MULTI-ELEMENT COMPOSITION OF WETLAND SOILS ALONG VERTICAL PROFILES

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Disturbances of wetland soils in the region due to agricultural activities change the element composition of the top soil.

- Are such changes evident throughout the vertical profile?
- If so, to what depth do differences prevail?
- Can this information be used for management of wetlands, and determination of potential for restoration?
PREVIOUS RESEARCH

Previous research
Can differences in chemical composition provide information about

1. levels of past disturbance (How deep? How long ago?)
2. management requirements (Keep as-is? Restore?)
Twelve wetlands
6 of good condition, ‘undisturbed’
6 of poor condition, ‘disturbed’
Several cores in and around each wetland
Sectioned and analyzed
Good condition, 'undisturbed'

Poor condition, 'disturbed'
CONCLUSIONS

• Soils of wetlands of ‘good’ condition show very different characteristics compared to those of wetlands of ‘poor’ condition.

• Wetlands of poor condition in the region are most likely attributed to disturbances associated with agriculture.

• Monitoring of soil profiles in wetlands may provide information about management and restoration potential, and aid in determining success of restoration of wetlands.

• Question: What about the relationship with bacterial and fungal biota?