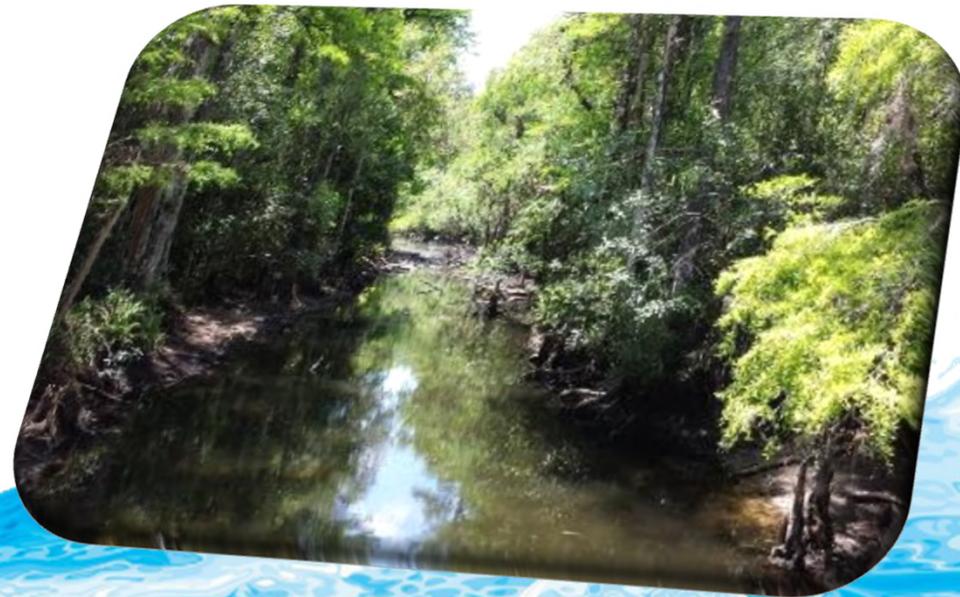




Lateral Carbon Flux in Sweetwater Strand, Big Cypress National Preserve, Southern Florida

Amanda Booth and Travis Knight



Outline

- Introduction
- Purpose
- Methods
- Results



"One day son this carbon footprint will be all yours."



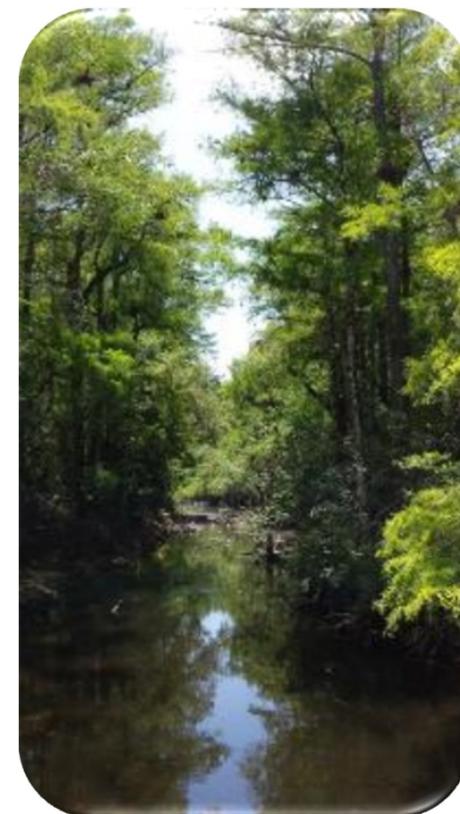


Introduction

- On global scales, wetlands are generally considered sinks for atmospheric carbon that is retained in the ecosystem to build topography, or transported laterally via overland flow.
- This project intends to provide scientists with additional insights on carbon cycling in forested wetlands.



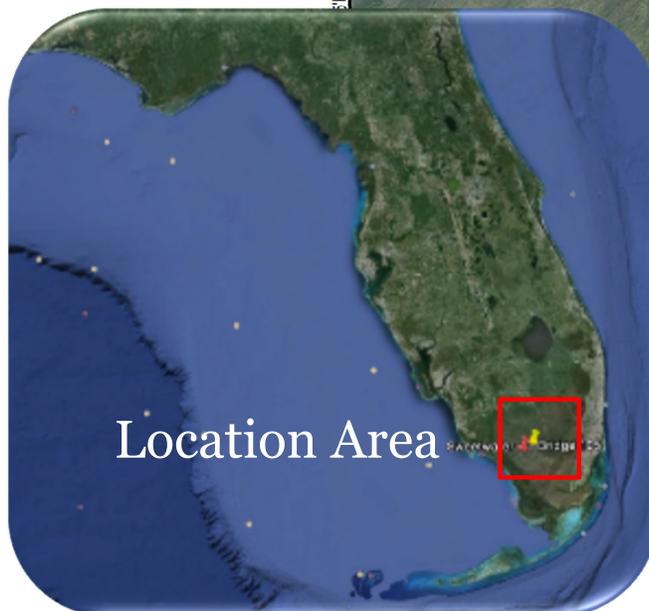
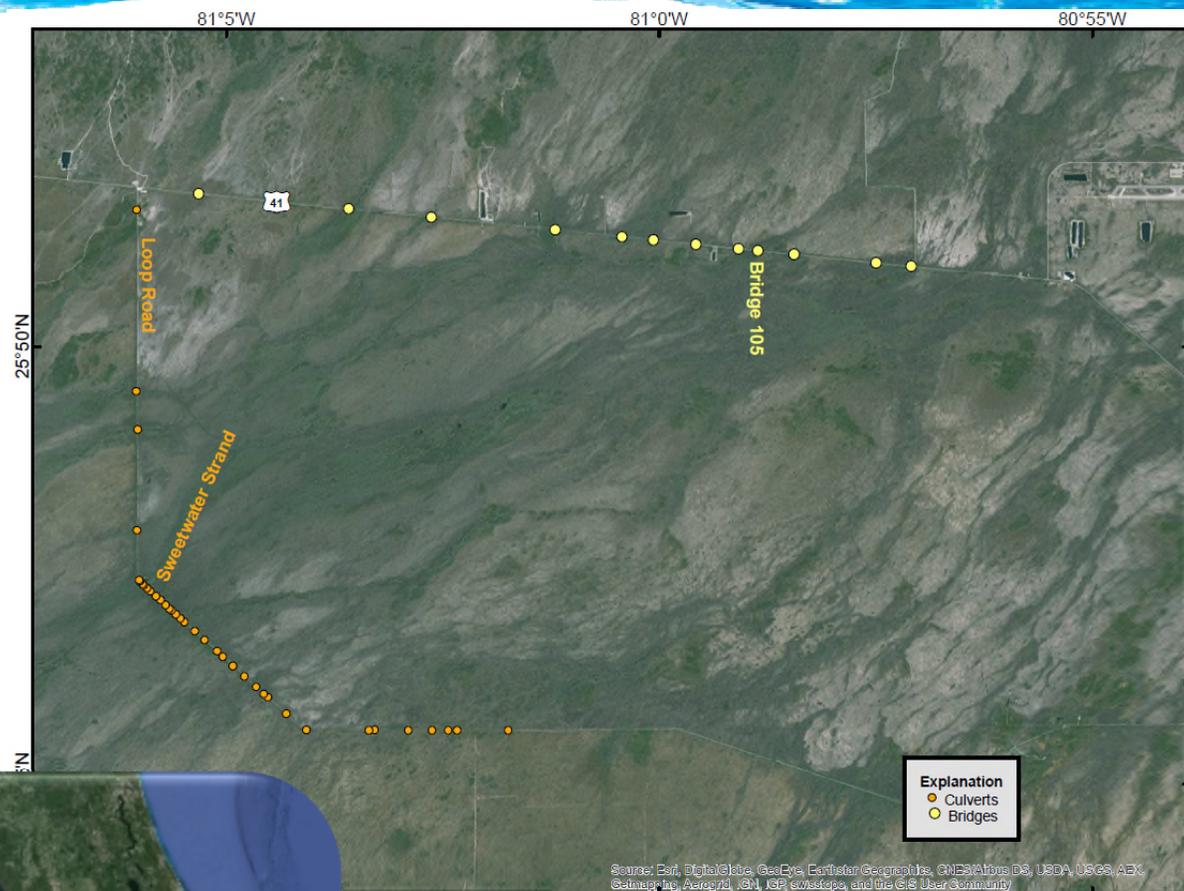
Sweetwater Strand
Dry Season



