

## **NOAA's Approach to Cooperatively Resolving Natural Resource Liability**

*OR&R Mission Statement: To protect and restore coastal resources by countering and responding to environmental threats and promoting sound decision-making in the coastal zone.*

At hazardous waste sites or spills, OR&R implements this mission through:

- Natural resource protection – Assists EPA & USCG in ecological risk assessment and in response and remedial planning, design, and monitoring, (CPRD CRCs & HAZMAT SSCs).
- Cooperative approaches to achieve restoration and resolve natural resource liability through settlements - The integration of remedial and assessment/restoration investigations, planning, and activities is a successful paradigm for achieving restoration-based settlements. Generally, waste site cases are led by a CPRD CRC in coordination with GCNR and participation of other Damage Assessment and Restoration Program (DARP) offices, as appropriate, working as a team. DARP also pursues cooperative settlements with responsible parties to resolve natural resource liability, and has had great success with this approach, particularly after oil spills.
- Preserving and, where necessary, pursuing the litigation option to achieve restoration objectives - The DARP Board reviews and approves candidate cases involving waste sites and spills and provides necessary support for the development of litigation-quality damage claims; achieves restoration through negotiated settlements, including at vessel grounding sites. When CPRD identifies sites that potentially will require litigation, or an increased investment and level of effort to resolve liability, the sites are referred to DARP (see below for factors). (DAC, RC and GCNR).
- Implementation and facilitation of other restoration projects and restoration research. (e.g., CREST, LPI, CICEET, Anacostia) (OR&R HQ and CPRD).

Under CERCLA 122j, trustees can release potentially responsible parties (PRPs) from natural resource damages liability if PRPs take appropriate measures to protect and restore injured natural resources. The approach described here protects and restores coastal natural resources by collaboratively resolving natural resource liability as part of, or in parallel to the cleanup process. By working with the responsible parties and other trustees during the cleanup process, we can quickly and efficiently plan for and cooperatively implement restoration actions that compensate the public for natural resource injuries, including interim service losses, caused by contamination.

As the principal Federal trustee for natural resources in the coastal and marine

environment, NOAA addresses natural resource injuries caused by the release of hazardous substances. The Office of Response & Restoration promotes the stewardship of natural resources for future generations, encourages industry to follow environmentally responsible business practices, and assists other Federal and state natural resource trustees in addressing their trustee responsibilities. NOAA's goal is both to protect and restore injured coastal and marine resources.

Achieving restoration of injured resources requires that the following questions be answered:

- What measures must be taken to protect natural resources from existing and future threats?
- What resources have been injured and what is the loss to the public?
- How can the resources be restored and what type and amount of restoration is appropriate to make the public and the environment whole?
- The damage assessment and restoration planning process addresses the last two sets of questions. It has three primary phases: injury assessment, restoration planning (including identification, evaluation and selection from among restoration alternatives and scaling of restoration) and restoration implementation.

There are currently two primary paths within OR&R which can lead to cooperative resolution of natural resource damages liability under CERCLA– (i) the path through the Coastal Protection and Restoration Division (CPRD-the cooperative and integrated approach to remediation/restoration and negotiated settlement) and (ii) the path through the DARP to assess injury and plan and implement restoration.

Waste sites are referred from CPRD to DARP when it appears that responsible parties are not cooperative and that resolving liability as part of the remedial process will be difficult. Additional factors that would cause a site to be referred to DARP include:

- the potential for large-scale economic or biological injury, particularly where additional studies are needed to obtain information to scale injury and restoration
- trustees are having difficulty working together and reaching agreements
- the cleanup agency may not address significant natural resource injury. For example, if no actions are taken to investigate and plan clean-up, if a site does not score sufficiently for the National Priority List, or if a cleanup decision will not protect NOAA trust resources

## **Cooperative and Integrated Remediation/Restoration Approach (CAIRR)**

The cooperative integrated remediation/restoration (CAIRR) approach is characterized by 1) an integrated and streamlined process for data assembly to support planning for remediation and restoration, 2) development of protective cleanup strategies to minimize residual injury and enhance recovery of coastal areas, 3) injury assessment, restoration planning and scaling, 4) the negotiated release of natural resource liability (through a Covenant Not To Sue), and 5) implementation and monitoring of restoration.

