

## **Course Name: Phytoremediation**

**Course Description:** The objective of this course is to review:

- the scope and applicability of phytoremediation as well as its advantages and disadvantages;
- the kinds of contaminants that can be phytoremediated (metals, metalloids, petroleum hydrocarbons, oxygenated and chlorinated organics, salts);
- the various mechanisms that can be involved in phytoremediation (the phytotransformation of light organics from soils, the phytovolatilization of transpirable organics and metals from soils, the microbially-enhanced rhizodegradation of heavy organics in soils, the phytoextraction of metals and salts from soils, the phytostabilization of metals in soils, and the aqueous-phase phytofiltration of wide ranges of pollutants in wetlands and metals during hydroponic rhizofiltration projects);
- the cost and economics of phytoremediation; and
- examples of phytoremediation projects.

**Target Audience:** The course will be of interest to firms with contaminated sites and waters; to government officials; to regulators at all levels; to university researchers; and to the public.

**Course Outline:** This course addresses the following topics:

- Module 1: Introduction
- Module 2: The Phytoremediation of Organics for Soil Remediation
- Module 3: The Phytoremediation of Inorganics
- Module 4: Phytofiltration, Phytoremediation for Wastewater Treatment
- Module 5: Examples and Conclusions

**Length of the Course:** This course is delivered in one day with two 15 minute breaks and a lunch break.

**Course Location:** TBD

**Course Evaluation and Certification:** n/a

**Course Pre-requisites:** n/a

**Materials:** Detailed notes are provided.

**Supplementary reading(s):** Provided during the course.

**Instructor Information:** Jim Higgins, Manager, Ecological Engineering and Special Projects

**Other Important Information:** Lunch and refreshments are provided.

# Jacques Whitford Training Institute



**Available Support Services:** If you have any questions, please contact [course\\_admin@jacqueswhitford.com](mailto:course_admin@jacqueswhitford.com) or call Course Admin at JWTI (613) 738-0708 ext. 3204.