Sweetwater Strand
Wet Season

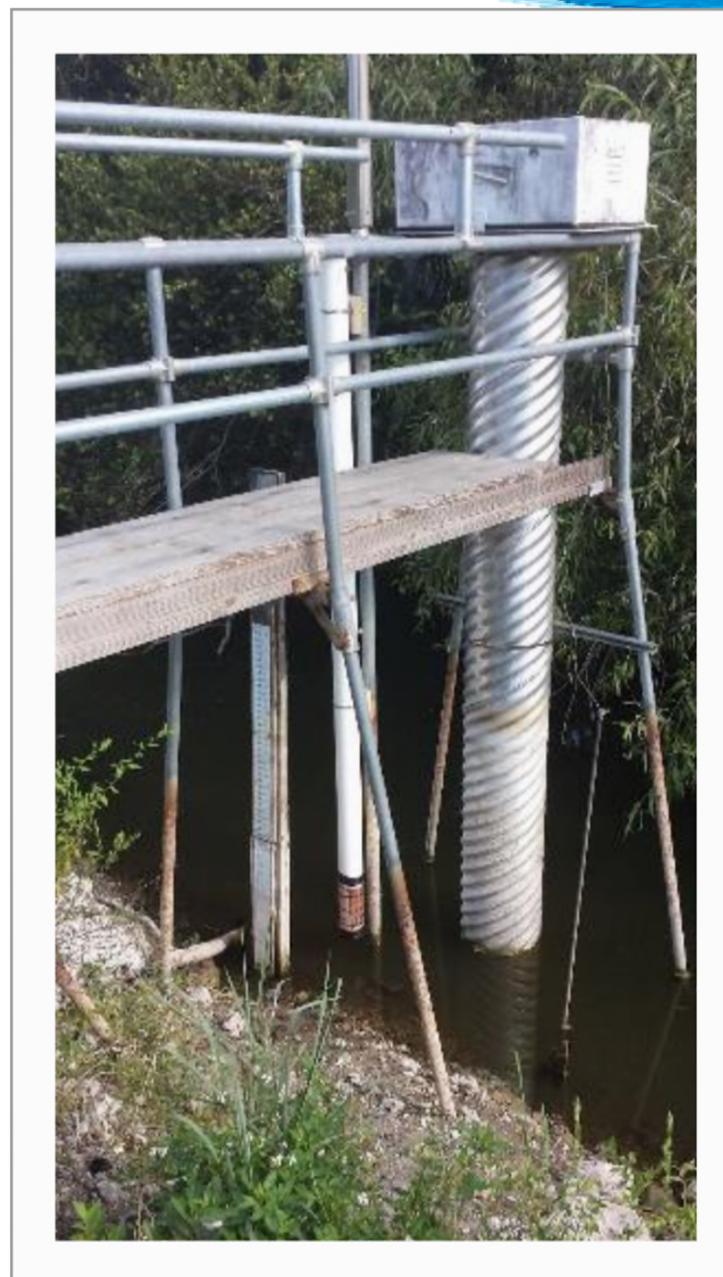
Purpose

- Develop a carbon budget for the water in the area between U.S. 41 and Loop Road, Big Cypress National Preserve.



Methods

- Temperature, specific conductance, turbidity, FDOM and water elevation are measured continuously at two fixed locations, Bridge 105 and Sweetwater Strand.
- Discharge is computed at both locations.