Because of our regional co-location with state and federal remedial decision-makers, NOAA OR&R works effectively to integrate the remedial and damage assessment processes to protect natural resources, to reduce or eliminate residual natural resource injuries after cleanup, and to achieve restoration as part of a cooperative natural resource injury settlement with responsible parties. The approach achieves the following objectives:

Protects resources – OR&R staff work with the response agencies (EPA, USCG, other federal Lead Response agencies, or a State) to efficiently determine protective cleanup levels and strategies and implement a feasible and appropriate remedy for the site (one which minimizes residual injuries and enhances recovery).

Resolves liability for natural resource injuries - OR&R promotes the collection of data during the remedial process that is also useful for scaling injury and planning restoration. OR&R also interacts with responsible parties and co-trustees to identify and quantify injuries to natural resources and determine restoration requirements. OR&R works to achieve consensus on conservative but technically reasonable assumptions and conclusions for quantifying injuries and scaling restoration.

Expedites restoration of resources – OR&R provides opportunities to incorporate or implement agreed restoration during cleanup, which reduces construction costs and mobilization expenses as well as residual restoration requirements. By incorporating restoration into remediation, restoration construction can begin earlier than if it begins after a remedy is implemented. OR&R also works with cleanup agencies to incorporate restoration into remedial actions where there is no responsible party and at Federal facilities.

Monitor restoration performance – OR&R includes provisions to monitor restoration actions to ensure that restoration goals were met and to improve our understanding of restoration science.

The CAIRR process is tailored to the conditions and/or circumstances at

individual sites. The amount of data required and the difficulty of scaling injuries and identifying appropriate restoration vary with the complexity of the site, including the degree of contamination, the type and mixture of contaminants at the site, expected severity of toxicity and type of effects (direct toxicity vs. bioaccumulation-based effects), the sensitivity of the natural resources present, and the willingness and ability of responsible parties and trustees to be flexible in their approach to protection and restoration. The weight of the evidence (in terms of quality, quantity, and uncertainty) is matched to the weight of the decision (in terms of scale, cost, and environmental implications).

**Benefits of CAIRR:**

The benefits of the CAIRR approach include that it is:

- Integrated - placement of NOAA CPRD staff in regional EPA offices takes advantage of the response process to protect natural resources. The approach also assures that response data will be useful to identify and scale natural resources injuries and restoration requirements.
- Flexible - varies according to site-specific conditions and other circumstances.
- Fast - intended to work within the time frame of settling cleanup liability.
- Efficient - minimizes the need for additional assessment studies and can be implemented during and after remedial implementation.
- Cost Effective - minimizes legal costs (See Medina, 2000, "Just Do It")

Further, options for litigation are not precluded if cooperation ceases.

The outcome of the CAIRR process is usually a judicial Consent Decree detailing protection and restoration of natural resources (although other legal instruments may be applicable), a release from liability for responsible parties, a protective cleanup action, and implementation of the restoration plan for injured natural resources.

