

# Phytoremediation Part II

## Cattails and Hemp

*by Pat Lust, Extension Master Gardener Volunteer*

Before European colonization, Cattails, *Typha latifolia*, were a valuable food crop in most of the US. They can produce more starch per acre than potatoes or rice; as perennials, they require little cultivation. Usually found in marshlands and wet meadows, cattails provide food and protection for many animals, insects, and fish.

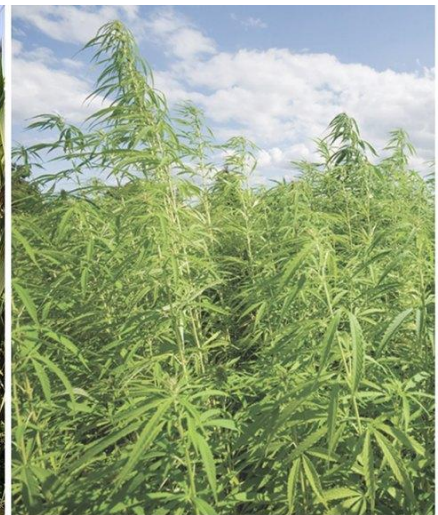
Cattails are one of the most noted plants for phytoremediation, since they can pull heavy metals and other water-soluble metals from the soil and store them in their leaves. They can also absorb herbicides, pharmaceuticals from contaminated soil, and phosphorus, nitrogen, sodium, and chloride from wastewater. In addition, Cattail roots can be very effective in stabilizing soil and preventing erosion.

Hemp, *Cannabis sativa* (not a VA native), produces a long, powerful fiber (called bast) that was used for making rope, sails, and other canvas, and at one time, farmers were required to grow a certain amount. Then, since hemp is the same species as marijuana, just with less THC, it fell victim to the Marijuana Tax Act of 1937 and disappeared from US agriculture.

Various studies have shown that hemp can not only remove toxins from the soil and store them in its leaves but can also transform some toxins into harmless substances. Hemp will grow most anywhere and has very deep roots. It was used to remove radioactive strontium after the nuclear disaster at Chernobyl in 1986. Research on the potential for Hemp to remove PFAS from the soil is ongoing.



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### References:

#### **What do Hemp and Cattails Have in Common? –**

<https://www.straughanenvironmental.com/news-insights/what-do-cattails-and-hemp-have-in-common-learn-about-the-impressive-benefits-of-phytoremediation/>

#### **How Hemp Plants Can Help Clean Up Forever Chemicals –**

<https://www.fastcompany.com/91208763/how-hemp-plants-can-help-clean-up-forever-chemicals>