



Client: American Electric Power  
Contact: Ms. Christina Svoboda

Year: 2009

Project: Phytoremediation

Project Type: Installation

Phytoremediation is the use of vegetation to remove pollutants from the environment or render them harmless. Phytoremediation technology uses plants to “vacuum” heavy metals from the soil or water through the roots. Certain plant species—known as metal hyperaccumulators—have the ability to extract elements from the soil, water, and air and concentrate the pollutants in the easily harvested plant stems, shoots, and leaves.

Williams Creek Management installed floating wetland islands in leachate ponds at multiple American Electric Power plant sites within Ohio. The floating wetland islands were planted with specific plants of known hyperaccumulators of specific metals based on published phytoremediation research.

Examples of Hyperaccumulators:

- *Salix viminalis* (Willow) has a significant potentiality for using it as phytoextractor of Cadmium (Cd), Zinc (Zn) and Copper (Cu)
- Hydrangeaceae (Hydrangeas) uptake Aluminum (Al)
- *Brassica juncea* (Indian Mustard), *Ambrosia artemisiifolia* (Ragweed), *Apocynum cannabinum* (Hemp Dogbane), or *Populus* (Poplar trees), which sequester lead
- *Helianthus annuus* (Sunflowers) removes Uranium (Ur)