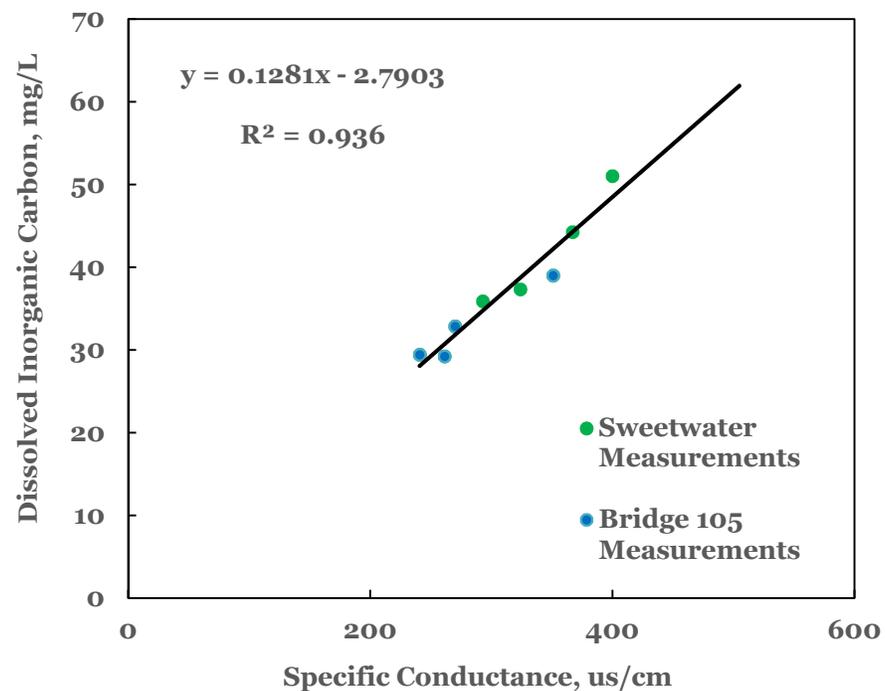
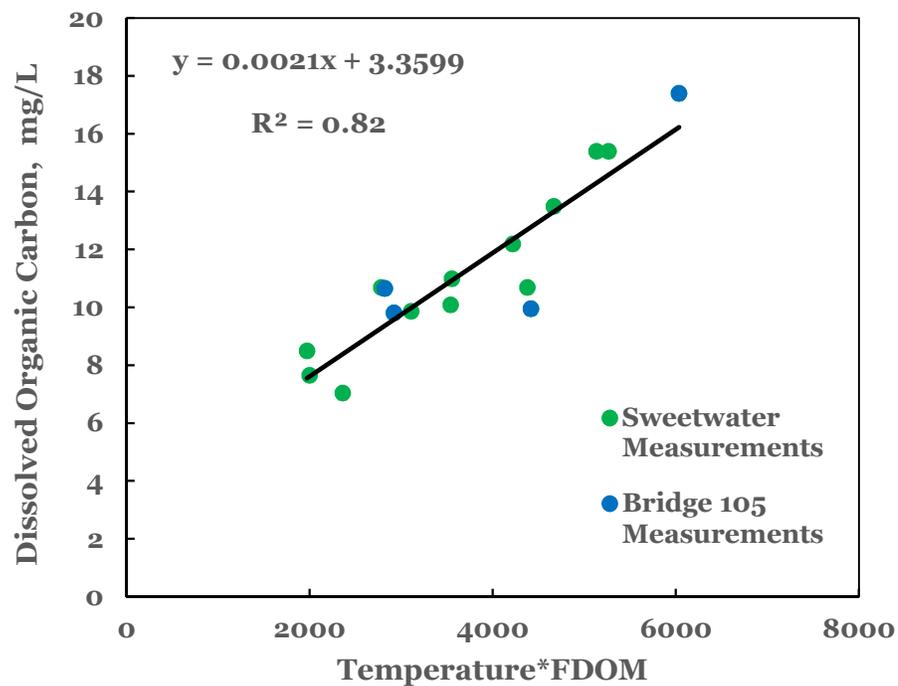


Station at Bridge 105.



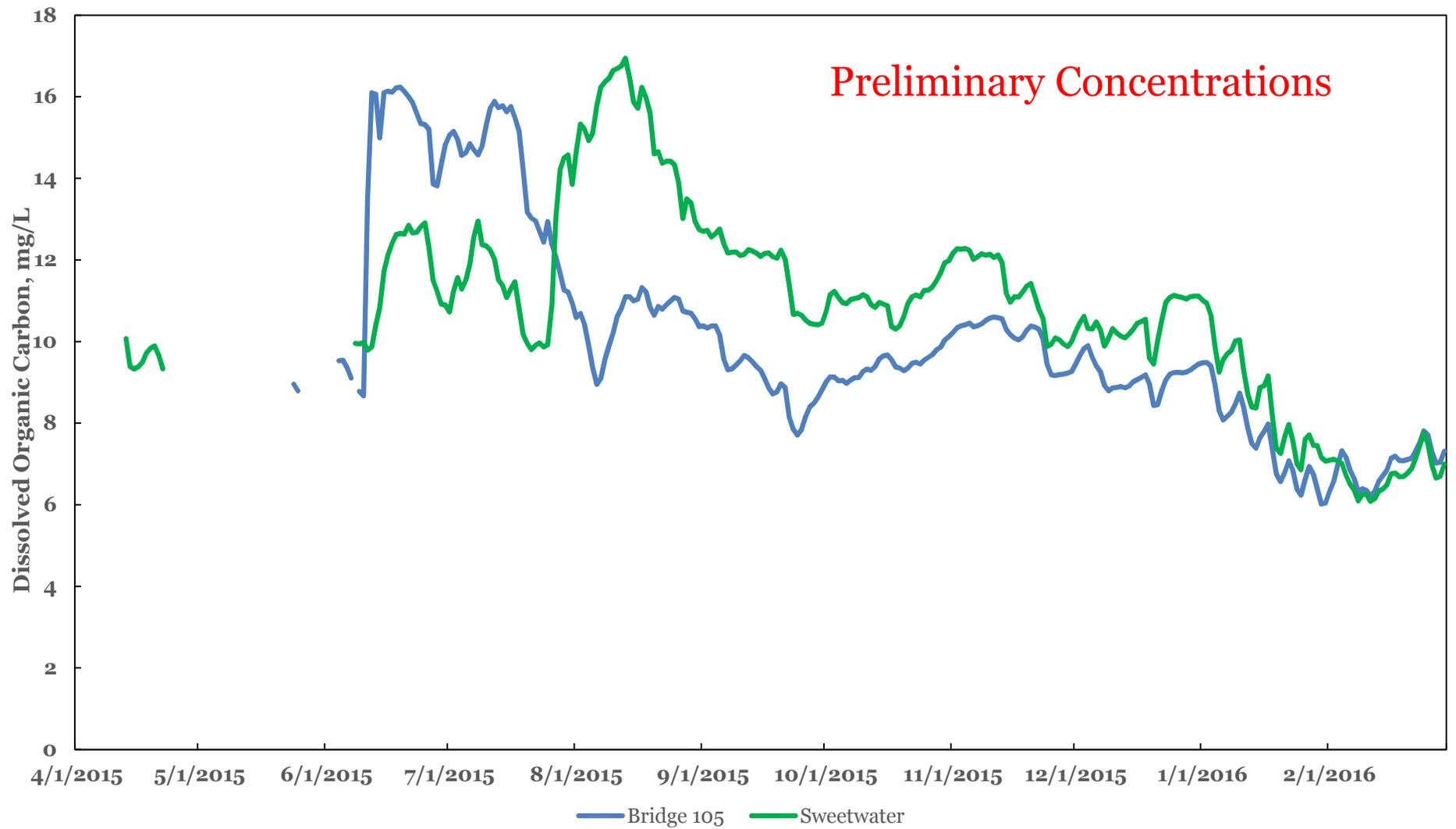
Method

- Dissolved organic carbon (DOC) and dissolved inorganic carbon (DIC) samples are collected monthly at Bridge 105 and Sweetwater Strand.



