

## Remediation Processes Currently Employed by RainGrow

We at RainGrow are educated in and qualified to employ a great variety of processes and techniques for use in the remediation of contaminated landscapes and waters. Approaches are delineated via applicability to specific pollutant/medium combinations. Selections are therefore project dependent and based on the analysis for suitability and efficacy by which we decrease both the time and costs associated with the project. The following is a list of remediation process:

### Physical

- Air Sparging
- Air Stripping
- Centrifugation
- Density Separation – Sedimentation and Flotation
- Hot Water Extraction
- Primary Product Recovery Techniques for Reuse
- Shallow Soil Mixing
- Soil Flushing/Washing
- Soil Vapor Extraction
- Steam Extraction
- Thermal Treatment

### Chemical

- Adsorption onto Activated Carbon, Clays, Humate, Lignite, Resins, Zeolite
- Chemical Catalysis
- Chemical Precipitation using Alum, Gypsum, Lime, other natural materials
- Chemical Treatment
- Flocculation
- Ion Exchange
- Media Filtration
- Oxidation/Reduction
- Permeable Reactive Barriers
- Photochemical Oxidation
- Reverse Osmosis
- Solidification/Stabilization

### Biological

- Biological Pump and Treat
- Composting Hydrocarbon Polluted Soil and Sediment (Biopiles)
- Constructed Wetlands
- Landtreatment/Landfarming
- Microbial Growth Stimulation by use of Compost, Humic Substances, other Soil Amendments
- Microbial Photolysis
- Phytoremediation
- Sequential Anaerobic/Aerobic Treatment
- Suspended Growth and Fixed Film Bioreactors for Filtration and Biodecomposition