

# FY 2020 Hanford Natural Resource Damage Assessment

## Activity and Accomplishment Report

### Summary

This report provides a summary of the Hanford Natural Resource Damage Assessment (NRDA) activities and accomplishments during fiscal year 2020. The Hanford Natural Resource Trustee Council (HNRTC), composed of the State of Oregon, State of Washington, Nez Perce Tribe, Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, U.S. Fish and Wildlife Service, NOAA Fisheries, and U.S. Department of Energy, is implementing the NRDA process at Hanford.

Council work in FY 2020 focused on continuing the injury determination phase of the assessment process. Most of the ongoing or newly-implemented studies are based on the Injury Assessment Plan (IAP), approved by the HNRTC in 2013.

Trustee organizations established five distinct teams, which have submitted reports (below): 1) Terrestrial Team coordinates and advances injury assessment in upland habitats; 2) Terrestrial Restoration Planning (18b Team) advances restoration crediting methods and planning for terrestrial vegetation; 3) Aquatic Work Group coordinates and advances the injury assessment in riparian and aquatic habitats; 4) Hanford Aquatic Restoration Planning (HARP) advances restoration crediting methods and planning for aquatic habitat; and 5) the Tribal Service Loss studies which are managed by the individual tribes. Other teams meet as needed, such as the Data Management Team, teams working on individual scopes of work, and administrative tasks such as budget development.

In FY2020 these teams made progress in seven major activities:

- (1) Aquatic data compilation was nearly completed and terrestrial data compilation made significant progress;
- (2) *Compilation of NRDA Injury Threshold Memos*, documenting ecological injury thresholds for soil, sediment, and water, was completed;
- (3) The *Hanford Site NRDA Disturbance Inventory*, documenting much of the physical disturbance along the river, was completed;
- (4) *Framework for Terrestrial Restoration Planning at Hanford: Analysis of Ecological Services and Recommendations for Terrestrial Restoration and Preservation Crediting*, completed in FY2019, was used in FY2020 to discuss trustee organization's individual restoration priorities and to review restoration priorities from organizations outside of HNRTC;
- (5) A review of existing aquatic sediment and pore water toxicity bioassays was drafted;
- (6) The HARP team drafted a technical memo on the review of aquatic restoration planning literature.
- (7) The Attorney Work Group met in-person once and had three conference calls during this fiscal year to confer over approaches to move the assessment closer to resolution.

More detail about trustee participation can be found in the quarterly grant reports to DOE produced by most trustee organizations, descriptions of individual studies can be found in the IAP, and estimated schedules are in the Project Execution Plan (PEP), the Terrestrial Work Plan, and the Aquatic Work Plan.

**Terrestrial Team:** coordinates and advances injury assessment in upland habitats, including upland aquatic habitats

A Terrestrial Team formed in February 2020 to focus on a strategic and cohesive approach to assessing terrestrial injury. The Team meets approximately monthly to review information and make decisions needed for execution of injury assessment studies.

The Team decided which existing Hanford data to compile (described below) and wrote a scope of work (SOW) to continue the contracted data compilation effort into FY 2021; this scope was approved and funded by Council but the work was not actually completed due to a change in DOE policy regarding pass-through funding.

Other work completed by the Team included the drafting of graphic conceptual site models, development of receptor selection criteria, and GIS mapping of reference locations used in Hanford studies. As part of Council's work planning effort and implementation of the HNRTC PEP, a Terrestrial Assessment Work Plan was developed and approved for use. This was a significant milestone as terrestrial work has heretofore been conducted using the increasingly outdated PEP in conjunction with the IAP. The plan was approved at the end of the fiscal year by the Terrestrial Team; it will guide work going forward and is considered a living document that will be revised annually.

### *Terrestrial Data Compilation (Studies 55 and 56)*

The purpose of this work is to evaluate and compile existing Hanford data and to upload NRDAR-relevant, quality data into the HNRTC database, Project Portal.

#### Council Resolution

2020-R-03: Trustees approved an amount not to exceed \$220,000 to continue to compile and upload terrestrial and aquatic data into Project Portal in FY 2021. Afterwards it was determined that DOE would not approve the pass-through funding mechanism that had been used in the past, and would need to procure these services later than originally anticipated by the Council. While it is critical to have these data available for the planned upcoming data analysis, it is now unclear when this work will be accomplished. This work scope will complement the original terrestrial data compilation effort (Phase 1) approved by the Council in 2018 as Resolution 2018-R-01 (NTE \$460,000), which was completed at the end of FY2020.