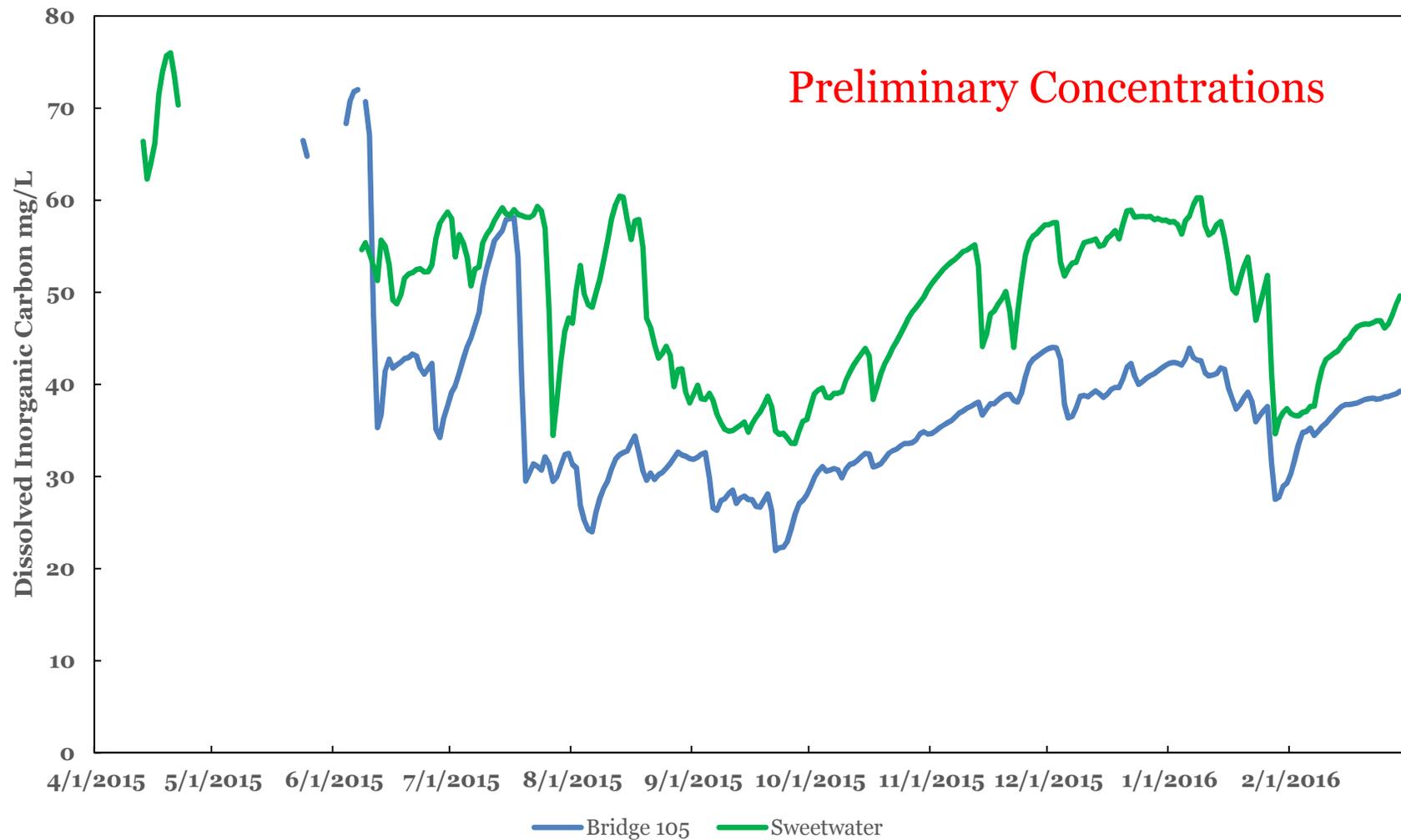


Results





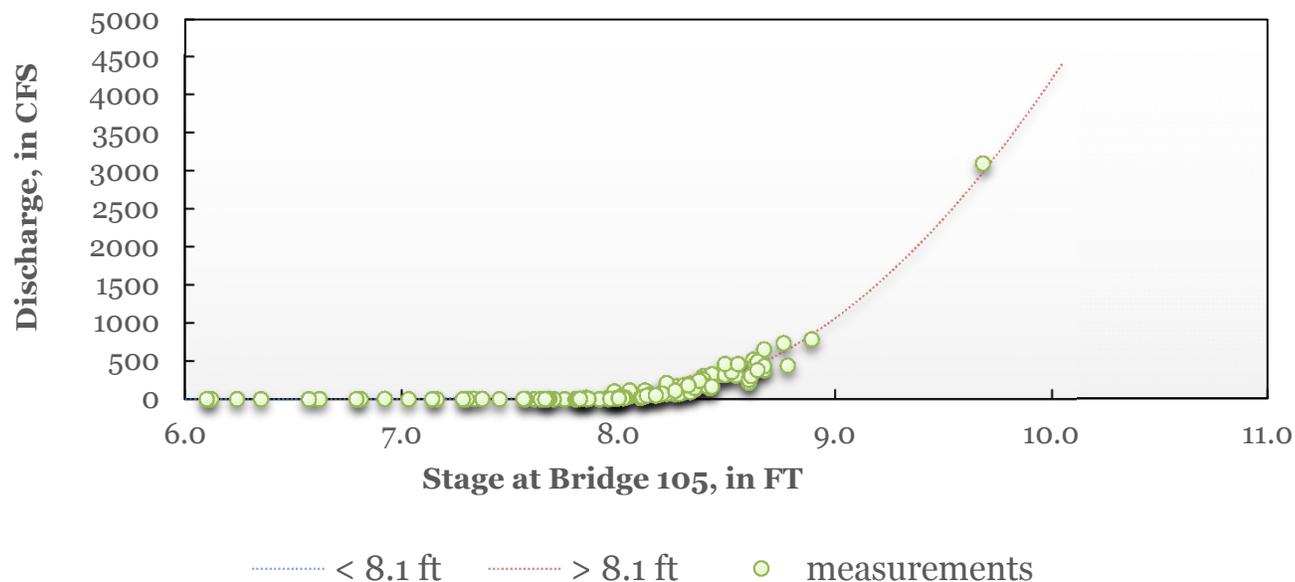
Results



Methods

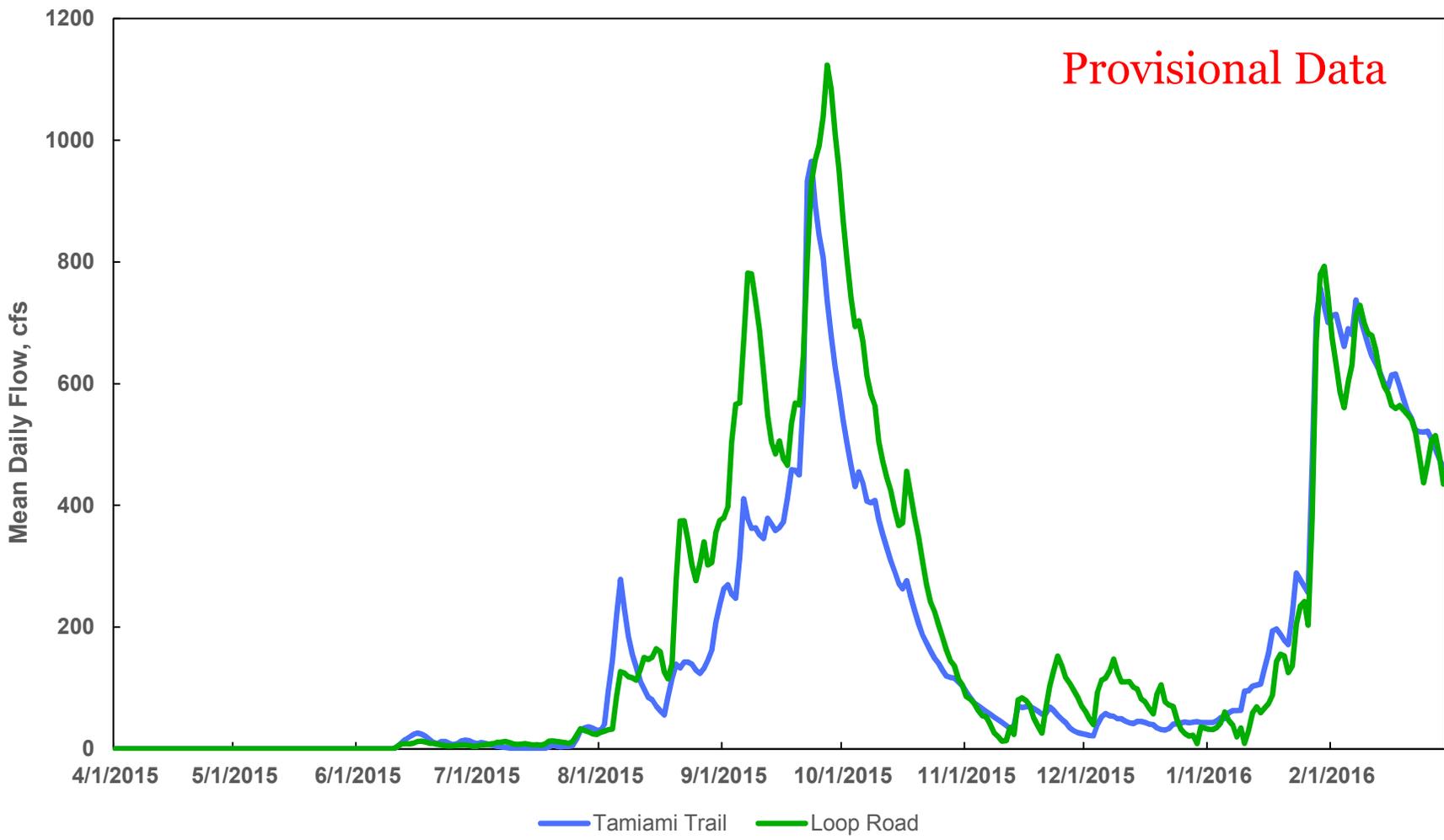
- Discharge measurements are made monthly along Loop Road and biweekly along U.S. 41.
- Ratings were developed relating stage at the monitoring stations to measured discharge.