## Cooperative And Integrated Response & Restoration (CAIRR)

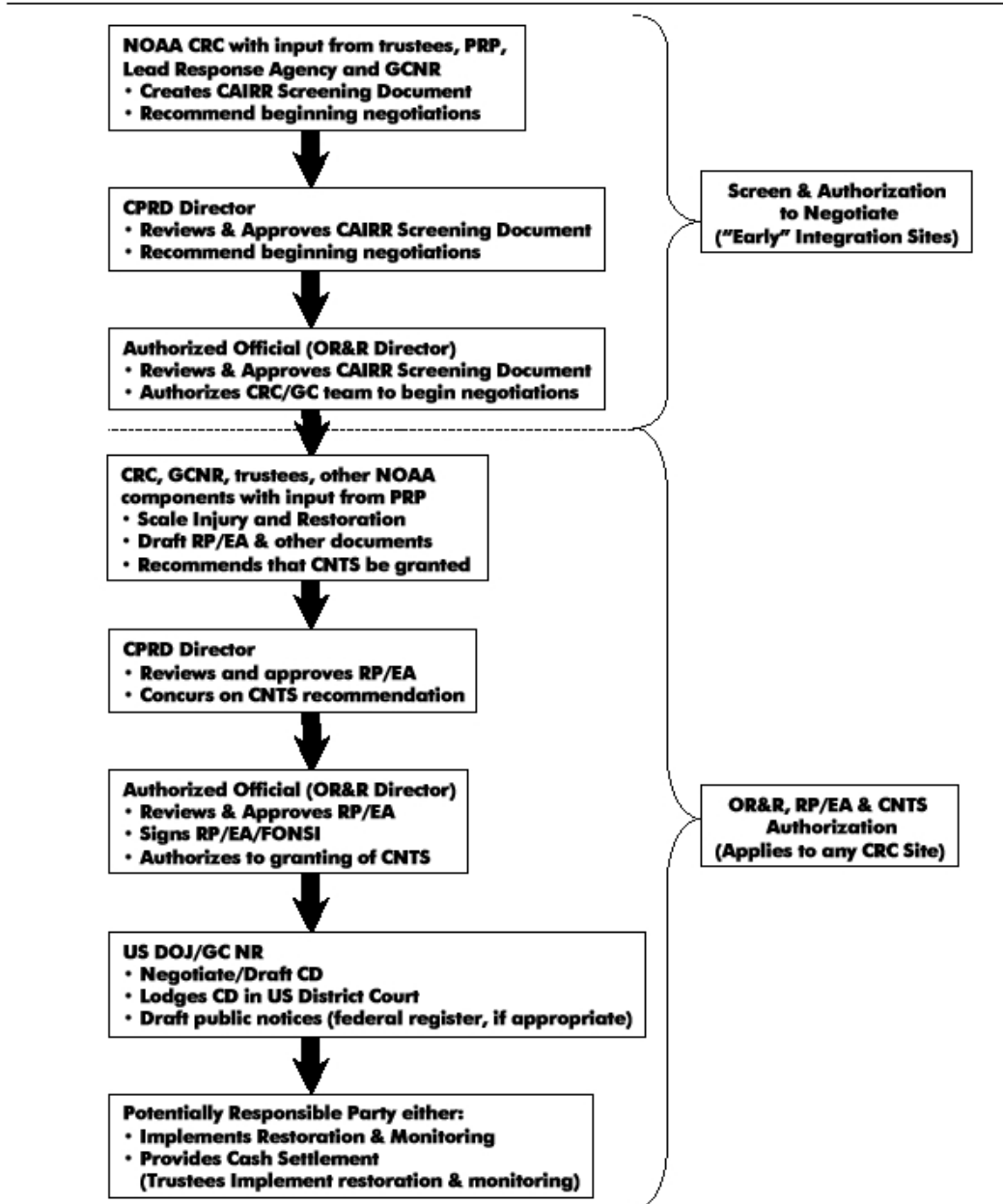


Figure 1. CAIRR Process Flow Diagram

### 10 Steps to Restoration

Step 1 - Identification of Potential Injuries/Trustee Coordination: Trustees can use the Potentially Injured Natural Resource Matrix as a tool to foster agreement on which resources at the site should be evaluated. Injury categories are initially ranked based on potential magnitude of potential injury. This ranking is a factor to be considered in determining the level of effort that is reasonable in assessing each injury.

Step 2 - Initiation (CRC & GCNR) - As soon as there is sufficient information, a screening-level position is developed on integrated remediation/restoration for OR&R management – the CAIRR Briefing Document (CAIRR Brief). The CAIRR Brief uses existing data (e.g., from the Site Assessment/Waste Site Report, previous investigations, local agencies, etc.) to:

- document that NOAA resources are at the site;
- identify the potential for resource exposure and effects due to contaminants or potential response actions, as appropriate; and
- recommend that a CAIRR be attempted with a viable, interested PRP. A preliminary, conservative “best estimate” of potential losses or restoration requirements, using a screening-level habitat equivalency analysis (HEA) or other methods to estimate of scale of restoration is included, as appropriate.
- identify and authorize the NOAA team to initiate the CAIRR process and enter into negotiations.

Upon completion of this step, the NOAA project manager or CRC may invite the PRP (by letter) to participate, on a cooperative basis, in an integrated remedial and restoration planning process that is intended to lead to a comprehensive, restoration-based settlement to resolve their NRD liability at the site.

Step 3 – Reasonably Conservative Injury Evaluation and Restoration Scaling with the Trustee/PRP team

Working within the remedial process, CRCs evaluate ecological risk and advocate for remedies that prevent or minimize adverse effects to coastal resources. By working within the remedial process, the CRCs are often able to acquire most of the information necessary to identify and scale natural resource injuries and restoration requirements on a cooperative basis, which eliminates the need for separate assessments.

