

Natural Resource Damage Claims at Sediment Sites

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NRD claims are brought by trustees for injuries to natural resources caused by the unpermitted release of a hazardous substance or oil. Claims are made based on an assessment of the degree to which natural resources have been injured, and require a causal link between the unpermitted release and the injured resource. While trustees have brought claims at a wide variety of hazardous waste sites, a majority of the current claims are for injuries to the groundwater resource (e.g., recent larger number of claims made by the state on New Jersey acting as trustee for the groundwater resource) and at sediment sites, where some of the hazardous substances resulting from historic releases are present in the sediment.

Sediment sites are often complex, with multiple contaminants, a combination of current and historic contamination, dynamic systems, and multiple sources and multiple stakeholders. For this reason, conclusions from site investigations can have high uncertainty unless considerable time and scientific effort is expended to identify the chemicals of concern and their source. Many times, the original sources can not be identified since the contamination is widespread and the contaminants (such as PCBs, hydrocarbons, and metals) similar to general urban inputs to the system. For these reasons, NRD assessments at sediment sites, which require a causation link between a release and a quantifiable injury, can be controversial. Due to the high degree of interest in resource use, combined with multiple contaminants in a dynamic system, resolving NRD claims at large sites is complex.

The ability to make a clear causation link between a release and a quantifiable injury is difficult at a sediment site for a number of reasons. Waterways have been used historically as a convenient discharge point for industrial and urban wastes, and that the practice of discharging wastes to water has gone on, in some instances, for well over 100 years. As a consequence, contaminants discharged to a water body often became attached to sediment particles and settled to the bottom of the waterway. These sediments then become a reservoir that can serve to continue to serve as a pathway of exposure to aquatic organisms. At most aquatic sites, the majority of the assessment effort is in determining resource injuries associated with this legacy contamination rather than any current, ongoing releases. Adding to the complexity of quantifying NRD injuries is the fact that many aquatic species are mobile, moving freely throughout the water body making it more difficult to link a particular release. In addition, for many aquatic organisms exposure to sediment is not direct, but rather through the consumption of food. Food web analysis needed to establish the indirect link between exposure to sediment, tissue body burdens, and injuries can be highly uncertain and lead to significant disagreements between parties seeking to resolve a NRD claim. Finally, NRD regulations require that baseline conditions be taken into account when quantifying resource injuries. Baseline conditions are often referred to as the 'but for' conditions, in which trustees have to account for the status

of a resource and the services provided by that resource that are associated with habitat conditions and other factors that are not associated with the release of a hazardous substance. In many urban waterways, urbanization and industrialization of the area resulted in significant modifications of the shoreline and water areas (filling of wetlands, dredging and channelizations, construction of dams to control water flow) that were concomitant with releases of hazardous substances. Quantifying injuries that are associated with these 'but for' conditions and the significance of the baseline conditions in the final quantification of injuries also can lead to significant disagreements between the parties.

While the original scheme for settling NRD claims leaned towards a litigation-based approach in which the claim would be determined through trial, or settlement prior to trial, the recent trend has been to attempt settlement through a cooperative assessment process, followed by a negotiated settlement. Such a trend can be beneficial to those seeking a timely resolution of a NRD claim, especially at sediment sites where the uncertainties associated with the assessment and quantification of injuries might be better accounted for through mutual agreement than through an extensive, and expensive development of empirical data and analysis. Also, the trend has been to settle claims through the direct construction of restoration projects by the responsible parties, rather than through the payment of cash to trustees, who then in turn must put the funds towards restoration. This shift in emphasis towards the immediate construction of restoration projects has also served to accelerate settlements at sediment sites.

These changes in approaches to resolving NRD claims has occurred because it promotes more efficient implementation of restoration projects, and decreases transaction costs. This approach for settling claims is especially well-suited for sediment sites, where changes in bank configuration or other physical changes in bank structure and near shore water depth can allow for enhanced habitat value. The construction of restoration projects has been fostered as a means of settling NRD liability for several reasons, including the desire by trustees to assure that more habitat is restored than might be otherwise obtained through alternative settlement structures. Restoration-based settlements result in habitat restoration projects being constructed sooner, often with construction being coordinated with, and incorporated into, cleanup projects.

Instead of using the Department of Interior's NRD regulations to assess injuries and establish their claim, they have relied on habitat service models, such as the Habitat Equivalency Analysis (HEA) model, to negotiate settlements. While not discussed in the Type B regulations, the application of habitat service models as tools for assessing injuries and determining compensation based on restoration projects is presented in the National Oceanic & Atmospheric Administration (NOAA) Oil Pollution Act regulations. Using habitat models, trustees make claims for resource injuries based on restoration projects, rather than based on cash. At settlement, responsible parties then have the option of undertaking a defined restoration project,

or paying the trustees an amount of money equivalent to doing the project. The HEA model represents a fundamental shift in the way in which trustees approach NRD claims in that it:

- Uses loss of services provided by habitat as a surrogate for losses of services provided by individual natural resources
- Provides a “currency” for defining losses and gains in resource services based on habitat losses and restoration
- Places the emphasis for settling a NRD claim on habitat, rather than dollars.

The trend towards the application of models such as HEA and the general desire to seek settlement through cooperation has lead Federal trustees to foster a more cooperative approach and to consider restoration opportunities to settle multi-party claims. This approach has been received favorably by many companies with potential for NRD claims, since this offers an avenue for resolving claims more effectively and with a positive, visible outcome for all parties involved. As a result, both potentially responsible parties and the trustees have been working together to better outline processes for both cooperative assessments and maximizing the resource value provided by restoration.