U.S. 41 from Bridge 97 to Bridge 108



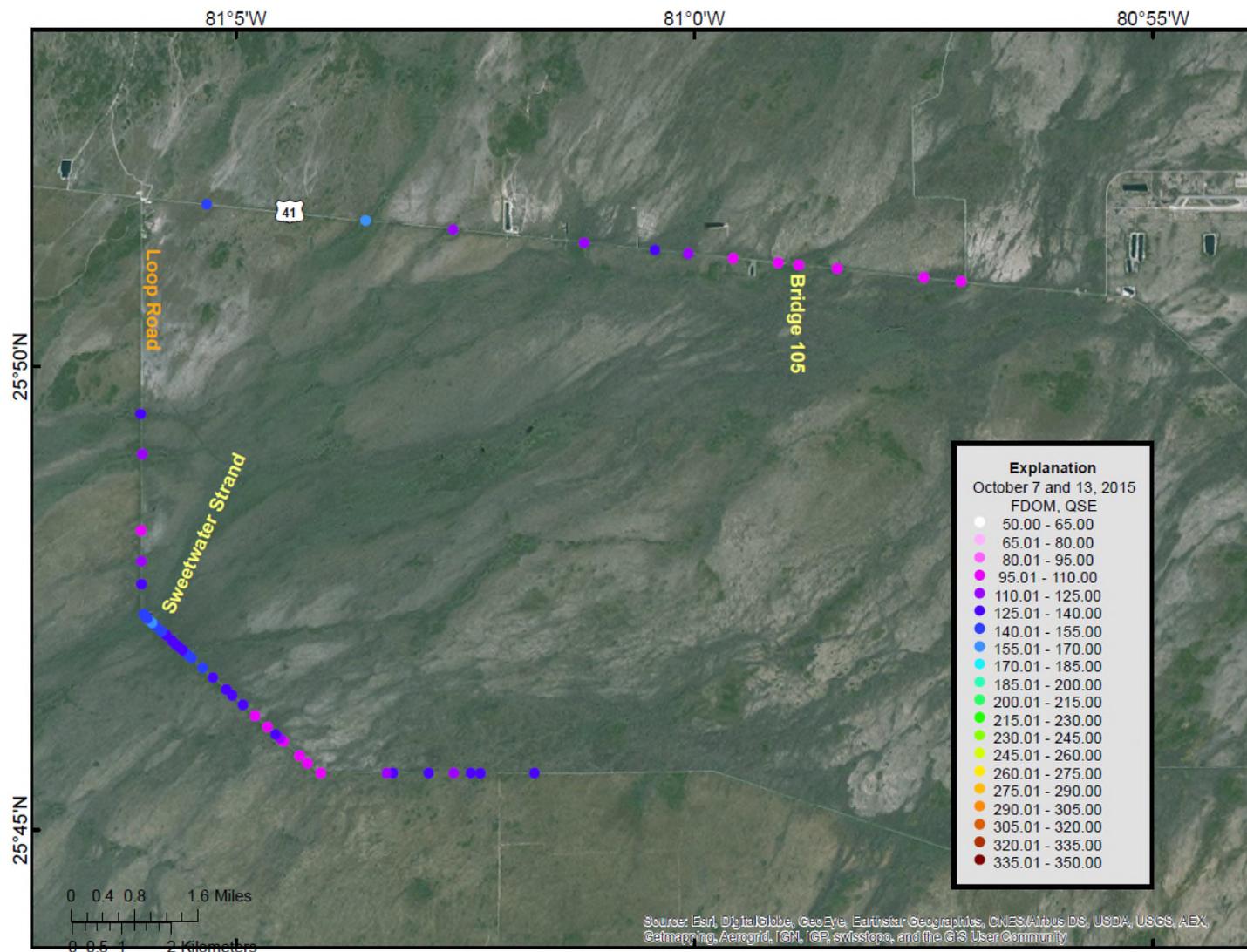


Results



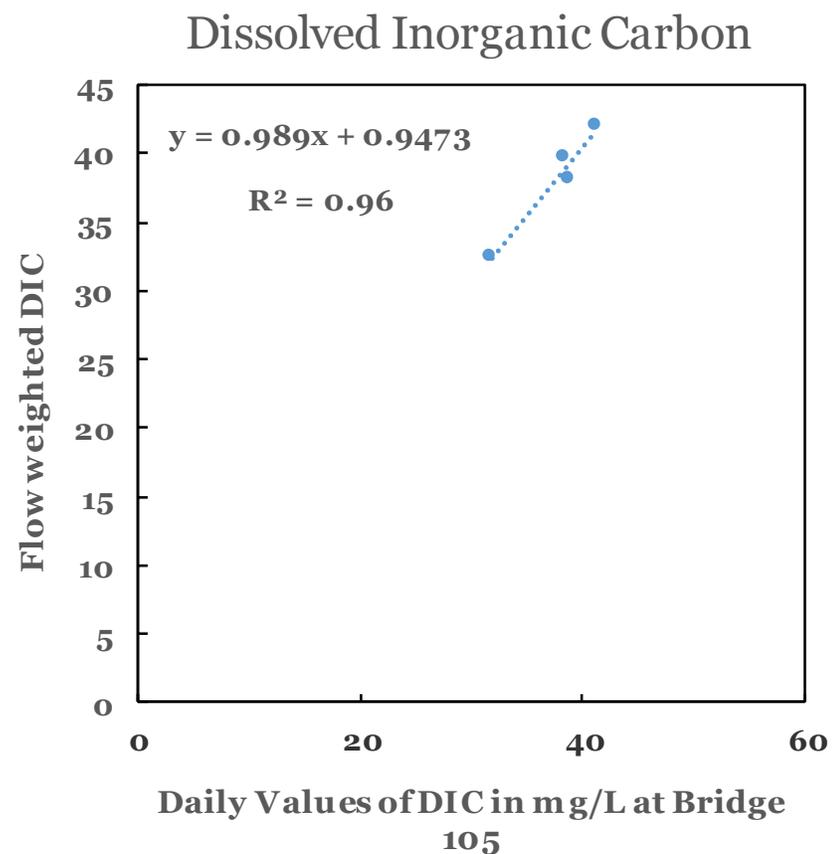
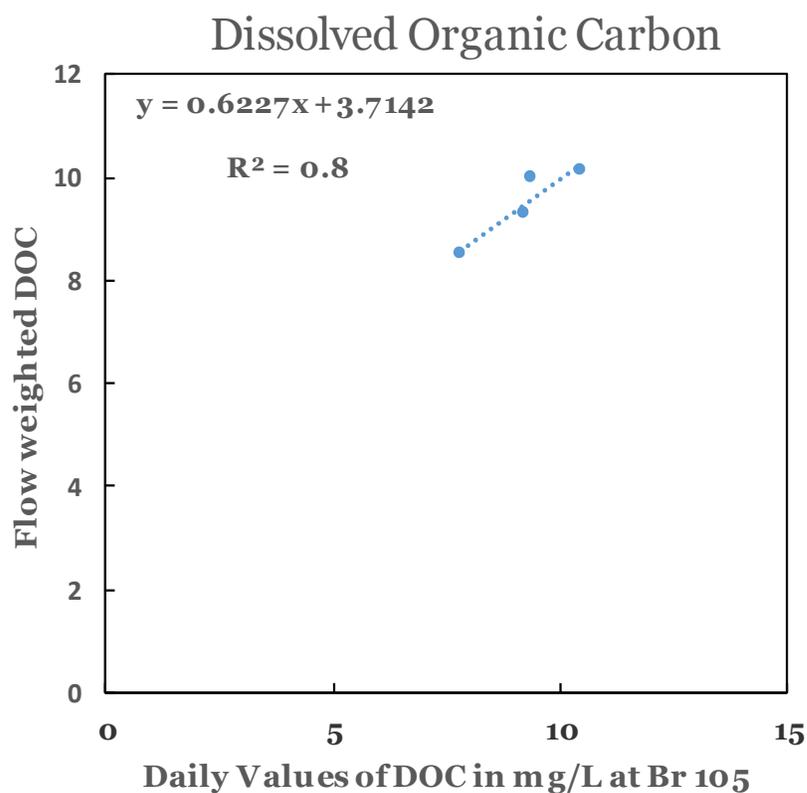
Methods

- Water-quality sensor readings are taken monthly at 12 bridges along U.S. 41 and 40 locations along Loop Road.

