



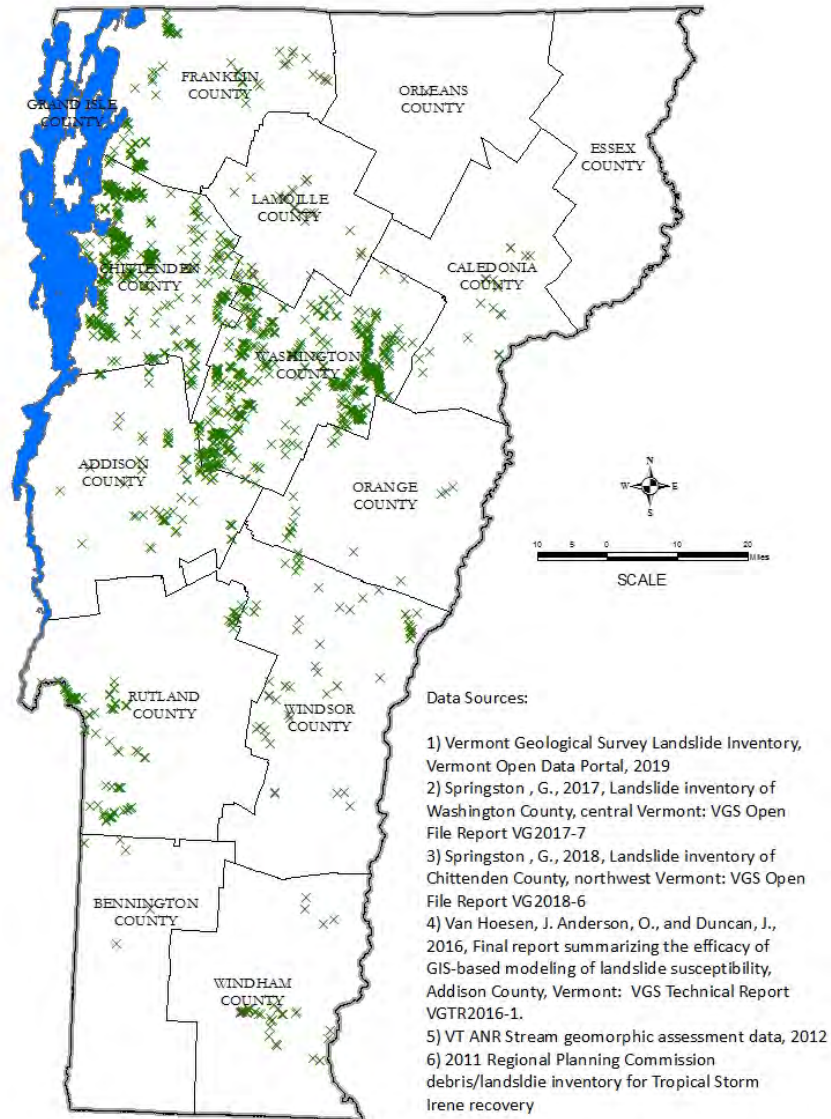
Sliding Down the Cotton Brook and Other Tales of Slope Instability

Presenters:

