Literature Review and Evaluation of MDEQ Cleanup Criteria

Stratus Consulting will provide support in the compilation, review, and assessment of information on the potential ecological effects of oil constituents such as PAHs on biological receptors. This task will involve compiling, reviewing, and summarizing scientific literature, reports, and other information on the effects of relevant hazardous substances on biological receptors. It will also involve compiling and reviewing MDEQ's toxicity-based cleanup criteria for soil, sediment, and water and evaluating their relevance for the NRDA. Findings will be delivered in a draft report that will be submitted according to a schedule that is mutually agreed upon by the Service and Stratus Consulting. The final report will be provided within two weeks of receiving comments on the draft.

Summary of Previously Collected Site Environmental Data

Stratus Consulting will compile and interpret available soil, surface water, and sediment data from the site. We will generate reports that summarize how and when the data were collected, and that also provide a comparison of the data to the identified relevant injury effects levels. Data to be evaluated include surface water, sediment, and soil data collected during response activities, as well as surface water data, sediment, and mussel tissue data collected as part of the NRDA. The draft reports will be submitted according to a schedule that is mutually agreed upon by the Service and Stratus Consulting. The final reports will be provided within two weeks of receiving comments on the draft.

Support for Ongoing Assessment of Potential Toxicological Effects

Stratus Consulting will also provide ongoing support in the assessment of potential adverse effects of PAHs and other oil constituents on biological receptors. This work may involve identifying and evaluating potential biological pathways and receptors, conducting additional literature searches, and providing further analysis of available data and information, as requested by the Service.

3. Schedule and Deliverables

The schedule is dependent on the needs of the NRDA as it progresses, and will be developed at the mutual agreement of the Service and Stratus Consulting. Deliverables will be submitted as requested by the Service within reasonable time constraints and budget limitations.

The Contracting Officer will be provided with a monthly invoice accompanied by a progress report that summarizes the expenditures for the month and includes a cumulative subtotal of expenditures against the contract amount. This monthly report will discuss progress on the contract tasks, as well as any problems encountered. The objective of this monthly progress report is to advise the Contracting Officer and the Contracting Officer's Technical Representative (COTR) of any problems that would interfere with completion of the contract on time and within budget. Stratus Consulting will notify the COTR when the deliverables have been sent. Deliverables will be provided in electronic format. Data generated as a part of this contract will be provided electronically upon request. Hard copies of data or deliverables will also be provided upon request.

4. Cost Estimate and Period of Performance

Our cost estimate for the tasks described above is as follows:

Task 1: \$89,321

- ▶ General Trustee Council coordination and administrative support

Assumes one staff member attends six in-person meetings

- ▶ General Trustee Council support for turtle summit

Stratus Consulting labor = \$17,707, Stratus Consulting travel (assuming two staff members travel to the meeting) and other direct costs including facility = \$4,501, expert labor (assuming two experts, 40 hours each) = \$17,490, expert travel (assuming five experts will travel and require accommodations to attend the meeting) = \$3,650

Task 2: \$37,884

- ▶ Physical impacts and restoration TWG vegetation assessment activities
- ▶ Physical impacts TWG restoration planning activities

Assumes two staff members attend one in-person meeting

Task 3: \$67,154

- ▶ Review of literature and MDEQ criteria for oil constituents
- ▶ Compilation and analysis of site environmental data
- ▶ General support for ongoing toxicological impacts TWG tasks.

The total estimated cost is \$194,359. The period of performance is 18 months from initiation of work, with work anticipated to be initiated in the late spring/summer of 2013.