#### FY 2020 Accomplishments

Work on Phase 1 of the data compilation project resulted in the acquisition and review of 26 data utility assessments (DUAs), and represents the majority of significant analytical datasets available for the Hanford Site of over 500,000 records. Data packages and corresponding citations for Phase 1 were uploaded and archived to the HNRTC data management system in Project Portal.

#### Remaining Work, Deliverables, Milestones for FY 2021

Because of the contracting issues identified above, a new funding resolution and SOW will have to be written to obtain a contractor that can complete Phase 1. Phase 2 and Phase 3 of the terrestrial data compilation project were initiated in FY 2019 and will continue through at least FY 2021. These efforts are being led by a contractor whose current contract ends in September, 2021 (contracting to continue this work is also being developed). The objective of Phase 2 is to address the formal acquisition process to search for, obtain, or extract original sources of analytical data; including GIS layers, project metadata, maps, images, and other information, that will require any form of manipulation and configuration

management to be submitted to the HNRTC data management system in Project Portal. Phase 3 of this project focuses on submitting the acquired data and information into the HNRTC Case User Library within Project Portal. This work and process is ongoing and is scheduled to be completed in FY 2022, concluding the terrestrial Data Compilation Project.

### *Data Analysis SOW (Studies 14, 15a, 16, and 17)*

The purpose of this SOW is to evaluate existing/compiled media and biota data to (1) compare measured and/or modeled concentrations of HNRTC contaminants of concern (COCs) to site-specific effects thresholds for soil previously developed by HNRTC, (2) identify tissue thresholds in the literature for COCs and compare to measured and/or modeled concentrations at Hanford, (3) identify COCs and terrestrial receptors that may be most strongly associated with potential injuries (e.g., by virtue of having a greater magnitude and/or exceedance of effects thresholds), and (4) identify locations with higher or lower levels of exposure to hazardous substances, to help inform site selection in potential future injury studies.

#### Council Resolution

Additional information in the Project Management section of this report.

#### FY 2020 Accomplishments

Early in the fiscal year a draft Data Analysis SOW was developed by trustees and reviewed by the full Council. Council decided to expand this SOW to include a draft Tissue Threshold Development SOW, originally conceived for the Aquatic Team but expanded to include terrestrial biota. Council contracted with PNNL to produce an integrated and more comprehensive draft of the SOW (additional information in the Project Management section of this report).

#### Remaining Work, Deliverables, Milestones for FY 2021

The Council anticipates the Data Analysis SOW to be completed by mid-2021, and that initiation of contracting could begin as soon as the latter half of 2021 after the Council achieves consensus on a study funding resolution. Delays in the completion of data compilation may delay the data analysis.

### *Injury Thresholds for Soil, Sediment, and Water (Study 50)*

The purpose of this study is to identify threshold concentrations of COCs, above which injury to natural resources may occur. Thresholds will be compared to Hanford environmental sampling data as a way to determine injury in soil, sediment, and surface water.

#### Council Resolution

There were no resolutions in FY 2020.

#### FY 2020 Accomplishments

The development of Hanford-specific injury thresholds for COCs in soil, sediment, and surface waters was completed in FY 2020 after a multi-year contracting effort overseen by the Council. The process for determining whether terrestrial resources have been injured and the magnitude of injury involves the identification of threshold levels of contaminants that indicate measurable adverse effects to natural resources. The final product, dated March, 2020, is entitled “Compilation of NRDA Injury Threshold Memos” and addresses 42 radionuclide, inorganic, and organic COCs. Thresholds found in the document will be used to determine injury. While completion of the thresholds was a significant milestone, some

thresholds are based on species and conditions not found at Hanford Site and therefore may be revisited as new studies are published in the literature or currently unknown information comes to light.

#### Remaining Work, Deliverables, Milestones for FY 2021

The Injury Thresholds product is a major milestone in the Hanford NRDA and will be a key component in the extensive Data Analysis to be performed later in 2021.

#### *Terrestrial Disturbance (Study 18a)*

The purpose of this study is to assess the nature and extent of injury caused by remedial activities at Hanford Site. This is a complex, multi-year study to assess when and where physical disturbance of terrestrial habitat occurred as a result of cleanup, and to evaluate how long there will be effects into the future.

