

## Data Management Strategy Glossary

**Analytical Chemistry** is the study of the [separation](#), identification, and [quantification](#) of the [chemical](#) components of natural and artificial [materials](#).<sup>[1]</sup> [Qualitative analysis](#) gives an indication of the identity of the chemical species in the sample, and [quantitative analysis](#) determines the amount of certain components in the substance. The separation of components is often performed prior to analysis. (wikipedia)

**Contaminant Chemistry** - EPA states the Chemical Contaminants were regulated in phases, which are collectively referred to as the Chemical Phase Rules. These rules regulate over 65 contaminants in three contaminant groups: Inorganic Contaminants (IOCs), Volatile Organic Contaminants (VOCs), and Synthetic Organic Contaminants (SOCs). The rules apply to all public water systems (PWS). PWS type, size, and water source determine which contaminants require monitoring for that system. (EPA definition)

**Data** - (ARD Managers Breakout Group)

- information which can be tied to a specific point spatially and/or temporally
- single point of information which can be interpreted to answer a question
- individual record-based information that can be tied to location, points in time in space, (observations, concentration measurements, photographs)

**Data Management** - Data management is the development, execution and supervision of plans, policies, programs and practices that control, protect, deliver and enhance the value of data and information assets." provided in the DAMA Data Management Body of Knowledge (DAMA-DMBOK)

**DARRP/Damage Assessment, Remediation, and Restoration Program**—A multioffice program within NOAA involving the National Ocean Service, the National Marine Fisheries Service, and the Office of General Counsel. DARRP scientists, economists, and attorneys conduct natural resource damage assessments of and restoration projects for coastal and marine resources injured by oil and hazardous material releases. (ORR DARP website)

**DDT/dichloro-diphenyl-trichloroethane**—A chemical compound commonly used as a pesticide until it was banned in the U.S. in 1972. However, DDT is still used in other parts of the world. DDT remains in the environment for many decades, accumulates in living creatures, and poses health hazards to humans, wildlife, and fish. (ORR DARP website)

**DIVER** - Data Integration Visualization Exploration and Reporting - DIVER is a collection of tools and processes to standardize and make available a vast range of data with common elements (e.g. Deepwater Horizon NRDA). The DIVER data warehouse contains sample, visual observation, instrument, photographic and telemetry data collected by Gulf Coast Historical, Response, BP and NRDA operations. These data are drawn from multiple sources, including the Field Sample Form collection databases, oceanographic sampling data, Query Manager, field workplan-specific observation databases, Additional Lab results, PhotoLogger, and analysis products. DIVER Explorer is an application that lets users create customized maps and queries across all of the datasets available in DIVER. Using DIVER Explorer, you can query the data from Historical, Response, BP and NOAA NRDA operations and view the results on a map, on charts, and in a table—all of which are interactive. DIVER Explorer also lets you sort, filter, and highlight the data, allowing you to focus on your fields of interest.

**Documented Safety Analysis** - must demonstrate the extent to which a facility can be operated safely with respect to workers, the public, and the environment. (DOE definition)

**Environmental Response Management Application (ERMA<sup>®</sup>)** is an online mapping tool that integrates both static and real-time data, such as [Environmental Sensitivity Index \(ESI\) maps](#), ship locations, weather, and ocean currents, in a centralized, easy-to-use format for environmental responders and decision makers. (ORR website)

**HEA/habitat equivalency analysis**—A method developed by NOAA for estimating how much restoration is needed to replace the loss of natural resources from the time they are injured until they are returned to the condition they would have been in had the release not occurred. (ORR DARP website)

**hazardous substance**—Substances identified as capable of posing "imminent and substantial danger to public health and welfare or the environment." CERCLA has identified more than 800 hazardous substances. The term does not include petroleum or natural gas. (ORR DARP website)

**Information** - (ARD Managers Breakout session)

- all records collected when working a case - reports, photos, etc
- not by definition tied to a data point
- include everything from the documents we used to collect reports, photos, etc is the info associated with case
- more than just a number or single point in time
- results from data gathered in the RI process

**injury**—An observable or measurable adverse change—including destruction, loss, and loss of use—in a natural resource or impairment of a natural resource service.(ORR DARP website)

**injury assessment and restoration planning**—The second phase of a natural resource damage assessment. Trustees identify the injuries to natural resources and their services and use that information to determine the need for and amount of restoration.(ORR DARP website)

**Electronic Data Deliverables (EDD)** Data deliverables for this service include hardcopy data reporting forms and supporting raw data. Laboratories must also submit the data electronically, referred to as an Electronic Data Deliverable (EDD), within the contract required TAT. EPA then processes the EDD through a web-based data assessment tool – the Electronic Data eXchange and Evaluation System (EXES). EXES provides data users with electronic data assessment/usability reports and spreadsheets within 24 to 48 hours of data receipt (EPA definition)

**natural resource trustees (trustees)**—Government officials who act on behalf of the public when there is injury to, destruction of, loss of, or threat to natural resources as a result of a release of a hazardous substance or a discharge of oil. Trustees include the U.S. Departments of Commerce, Interior, Defense, Agriculture, and Energy; state agencies; and Native American tribes. NOAA is the lead federal trustee for coastal and marine resources.(ORR DARP website)

**NRDA/natural resource damage assessment**—Investigation performed by trustees to identify and plan the restoration of natural resources injured by oil spills and hazardous substance releases. The goal of NRDA is to restore natural resources.(ORR DARP website)