Two closely coordinated activities take place during this step: (i) injury assessment, to determine the nature and extent of injuries and losses of natural resources and services that need to be compensated; and (ii) estimation of restoration requirements, to determine the size and type of habitat needed as compensation. Ideally, these activities begin while the remedial investigation is underway. The remedial investigation includes ecological risk assessment that can generate biological injury information that can be supplemented if necessary. During this step, potential remedial alternatives are evaluated to minimize residual injury. Restoration scaling estimates should reflect evaluation of potential injury based on different remedial alternatives.

In an integrated cooperative assessment, the Potentially Injured Natural Resource Matrix can be used by the Trustees and PRPs to assist in developing an

understanding of the probable injuries. Generally, the parties should be able to agree on the resources injuries which need to be addressed, the structure and input values to be used in HEA for each injury to be scaled, or the input parameters for other scaling methods to be used. If additional data gathering is warranted, these needs can be jointly identified and the data secured.

At some point, the parties should be able to agree that they have adequately captured information needed for them to support stipulation or agreement on each injury parameter, based on existing data or data becoming available from RI studies or special studies. Agreement can usually be reached when the level of uncertainty around the data is acceptable to all parties. Trustees or PRPs can then draft "stipulations" (or a more informal equivalent) for each appropriate issue.

#### Step 4 – Draft Restoration Plan/Environmental Assessment (RP/EA)

Restoration planning - Trustees and the PRPs identify and evaluate alternatives available for returning the injured resources and services to their baseline condition (the condition of the resource had injury not occurred) and for compensating for the loss from the onset of injury until recovery.

Preferred restoration identified - A preferred action is selected from a range of restoration alternatives based upon the Trustees' evaluation and analysis of these restoration alternatives.

Draft Restoration Plan - The preferred action and the Trustees' evaluation and analysis of restoration alternatives is presented in a draft restoration plan (consistent with and including a NEPA Environmental Assessment Review). The preferred restoration action should be recommended, preferably at the location-specific level.

#### Step 5 – RP/EA Completion

RP/EA & Appendices should contain

- HEA inputs/coordination document
- Essential Fish Habitat coordination (Letter with Draft RP/EA)
- Endangered Species Act coordination (Letter with Draft RP/EA)
- Federal Consistency Determination (under the CZMA) (Letter with Draft RP/EA)
- Reply from State Coordinator (including Archeological/Cultural assessments)

- Determination of Consistency with Other Laws

RP/EA Finalization Steps:

- Draft RP/EA Newspaper, Fed Register &/or State Register Announcement
- Public Comment review and response.
- Finalize RP/EA (including restoration action selection)

Step 6 - Environmental Assessment/NEPA Clearance - The memos for a NEPA finding under an EA of "no significant impacts" go from:

- CPRD Director to OR&R Director
- OR&R Director to NOS Head
- NOS Head to the Director of the NOAA Office of Policy & Strategic Planning (OPSP) asking for concurrence.
- OPSP send briefing packet with the concurrences and the "to all interested parties" letter back to NOS. NOS Head can now sign and issue the actual Finding Of No Significant Impact (FONSI).

Originals with signature in the briefing package should be sent back for inclusion in the Final RP/EA.

Step 7 –CNTS with RP/EA Decision– The decision and clearance process for the Final RP/EA includes a cover letter of transmittal signed by OR&R Director recommending to GCNR that a CNTS be granted based upon RP implementation or RP payment of costs to implement selected restoration action(s). Signature of OR&R Director constitutes the decision by the NOAA Trustee to recommend that a the United States grant a covenant-not-to-sue . This decision is transmitted to GCNR with the RP/EA for implementation.

Step 8 - Consent Decree Preparation - DOJ and GCNR draft consent decree (CD) language based on the final RP/EA. DOJ, GCNR & CRC negotiate terms of the CD. All trustees must do this in coordination with legal staff of other trustee agencies to ensure settlement is approvable. The final RP/EA is used as a technical attachment, as appropriate.

Step 8a - Consent Decree Filed/Lodged - All parties execute the CD and DOJ, GCNR and co-trustees jointly lodge the CD with court. Fed Register &/or State Register notice announces CD lodging and period for public review and comment.

Step 8b - Consent Decree Approved/Entered By Court - DOJ seeks approval of settlement by court.