#### Council Resolution

There were no resolutions in FY 2020.

#### FY 2020 Accomplishments

During FY 2020, an addendum to the *Terrestrial Disturbance Inventory Report (2017)* to estimate habitat disturbances from remediation activities on the Hanford Reach National Monument was completed. The addendum provides a more complete picture of injuries at Hanford. Some Terrestrial Team members provided comment on the addendum but it is considered a DOE product. DOE also contracted with IEC to produce a pilot disturbance HEA for the 100 B/C Area; the Council was not part of the contracting or scope development but the Team received progress updates.

#### Remaining Work, Deliverables, Milestones for FY 2021

Work presented in the *Terrestrial Disturbance Inventory Report (2017)* and the IEC pilot HEA is under consideration by the Legal Work Group as part of its evaluation of appropriate next steps in addressing legal aspects of the Hanford NRDA. Relevant legal issues include determination of terrestrial baseline, the categorization of disturbances for purposes of determining terrestrial resource restoration obligations, and how best to address the temporal component of injury quantification across the disturbed areas. It's anticipated that the Legal Work Group will provide guidance to technical trustees on these matters later in FY 2021.

**Terrestrial Restoration Planning (18b Team):** advances restoration crediting methods and planning for terrestrial vegetation

#### *Terrestrial Habitat Restoration Planning (Study 18b)*

The purpose of this study is to identify terrestrial habitat restoration metrics and services, develop a crediting framework, and create a process for selecting restoration projects.

#### Council Resolution

There were no resolutions in FY 2020.

#### FY 2020 Accomplishments

The Study 18b team continued working on the second of two phases of shrub-steppe restoration planning, having completed Phase 1 in FY 2017. In FY 2019, the team finalized a summary of the findings of an

expert panel on shrub-steppe restoration that took place in February 2018. This summary, dated October, 2018, can be found in the document entitled “*Hanford Natural Resource Trustee Council Expert Panel Workshop: Shrub-steppe Habitat Recovery.*” Using this summary, the team went on to produce a document containing its recommendations for how to credit shrub-steppe restoration activities under the NRDAR process. This document, dated May 2019, is entitled “*Framework for Terrestrial Restoration Planning at Hanford: Analysis of Ecological Services and Recommendations for Terrestrial Restoration and Preservation Crediting.*” Following this work, the team developed a sequenced tasklist for completing Phase 2 of the study, which is intended to lead to the identification of potential areas for restoration or preservation on Hanford Site and off-site.

Having previously developed recommendations for terrestrial restoration and preservation crediting, the team focused on identifying recommendations for where restoration might occur. Since some trustees want to prioritize on-site restoration where the injury occurred, the Team decided to identify priority areas for restoration on Hanford Site to test the terrestrial restoration and preservation crediting framework. The Team worked with a GIS analyst to obtain the available ecological geospatial data, both within DOE and in the greater ecosystem management discipline, and developed methodology for priority area identification. A site visit was also conducted to groundtruth the most recent vegetation maps available for Central Hanford; vegetation type and diversity is key to identifying where restoration should and should not occur. Additional site visits will be essential for the team to identify specific restoration project locations. The Team also met with ecologists from Mission Support Alliance, discussed their MARXAN modelling exercise, and agreed to consider for restoration the areas that Mission Support Alliance mapped as needing “Improvement” in their 2019 mitigation prioritization report for the Hanford Site.

#### Remaining Work, Deliverables, Milestones for FY 2021

In FY 2021 the team will continue working with a GIS analyst to develop and implement methodology for identifying priority areas for restoration on Hanford Site (geographic focus areas) to test the terrestrial restoration and preservation crediting framework. NOAA will advanced the team’s crediting framework development by creating an Excel-based HEA workbook that can be used to run various project scenarios through a HEA and explore the inputs that affect credit generation.

**Aquatic Work Group:** coordinates and advances injury assessment in riparian and aquatic habitats along the Columbia River

The Aquatic Team focuses on a strategic and cohesive approach to assessing aquatic injury. The team met approximately monthly for discussion of progress and to make decisions needed for the execution of injury assessment studies. Some aquatic projects initiated in FY2020 will be ongoing in FY2021 and some will continue into future years. Project scopes of work that have received funding are ongoing while others are still in development.

