

# Restoration of a Coastal Wetland at the Deering Estate

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## Goals

- Determine the efficacy of the Deering Estate rehydration project.
- Identify sources of water (canal, groundwater, seawater) in the Deering Estate.



Figure 1. The Deering Estate.



Figure 2. Auto-injector and Liquid Water Isotope Analyzer (left), Titrator (right).

## Research Methodology

- Use pressure transducers to determine wetted areas throughout the Deering Estate.
- Collect water samples from canals, groundwater, and surface water along a transect across the Deering Estate.
- Analyze water samples for major and minor constituents and nutrients.
- Monitor changes in chemical concentrations.

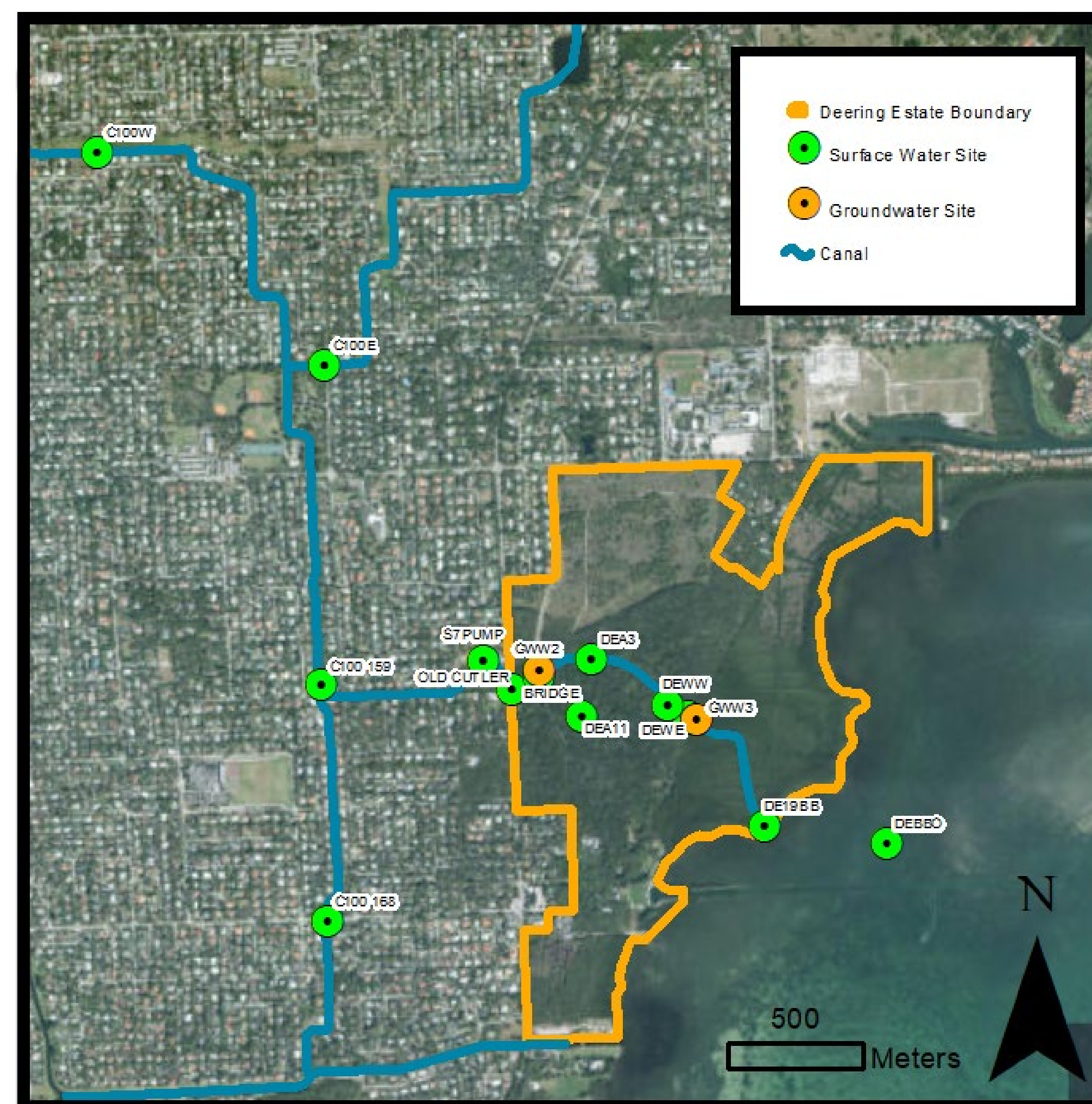


Figure 3. Sampling sites at the Deering Estate.