Step 9 - Restoration Project Planning and Construction – Perform all actions necessary to restore habitat (PRP, Trustees, other partners). The schedule within the consent decree governs the implementation of the restoration actions.

Step 10 – Monitoring Success of Remedy and Restoration and implementing any needed modifications.

#### **Appendix A. Cooperative Reasonably Conservative Injury Evaluation (CRCIE)**

The CRCIE approach to natural resource damage assessment recognizes that it is sometimes better to make reasonable, conservative estimates of natural resource injuries/losses using information obtained for other purposes than to spend additional time and money on injury assessment studies. At some point the additional costs to refine conservative injury estimates do not justify further investment considered against of the costs of providing additional habitat as compensation (this assumes that resources are protected from future or ongoing harm).

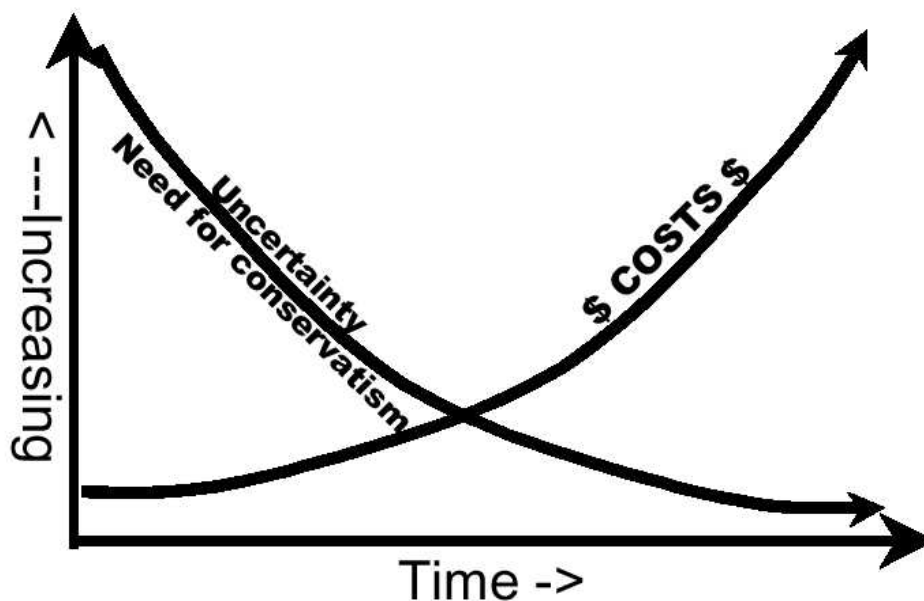


Figure A-1. Relationship between cost and uncertainty.

Ideally trustees' concerns are integrated into work plans for the remedial investigations,. Therefore, their data needs can often be met without additional assessments. This should occur simultaneously when the nature and extent and risk assessment sampling efforts are underway in the remedial investigation. If necessary, additional data/samples can be taken simultaneously with response samples to answer injury-specific questions. These data and any relevant historical data should ideally be managed in a relational database linked to a GIS and freely shared among the Trustee/PRP team.

Using this data, the parties can estimate the scale of likely injury. Uncertainty and conservatism about various parameter estimates can be reduced as additional higher quality

data become available. Where substantial data exists, uncertainty should be lessened.

**At some point, the parties can agree that existing data has an acceptable level of certainty needed to determine and stipulate agreement on each injury parameter (see below).**

**Potentially Injured Natural Resource Matrix (PINRM)** - Trustees construct a PINRM. Generally the level of effort devoted to each potentially injured resource should be based on best judgment of the magnitude of potential injury.

RESOUR CE/ SERVICE	CONTAMINA NTS	EVIDENCE SUPPORTI NG POTENTIA L INJURY	INJURY ASSESSM ENT DATA NEEDS	POTENTIAL ACTIONS ADDRESSIN G CONTAMINA TION	RESTORATI ON OBJECTIVES	COMPENSA TORY RESTORATI ON OPTIONS

Figure A-3. Potentially Injured Natural Resources Matrix (PINRM)

You need to insert a box to evaluate the magnitude of injury or perhaps break this in 2 parts after Evidence and Magnitude- then start with Injury assessment needs.