As part of Council’s work planning effort a new Aquatic Work Plan was developed, as aquatic work has heretofore been conducted using the increasingly outdated PEP in conjunction with the IAP. In FY2019 a Draft Aquatic Work Plan for 2019 – 2022 was developed, although this new work plan takes a different approach and offers a tighter schedule. Trustees reviewed and commented on the plan in FY2020; it will guide work going forward and is considered a living document that will be revised annually.

### *Hanford Sediment and Pore Water Toxicity Studies Review (Study 4)*

The goal of this technical memo is to evaluate results of aquatic-oriented bioassay toxicity studies for use in the injury assessment. The River Corridor Baseline Risk Assessment used some data from these bioassay reports to draw conclusions for a risk assessment; these data in conjunction with others must be assessed for appropriate use in a natural resource damage assessment. The Trustees will apply the study results during injury determination and quantification.

#### Council Resolution

There were no resolutions in FY 2020.

#### FY 2020 Accomplishments

The review of original bioassay reports and summaries of other bioassays was accomplished this year, and a draft technical memo is in development and more than 75% complete. It was initially identified as a potential review/study in the IAP, however the Aquatic Team agreed individual trustees could develop a technical memo in an efficient manner.

#### Remaining Work, Deliverables, Milestones for FY 2021

Additional bioassay studies were identified, and while the original reports could not be located the search continues. Several people drafted pieces of this memo, which require mostly editing and assembling in FY2021.

### *Aquatic Data Compilation (PEP Study 51)*

The Council in 2017 initially approved funding for Aquatic Data Compilation (Resolution 2017-R-02). Since the completion of Phase 1 of the aquatic data compilation project in FY2019, work has continued with identification and compilation of data through continued funding of contractors. The purpose of this work was to compile and review analytical data for their utility, quality, and relevance to injury assessment questions. Initial work resulted in the compilation and review of 19 data packages (or data utility assessments) that represent the most significant analytical data sets available for the Columbia River. In the past year, older radiation data in air, soil, water, and biota was sorted so Trustees could decide which parcels of hardcopy data should be digitized and added to electronic database. This effort is about 25% complete and critical for performing time-series contaminant analyses at sampling stations and in selected geographic areas. As part of the data analysis SOW a deliverable that will display where and when data exist for both terrestrial and aquatic data will help identify any data gaps.

The second phase of the Aquatic Data Compilation continued into FY2020. The objective of Phase 2 of this work is to address the formal acquisition process to search for, obtain, or extract original sources of analytical data; including GIS layers, project metadata, maps, images, and other information, that will require any form of manipulation and configuration management to be submitted to the HNRTC data management system in Project Portal.

#### Council Resolution

2020-R-03: Trustees approved an amount not to exceed \$220,000 to continue to compile and upload terrestrial and aquatic data into Project Portal in FY 2021. Afterwards it was determined that DOE would not approve the pass-through funding mechanism that had been used in the past, and would need to procure these services later than originally anticipated by the Council. While it is critical to have these data available for the planned upcoming data analysis, it is now unclear when this work will be accomplished. This work scope will complement the original terrestrial data compilation effort (Phase 1) approved by the Council in 2018 as Resolution 2018-R-01 (NTE \$460,000), which was completed at the end of FY2020.



## FY 2020 Accomplishments

Work on Phase 1 of the data compilation project resulted in the acquisition and review of 26 DUAs, and represents the majority of significant analytical datasets available for the Hanford Site of over 500,000 records. Data packages and corresponding citations for Phase 1 were uploaded and archived to the HNRTC data management system in Project Portal.

## Remaining Work, Deliverables, Milestones for FY 2021

Because of the contracting issues identified above, a new funding resolution and SOW will have to be written to obtain a contractor. The development and implementation of data acquisition protocols is the third phase of the Aquatic Data Compilation study. The Trustees' work in the past year provided a standardized and streamlined approach for updating the HNRTC Data Acquisition Plan. The updated plan was posted in the the HNRTC Case User Library within Project Portal. This work is ongoing and is scheduled to be completed in FY2021.

## Data Analysis (PEP Studies 1, 2, and 3)

The Council approved funding for a task order in which PNNL assisted with technical refinements and methods of a draft data analysis SOW, and to combine several other studies into one SOW (additional information in the Project Management section of this report).