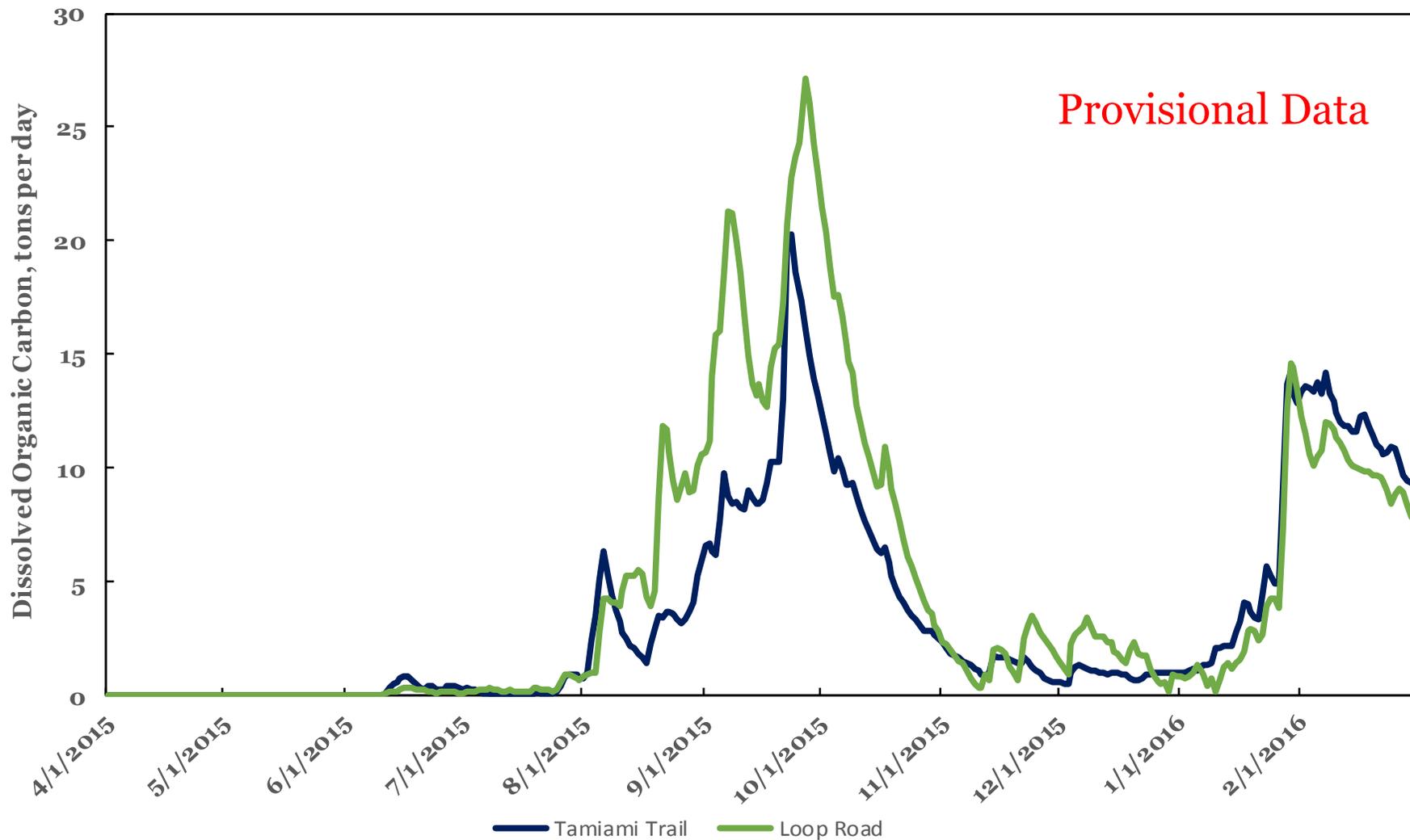


Methods

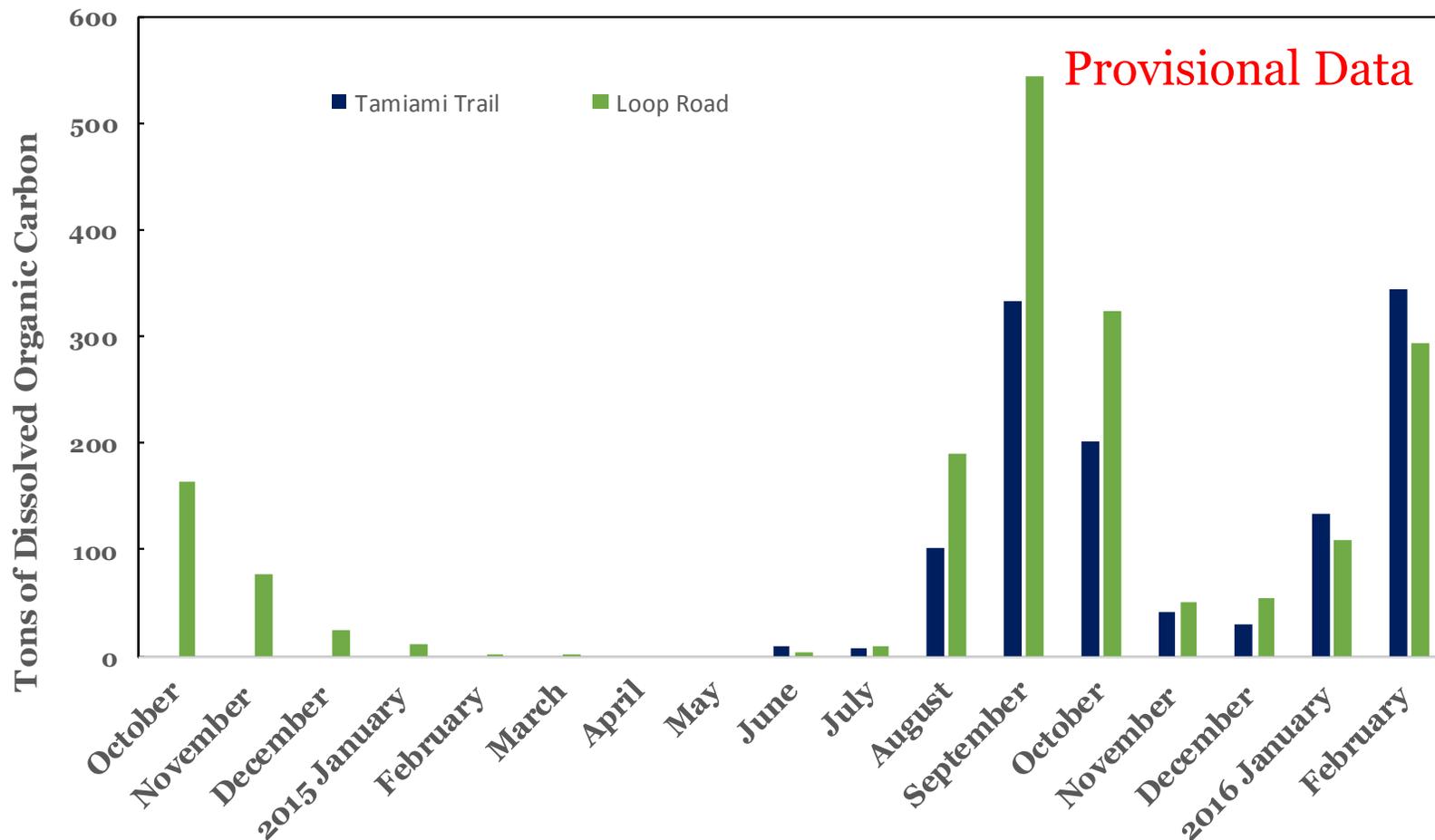
- Flow weighted concentrations = $\sum((\text{Bridge Q}/\text{Total Q}) * \text{DOC})$