**Simplification of the matrix is advisable if possible to reduce time and transaction costs. Injury categories that are plausible, but not feasible to measure or agreeably small in magnitude may be eliminated here, pending additional compensation for uncertainty (if appropriate).**

**Habitat Equivalency Analysis - Develop RCIE estimations of each HEA variable (Table A-1) potential injury in the PINRM (Figure A-3). Continue this process until all inputs are agreed upon or settled. Alternative Scaling analysis, if available, may be used.**

(are we implying in the figure below that Area A=Area B, if so, we need to say this more clearly) units are acre-years?

### Graphical Representation of HEA

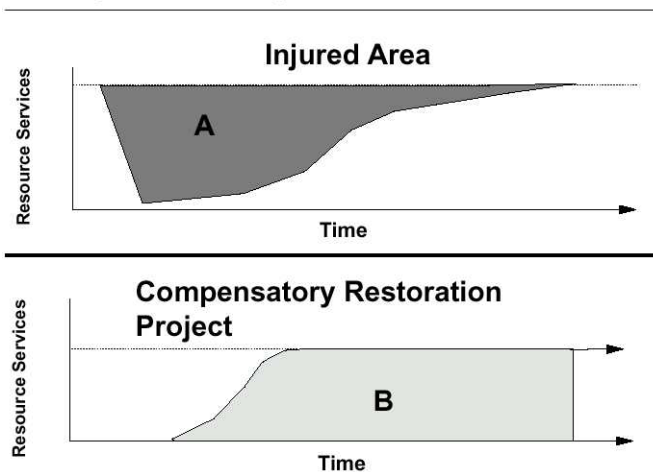


Figure A-4. Graphical Representation of Habitat Equivalency Analysis (HEA)

Table A-1. HEA Input Parameters

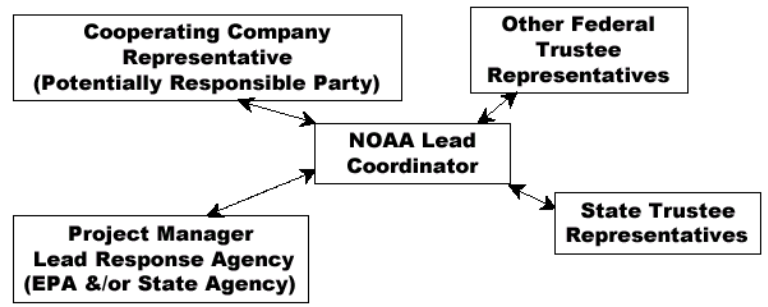
- **Type(s) of Habitat Injured**
- Date of Initial Resource Injury
- Extent of Injury
- Severity of Injury
- Duration of Injury
- Functional Form of the Recovery Curve
- Nature of Compensatory Restoration Project(s)
- Maturity Horizon of the Compensatory Restoration Project(s)
- Functional Form of the Maturity Curve
- Relative Productivity of Injured to Created Habitat(s)
- Persistence of Created Habitat
- Starting and Completion Dates of On-Site Restoration Activities (e.g., remediation and site restoration)
- Starting and Completion Dates of Compensatory Habitat Creation Projects
- Real Discount Rate:

**Working Groups** – A key concept is division of responsibility during negotiations. Experience has shown that technical issues can be resolved most quickly in a working group of technical representatives. Simultaneously, a legal team should begin drafting legal instruments to implement the technical agreements and resolve all legal issues. Frequent communication between the teams is necessary to avoid conflicts.

## CRCIE Working Groups – Structure

(Each Group Works in Parallel & is of equal stature)

### Technical Working Group



### Legal Working Group

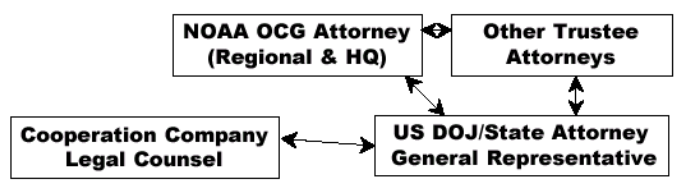


Figure A-2. Working Group Structures

Stipulations - If so inclined, Trustees and PRPs should be able to begin to negotiate to consensus regarding each potential injury category/HEA assumption (see NR Injury Matrix below) with PRPs. At anytime prior to finalizing RP/EAs, the Trustees and PRPs may draft and execute “durable stipulations” (or a more informal equivalent) for each issue they believe appropriate.