### *Aquatic Data Analysis (PEP Studies 1 & 2)*

The purpose of this SOW is to evaluate existing/compiled media and biota data to (1) compare measured and/or modeled concentrations of Hanford Site contaminants of potential concern (COPCs) to site-specific effects thresholds for sediment and water previously developed by HNRTC, (2) identify COPCs and aquatic receptors that may be most strongly associated with potential injuries (e.g., by virtue of having a greater magnitude and/or exceedance of effects thresholds), and (3) identify locations with higher or lower levels of exposure to hazardous substances, to help inform site selection in potential future injury studies.

### *Comparison of Aquatic Tissue Concentrations to Effects Thresholds (PEP Study 3)*

The purpose of this study is to determine potential past, current, and future injuries to aquatic biota based on comparisons of measured tissue COPC concentrations to literature-based effects thresholds. This effort will also identify COPCs that may be most strongly associated with potential injuries (e.g., by virtue of having a greater magnitude and/or exceedance of effects thresholds). A geospatial analysis will help identify species and/or locations with higher or lower levels of exposure to hazardous substances, which may help inform site selection in potential future field studies of aquatic biota.

## Council Resolution

Additional information in the Project Management section of this report.

## FY 2020 Accomplishments

Early in the fiscal year a draft Data Analysis SOW was developed by trustees and reviewed by the full Council. Council decided to expand this SOW to include a draft Tissue Threshold Development SOW, originally conceived for the Aquatic Team but expanded to include terrestrial biota. Council contracted with PNNL to produce an integrated and more comprehensive draft of the SOW (additional information in the Project Management section of this report).

### Remaining Work, Deliverables, Milestones for FY 2021

The Council anticipates the Data Analysis SOW to be completed by mid-2021, and that initiation of contracting could begin as soon as the latter half of 2021 after the Council achieves consensus on a study funding resolution. Delays in the completion of data compilation may delay the data analysis.

### Groundwater to Surface Water Evaluation (PEP Study 32)

The main purposes of this study are to map the extent of contaminant plumes, identify groundwater preferential discharge locations, connect the known groundwater plumes to the riverine environment, and to estimate the contaminant flux to the river. This study is designed to help assess the exposure pathways and injury to aquatic biota. This statement of work attempts to address many of the needs outlined within the IAP, past trustee discussions, and expert panel discussions.

### Council Resolution

There were no resolutions in FY 2020.

### FY 2020 Accomplishments

Currently, a small team of hydrogeologists from trustee organizations is compiling the background information that will be necessary for a contractor to evaluate contaminated groundwater upwelling to the Columbia River through both space and time. In FY2019, Trustees had different views on (1) the priority of this potential study, (2) cost/benefit of the study, (3) timing of the study, and (4) the extent to which it can reliably fill existing data gaps and address ‘uncertainties’ in the Aquatic part of the NRDA. The SOW has undergone significant revision by Trustees in the past year and in this nearly complete form has strong support from the Council.

### Remaining Work, Deliverables, Milestones for FY 2021

Many Trustees including DOE supported the evaluation and scoping of potential work in this area in FY2020, but the Council will provide direction on project scope, schedule and cost proposed in FY2021.

**Hanford Aquatic Restoration Planning (HARP)** advances restoration crediting methods and planning for aquatic habitat

### Hanford Aquatic Restoration Planning (PEP Study 54)

The goal of HARP is to initiate aquatic restoration planning and develop an aquatic restoration crediting framework. Review of literature on ecological aquatic resources and services was led by a NOAA contractor with frequent participation by trustee organizations. In Phase I (Literature and Data Review) trustees and the NOAA contractor laid the foundation for development of a framework for crediting aquatic restoration. A future phase of the study would entail creating the crediting framework based on the findings of this first phase of the study.

### Council Resolution

2020-R-02: Trustees approved an amount not to exceed \$140,000 for 1 FTE to continue to support aquatic restoration planning in Fiscal Year 2021.



## FY 2020 Accomplishments

In FY2020, Task 1 (Hanford Area Data Collection) was completed. Nine riparian revegetation projects were identified as having been implemented on Hanford and the Monument Lands. Due to the small number of projects, limited years of monitoring, differences in monitoring metrics, and other factors, recovery curves or ranges were not constructed with the data available from these nine projects. Deliverables for this task included a database of the catalogued areas and relevant project information as well as a map depicting the location and sizes of the nine projects. A memo describing the methods and findings of Task 1 was uploaded to the Project Portal workspace along with the task deliverables noted above.