DOC Load Calculations

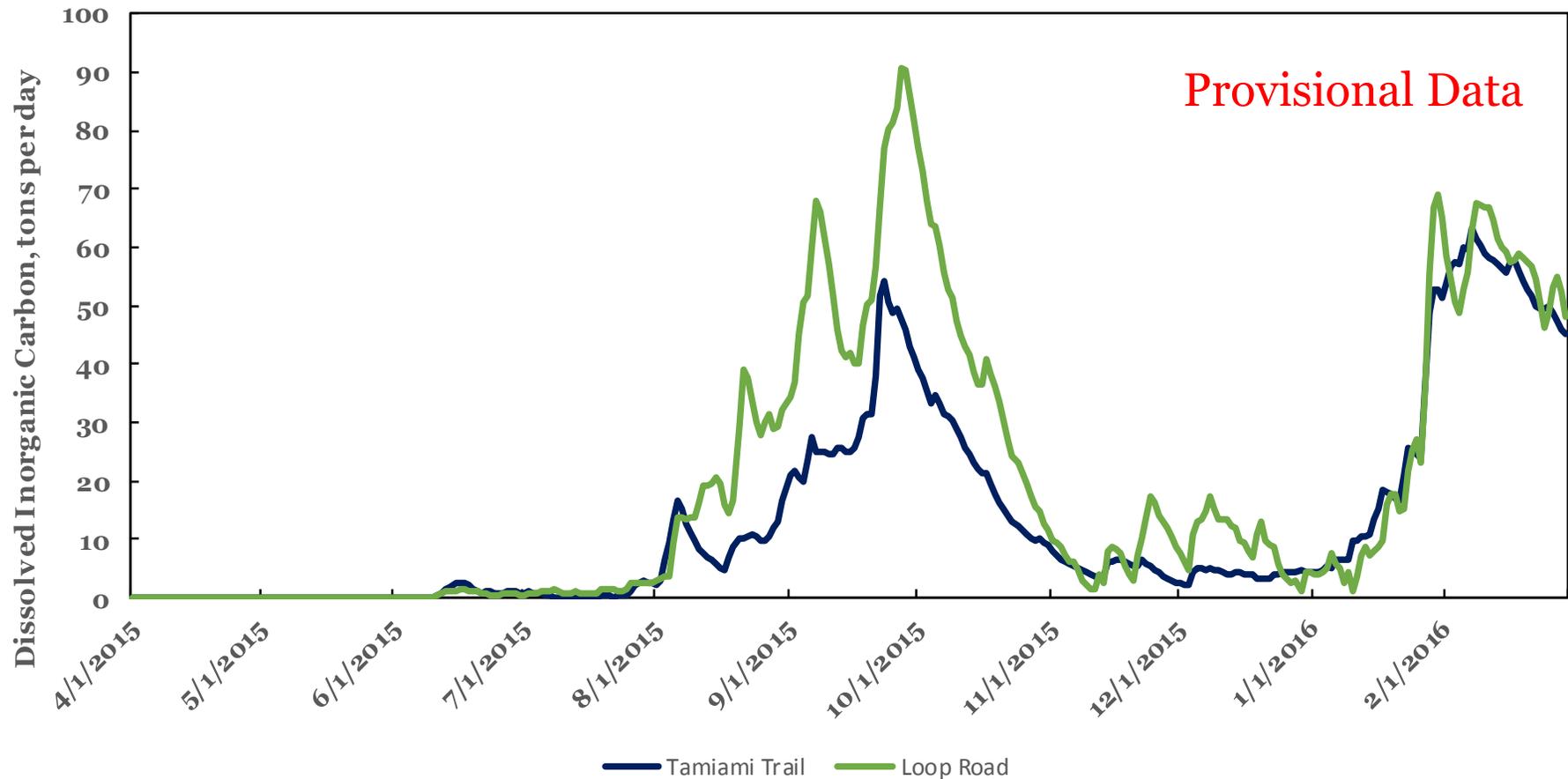


DOC Load Calculations

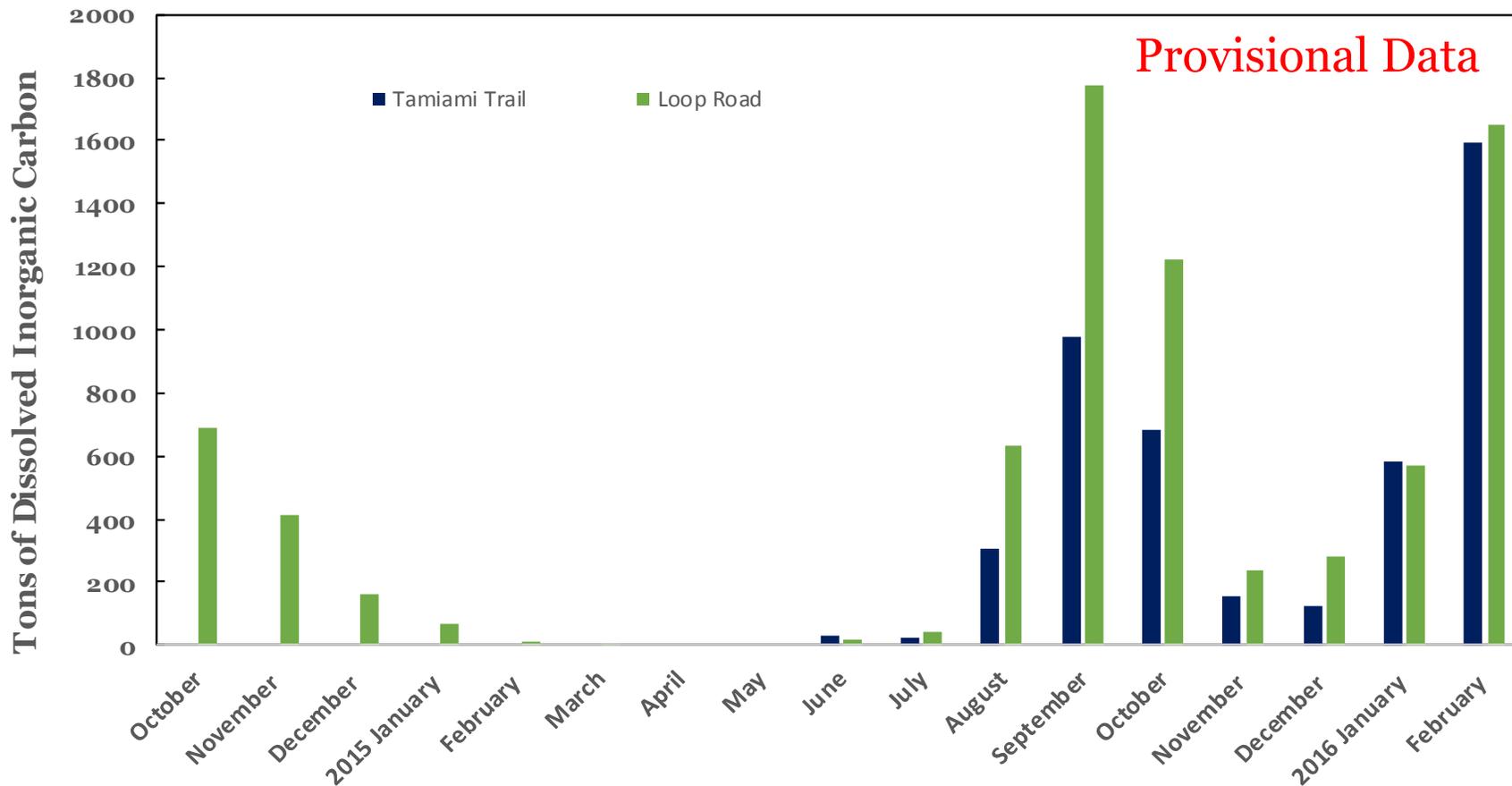


**Tamiami Trail (Bridge 105) station installed May 2015.

DIC Load Calculations



DIC Load Calculations



**Tamiami Trail station (Bridge 105) installed May 2015.



Questions?





*Thank
You!*

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