

Submission:

Oral presentation, Thesis presentation

Topic:

Remote sensing of *Phragmites* and wetland vegetation in the Long Point basin.

Abstract:

In order to view and analyze a large landscape such as the Long Point basin, remote sensing of image data (from satellites and piloted aircraft) is often used. With different project objectives and distinct sensor platforms, the results from each approach can widely vary. We test an assortment of these methods to determine their accuracy and efficacy of identifying invasive *Phragmites*, an aggressively invasive wetland plant. One such approach used by the OMNRF utilizes Landsat and land cover information to map *Phragmites* exclusively, while another developed by Michigan Technological University researchers identifies multiple land cover types with Landsat and PALSAR radar data. Using springtime photos from piloted aircraft, we have been able to identify *Phragmites* in roadside ditches as well as in some wetland complexes of Long Point. The higher spatial resolution of image data from piloted aircraft can provide a clearer picture of the extent of *Phragmites* invasion but this restricts spatial coverage and increases processing time. As a novel approach, we use an unmanned aerial vehicle to create a seasonally appropriate, high resolution map of Big Creek National Wildlife Area with plans to expand this process to the eastern tip of Long Point.

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