Task 2 (Literature Review of Off-Site restoration in Mainstream and Tributaries) was substantially completed in FY2020, though full Council review of deliverables will occur in early FY2021. Task 2 activities completed in FY2020 included team review of the literature; development of lists of habitat types, monitoring metrics, and restoration techniques; development of a database of habitat development rates; inventory of aquatic restoration projects outside of Hanford implemented on the mainstream of the Columbia River; and drafting of an annotated bibliography.

## Remaining Work, Deliverables, Milestones for FY 2021

Work on Task 3 (Literature Review of Benefits from Aquatic Habitat Restoration) is ongoing. A funding proposal for FY21 contractor support to continue leading Hanford aquatic restoration planning was unanimously approved by the Trustee Council in spring 2020.

## Tribal Lost Service (TLS) Studies

The three Hanford Tribal trustees [Yakama Nation (YN), Nez Perce (NPT) and Confederated Tribes of the Umatilla Indian Reservation (CTUIR)] have each continued studies to determine the nature and extent of potential impacts of Hanford releases on the cultural services provided to tribal communities by natural resources. These services may have been diminished in quality and/or are no longer present and are in need of restoration efforts, or were interrupted by the presence of contaminants released by Hanford operations.

After the IAP was finalized and approved by Trustees in 2013, the Council agreed that the three Tribal Loss Service studies were among the top priority studies for funding.

### Yakama Nation

Yakama Nation worked with DOE through cooperative agreement discussions to include a FY 2021 task to revise the Tribal Lost Service workplan. The effort will allow for the TLS work plan to be consistent with TLS work Yakama Nation has completed at other hazardous waste sites in the Pacific Northwest. The work plan revision is scheduled for the first quarter of FY 2021 but is dependent on awarding of funds tied to this project.

### Nez Perce Tribe

The NPT Tribal Service Loss study was completed at the end of FY 2018. A Restoration Plan for Tribal service losses was approved by the Council in February, 2019, and is awaiting funding to execute.

### Confederated Tribes of the Umatilla Indian Reservation

The CTUIR Risk Calculator, one component of the study, was completed and tested (bench marked with ResRad) in past years. Generating the risk layers and overlaying the results on cultural and other areas of concern is pending funding.

## **Project Management**

### Trustee Council Operations

Jack Bell (NPT) was Chair of the Council for FY 2020, and Sara Lovtang (Oregon) was Vice-Chair. For FY 2021, Sara Lovtang (Oregon) will serve as Chair and Stacy James (USFWS) will be Vice-Chair. The full Council generally met on a monthly basis in FY 2020, with a break in July, to plan and oversee Hanford NRDA activities. A key Council objective for FY 2020 was to fund and make substantial progress on injury studies focused on data acquisition and analysis. Current year funding was reviewed on a routine basis.

The FY 2022 budget request was developed and submitted to US DOE in May, 2020. While the budget request was formulated around Council's PEP, DOE requested additional information from the Council, and Council's expected outcomes from planned expenditures. With resolution of the budget request ongoing, DOE agreed to evaluate funding of individual studies as they are approved by the Council during Council meetings while discussing the Council budget.

### Data Management

Data management is an essential foundation of the damage assessment process. As such, the HNRTC operates and maintains a data management system as outlined in the Data Management Plan approved by the Council. This includes: (1) implementing, operating and maintaining a data management system and (2) providing data management; document management; (3) GIS data stewardship; (4) quality assurance and (5) data access coordination. Data management activities performed during 2020 involved technical coordination between the Trustees and three different contracting entities.

### Council Resolutions

2020-R-04: Trustees approved an amount not to exceed \$175,000 to fund operation and maintenance of the Data Management System (Project Portal) in FY2021.

2020-R-05: Trustees approved a not-to-exceed amount of \$112,000 to fund spatial/technical and data steward support services for fiscal year 2021.

2020-R-06: Trustees approved a not-to-exceed amount of \$246,000 to fund the Project Manager/Quality Assurance Coordinator for fiscal year 2021.