## Results

- Canal water is similar in major ion composition (chloride and calcium) to the groundwater and surface water in the Deering Estate.
- The dominant source of Total Nitrogen and Total Phosphorous in the surface water of the Deering Estate is the canal water, and not groundwater.

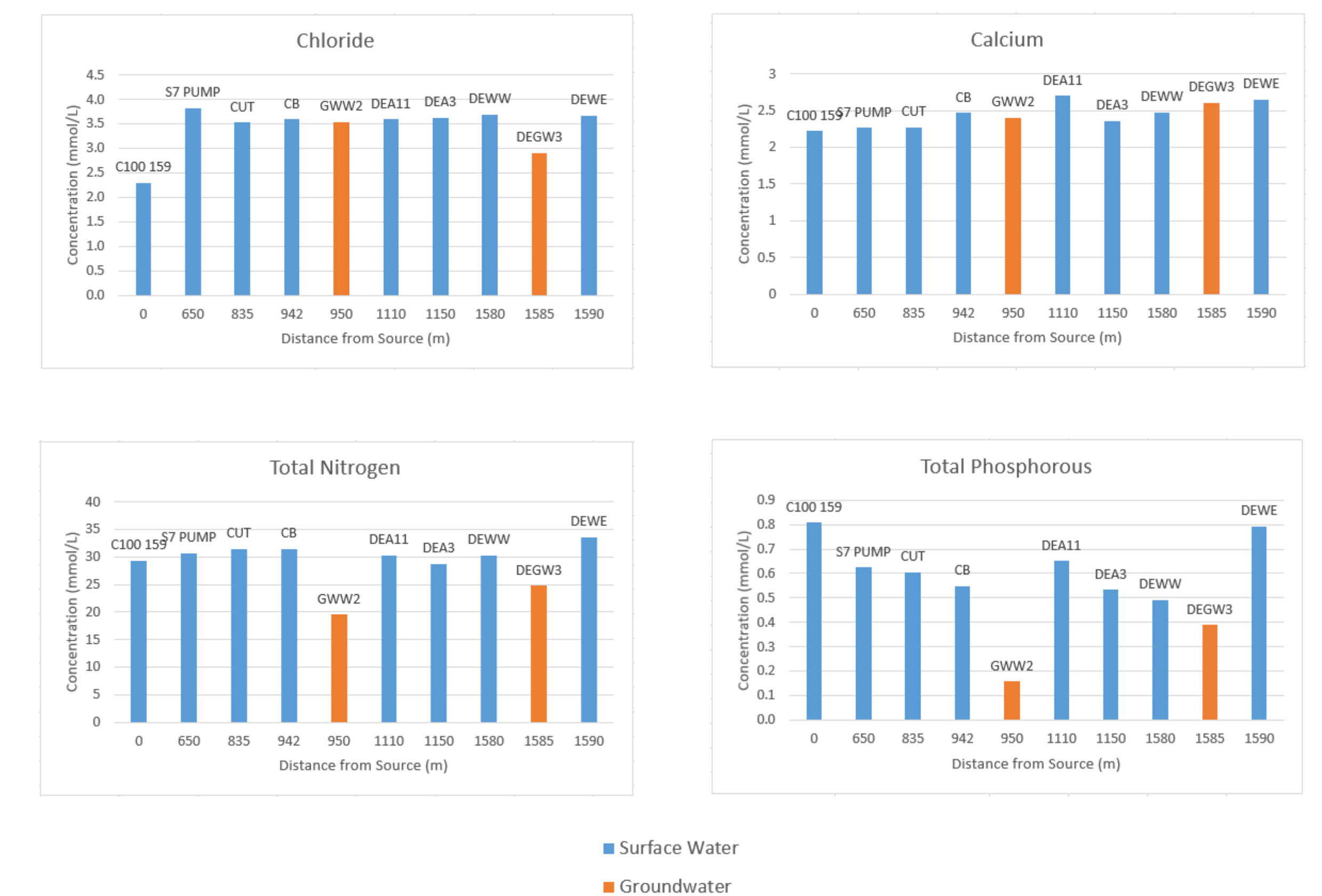


Figure 4. Surface water and groundwater results for select constituents.



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