**PCBs/polychlorinated biphenyls**—A class of chemicals previously used in manufacturing that remain in the environment for many decades, accumulate in living creatures, and pose health hazards to humans, wildlife, and fish.(ORR DARP website)

**RAP/Rapid Assessment Program**—A capability developed and supported by the Damage Assessment Remediation and Restoration Program to collect perishable data and readily available information to determine the need for a natural resource damage assessment.(ORR DARP website)

**Responsible Parties (RP)**—The parties (e.g., individuals, companies, or government agencies) responsible for an oil spill or hazardous substance release.(ORR DARP website)

**restoration**—The goal of a natural resource damage assessment, which involves rehabilitating, replacing, or acquiring the equivalent of injured natural resources and the services they provided. Restoration includes both primary and compensatory restoration projects.(ORR DARP website)

**sediment**—Loose particles of sand, clay, silt, and other substances that settle at the bottom of a water body. They come from eroding soil and from decomposing plants and animals. Wind, water, and ice often carry these particles great distances. Many sediments in rivers, lakes, and oceans are contaminated by pollutants, such as DDT and PCBs.(ORR DARP website)

**settlement**—An agreement between natural resource trustees and responsible parties that specifies the terms under which liability is resolved.(ORR DARP website)

**trustees**—See natural resource trustees.(ORR DARP website)

**Query Manager Application** - A query tool that can be used to access sediment, tissue, water, and oil chemistry results, as well as sediment and water toxicity data. Users can sort and examine data in a variety of ways by selecting from a menu of pre-programmed queries. These queries allow you to evaluate individual contaminants and contaminant groups, make comparisons to common toxicological benchmarks, calculate totals, and apply toxicity models. After completing your query, Query Manager produces summary data tables in several formats. Data outputs from the Query Manager desktop application can be mapped in the companion mapping software ([MARPLOT](#)), or exported to common open standard GIS formats, including ESRI shapefiles and KML (for ArcGIS and Google Earth) for further mapping and analysis. (ORR website)

**Query Manager is a database standard.** Query Manager organizes data sets from multiple studies into a consistent and standardized structure, which improves data delivery and facilitates interpretation, mapping, and analysis. (ORR website)

**Telemetry data** - technological advances have made it possible to use animals as platforms to carry remote-sensing devices (i.e. Animal Telemetry). Large animals such as sharks and marine mammals can carry sophisticated tags that sample the environment and report to satellites. Small animal like salmon and other fish can carry small acoustic tag and communicate to acoustic receivers. Access to integrated animal telemetry observations is improving ocean forecasts, establishing baseline habitat usage studies on potential sites of future anthropogenic disturbance, providing critical information for protecting Endangered Species and finally improving Fisheries Management. (NOAA IOOS web site)

# ARD Data Management Toolkit

## ARD Maintained Tools

### Environmental Response Management Application (ERMA)

- Regional and DWH Gulf Response (Public)

### DIVER (NRDA Portal, data warehouse and Explorer)

- DWH
- Great Lakes (not updated)
- NOAA NRDA.ORG
- Deepwater Information Management Portal

### Query Manager (QM)

- QM online (no maintenance)
- QM desktop (no development)
- QM database (active development)
- QM Import (ArcGIS and ArcView) - both unsupported
  - QM Direct w/ ArcView 3.x (both software unsupported)

### Photologger

- online photologger (OPL)
- desktop/access photologger (APL)

### HEA Tools

- Spatial (GIS)
- Database (Access)

## ERD Maintained Tools used by ARD Data Management

- MARPLOT
- ResponseLink

## BSG Maintained

- ORR "Private" FTP site
- ORR SFTP (int,ext,NRDA)
- Harddrives (laptops and external)

## Commercial or Open Source Tools

- Google
  - Earth
  - maps
  - search engine
  - Scholar
- Microsoft Office
  - Excel
  - Access
  - Word

- Sharepoint
- ArcGIS
  - ArcMap
  - 3rd party extensions (XTools)
- GPS Photolink/GeoJot
- AOOS
- Coastal Services Center (CSC) Sea Level Rise Tool
- Mussel watch
- CSC data displays - digital coast
- Nautical chart viewer and download app
- Quantum GIS
- Endnote
- Web of Science
- Shorezone
- ASFA
- STATA
- GAUSS
- R
- S
- SPSS
- Systat
- GlobeExplorer
- DNR Garmin
- Garmin Mapsource
- BSB View – NOAA raster chart viewer
- Lizardtech
- MrSidGeoviewer
- AOOS
- Consultant FTP sites (e.g. Newfields, IEC, Stratus)
- Response Manager (EPA)
- SCRIBE (EPA)
- EPA SDMS (documents)
- ImageConnect (EPA contract)
- LOSDMS – LOSCO data management
- Cal Spill Watch (CalOSPR)
- gulf spill restoration sites – data portal type for DWH
- CRC Log
- Filemaker
- Equis Enterprise
- Visual HEA
- Doodle Poll
- Wiki

- Google docs
- Trac
- Apps on phone (maps, docs, etc)
- ODK sample collection app

Other (e.g. storage mechanisms, non-digital, etc)

- notebooks (record/green books, legal pads, spiral notebooks, pads of paper, pen and paper)
- stacks on desks/tables
- file cabinets
- Memory