### FY 2020 Accomplishments

Highlights for the year include uploading reports, references, geodatabases, and data to the Documents Module of Project Portal for nine DUAs. Data utility assessment is a first step in the scientific analysis and evaluation of data by the Trustees to determine if data are of the right type, quality, and quantity to support their intended use in the NRDA. Data from these nine sources were uploaded into the

Environmental Database Module of Project Portal, representing 840,091 environmental records. During that work redundancy was identified and rectified among 1.9 million records.

Workflow was further streamlined between the data acquisition/compilation contractor and the quality assurance coordinator uploading data in Project Portal, allowing more efficient collating of data. DOE/Hanford Contractor geospatial files were identified and cleared, including data layers for the Comprehensive Land Use Plan, revegetation areas, Waste Information Data System polygons, Hanford Site soils, WCH-380 temperature and conductivity polygons in the river, and historic aerial imagery. Publicly-available GIS layers were retrieved and uploaded to Project Portal for HNRTC use (data sourced from National Park Service, Washington Department of Natural Resources, The Nature Conservancy, US Geologic Service, Washington Department of Ecology, US Department of Transportation).

Administrative records from the HNRTC public-website (HanfordNRDA.org) were migrated to the Project Portal Workspace for data consolidation.

#### [Remaining Work, Deliverables, Milestones for FY 2021](#)

Trustees will continue to support the implementation, operation and maintenance of the Council's data management system. This includes hiring contractors to provide management of data, documents and GIS data layers; quality assurance; and data access coordination. Data management activities for FY2021 are expected to involve technical coordination between the Trustees, a data acquisition/compilation contractor, the data quality coordinator, and the data management system.

#### [Data Analysis Scope Development](#)

Early in this fiscal year Trustees developed a preliminary draft statement of work for data analysis, which trustees reviewed. Council decided to expand this SOW to include a draft Tissue Threshold Development SOW, originally conceived for the Aquatic Team but expanded to include terrestrial biota. Council contracted with PNNL to produce an integrated and more comprehensive draft of the preliminary draft SOW. Funding was approved for a task order in which PNNL is assisting with technical refinements and methods for combining several studies into one SOW, projected to be completed in early FY 2021.

#### [Council Resolution](#)

2020-R-01: Trustees approved the amount of \$50,000 to contract with PNNL for combining and developing the Data Analysis SOW with divisible tasks. The scoping included engagement of HNRTC to explore how to best develop the tasks and sequencing of the work with a completion date of September 30, 2020.

#### [FY 2020 Accomplishments](#)

The SOW is more than 90% complete. The document is highly detailed and complex, more than 40 pages, and made up of multiple divisible tasks so funding the work can be matched to available HNRTC funds. PNNL interfaced with trustees on conference calls, and responded to trustee comments. However, at the end of the FY it was determined that additional time was needed for PNNL to complete the SOW.

Further details are in the Terrestrial Team and Aquatic Work Group sections of this report.

#### [Remaining Work, Deliverables, Milestones for FY 2021](#)

In FY 2021 (December, 2020) Trustees approved funding resolution 2020-R-08 for an amount of up to \$15,000 (for a total not-to-exceed amount of \$65,000) for PNNL to complete the Data Analysis SOW with the 4 new additions identified by the Council. Council expects the SOW development to be completed in May of 2021, with the potential for contracting bids and work to begin by the end of FY2021.

### Facilitation Services

Facilitation services were provided between September, 2019, and July 2020, when Trustees decided not to extend the facilitation team's contract. In July and September trustees rewrote the statement of work used to hire the former facilitation team to better reflect the Council's needs and DOE's contracting requirements.

After mid-July the burden of fulfilling administrative and facilitative tasks were completed by the Chair and Vice-Chair and other trustee representatives on a voluntary basis. As the Chair and Vice-Chair are not trained facilitators, the tasks they performed revolve around meeting agendas and filing. The Council is sorely in need of a trained facilitator who knows the steps in the Council decision-making process; will listen carefully to discussion to formulate questions that help guide the Council; create and maintain a safe and open environment for sharing ideas; be attuned to moods in the room, and respond to prevent dysfunctional behavior; step in quickly to reestablish order; direct the group toward a constructive resolution; and keep the Council meetings on track. The loss of this core service for the Council decreases its ability to perform work effectively and pulls the Chair and Vice-Chair, and others, away from technical issues of the NRDA.

### Council Resolution

2020-R-07: In September, 2020, Trustees approved an amount not to exceed \$175,000 for facilitation services for Council activities throughout FY2021.

### FY 2020 Accomplishments

Facilitation services were provided between September, 2019, and July 2020.

### Remaining Work, Deliverables, Milestones for FY 2021

During the FY 2020 period many facilitation team activities were postponed or not completed adequately, which have been only partly addressed (and identified) when the Chair and Vice-Chair took over the facilitation team roles. In FY 2021 a new facilitation team will have to bring the following up to date: Administrative Record updates; ensuring all past resolutions, meeting summaries and meeting materials are uploaded to Project Portal; updating the HNRTC public website (and perhaps rebuild it); and most importantly, helping the Council make decisions essential for moving the NRDA forward.

### Non-Federal Trustee Group and NRDA expertise

The non-federal Trustee organizations met in person until March, 2020, and via virtual meeting platforms for the rest of the fiscal year. This group meets to:

- Articulate common interests and issues of concern,
- Address potential non-consensus issues before bringing them to the full Trustee council,
- Work together to develop ways to move the assessment forward, and
- Develop strategic planning for the assessment work.

### Council Resolution

There were no resolutions in FY 2020.

### FY 2020 Accomplishments

The non-federal trustee group identified a need for NRDA expertise, sharing a SOW for a NRDA contractor with the federal partners in June, 2020. The SOW was originally conceived as a contractor assisting the non-federal trustees develop strategic planning for the assessment work. The non-federal

trustees explored ways to fund this expertise, although no individual trustee organization felt it could cover the costs upfront until the NRDA case was settled.

#### Remaining Work, Deliverables, Milestones for FY 2021

The federal trustee attorneys reviewed the SOW, and late in FY 2020 they verbally suggested that the NRDA expertise be made available not only to the non-federal trustees but to the full Council. The non-federal trustee group will revise the SOW for NRDA expertise.

#### Attorney Work Group

There are legal issues that require discussion among attorneys to advance the NRDA. In order to facilitate discussions and resolve complex legal issues, the Council agreed to establish and DOE agreed to fund for FY 2019 and FY 2020, an Attorney Work Group.

#### Council Resolution

There were no resolutions in FY 2020. Future attorney expenses will be included in individual trustee participation funding requests submitted to DOE annually.

#### FY 2020 Accomplishments

Department of Justice (DOJ) and trustee attorneys began pre-planning and coordination efforts late in FY 2019. In FY 2020, the attorneys held several conference calls to (1) discuss the possibility that a confidentiality agreement might be needed for legal work group discussions; (2) the extent to which non-federal trustees are able to begin discussing baseline and compensability, starting with comments on the 100 B/C terrestrial disturbance report to be released by IEC in FY2021; (3) a schedule for completion of injury assessment and how the non-federal proposal for retaining a NRDA expert would be integrated into the overall scope and schedule for completion of the injury assessment; and (4) DOE's reservations about funding the proposed SOW exclusively for the Non-Federal Trustee Group for a NRDA expert under the Federal Acquisition Regulation.

The following documents have been produced in cooperation with the Attorney WG in FY20:

- Non-federal trustees' SOW for NRDAR expertise
- Federal trustees' proposal for "joint consultant" to assist all trustees with NRDA (talking points in response to the non-federal SOW for NRDAR expertise)

#### Remaining Work, Deliverables, Milestones for FY 2021

Attorneys for each trustee organization will discuss baseline and compensability issues surrounding physical disturbance caused by remedial activities using "*100-BC Area Remedial Disturbance: Pilot Application of HEA for Injury Quantification*" released by IEC in January, 2021.

#### Problems/Challenges in FY2020

Some of the largest challenges during this period stem from the lack of strong facilitation services and the switch to remote meetings rather than in-person meetings caused by the COVID-19 pandemic. While Trustees have always had disagreements in the past, there were opportunities to strengthen relationships over lunch or dinner to casually discuss the NRDA, or work through issues as a Council with a facilitator in-person. In-person meetings and a good facilitator will foster effective communication to make informed decisions, encourage respect in the input of all Trustees, aid in transparency, and help Trustees work from a common understanding of issues and each other's perspectives.

Contracting hurdles also caused setbacks such as changes in contracting practices and the long wait times before contracts are bid, processed and selected. In planning for work Trustees currently try to allow for one quarter to develop the SOW, and two quarters for the contract to bid, process and get selected before work can begin.