George Springston, Norwich University

Marjorie Gale, State Geologist, DEC

3 counties completed 2016-2019;
1861 sites identified



LANDSLIDES AND GULLYING SITES REPORTED
TO THE VERMONT GEOLOGICAL SURVEY, 2008-2019



Lake Willoughby



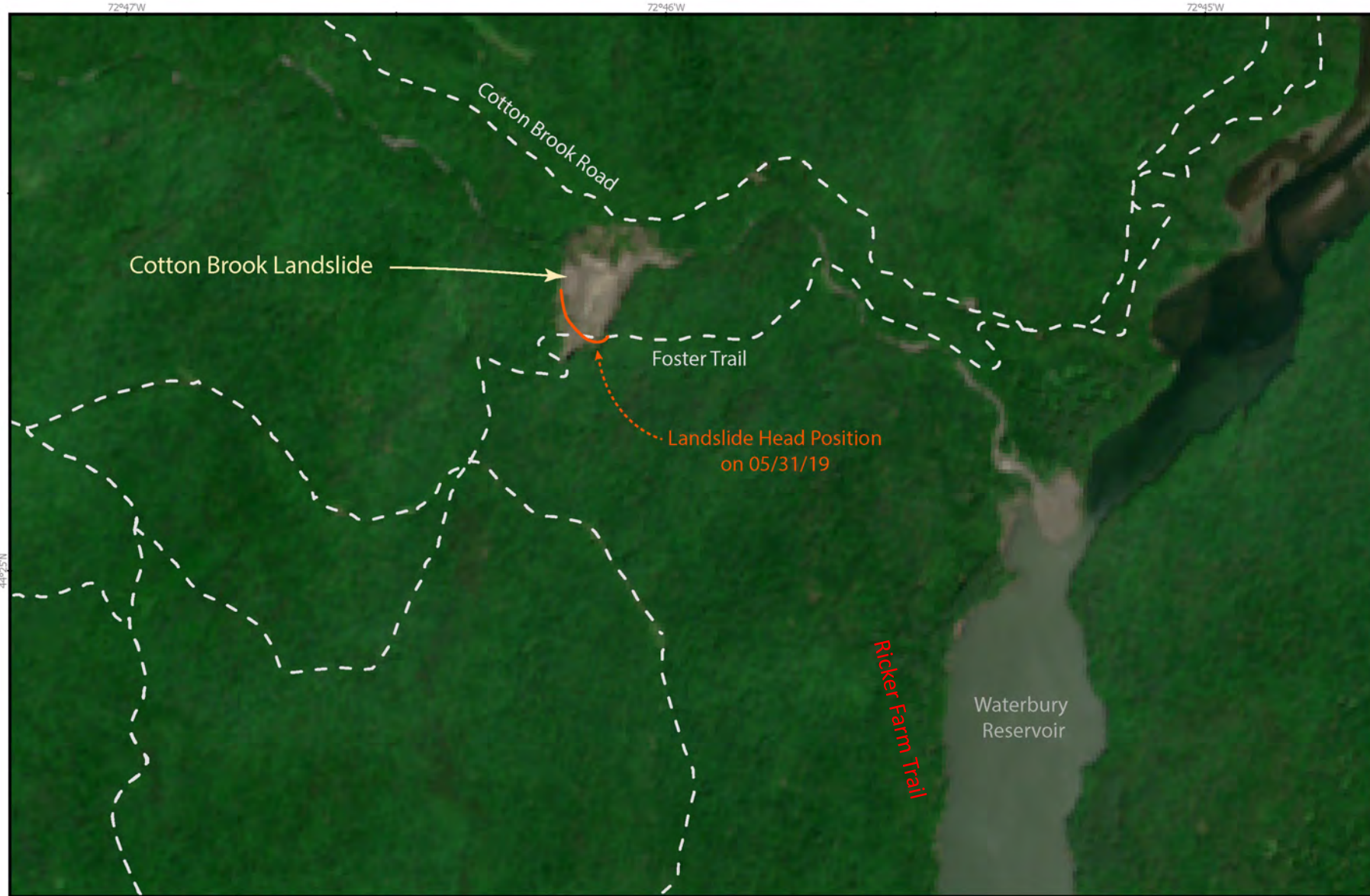
Smugglers Notch



Great Brook



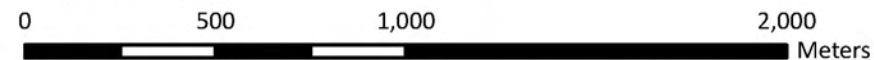
Jeffersonville



Landslide reported: May 31
Image: 6/17/2019



Scale: 1:24,000



Data Sources: Imagery - Sentinel 2 LA-2 Imagery collected 06/17/19
E911 Trails (geodata.vermont.gov)

12 acres active

2.2 acres detached

~1.8 acres impounded water

~2.8 acres delta

~250,000 cubic meters excavated

~100,000 cubic meters in brook

Visits: 6/4, 6/7, 6/10, 6/12,
6/24, 7/8

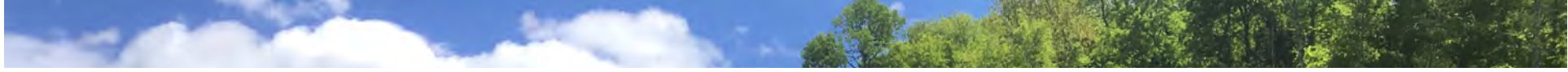
Flag (at arrow) is gone by 7/8



6/4/2019

Ground cracks and offset
Detached blocks will
continue to fail
6/4





6/4 - Mud flows, sand, falling trees, sliding boulders and potential for larger failure make the site dangerous.



6/12 - New delta in Waterbury Reservoir, ~2.8 acres

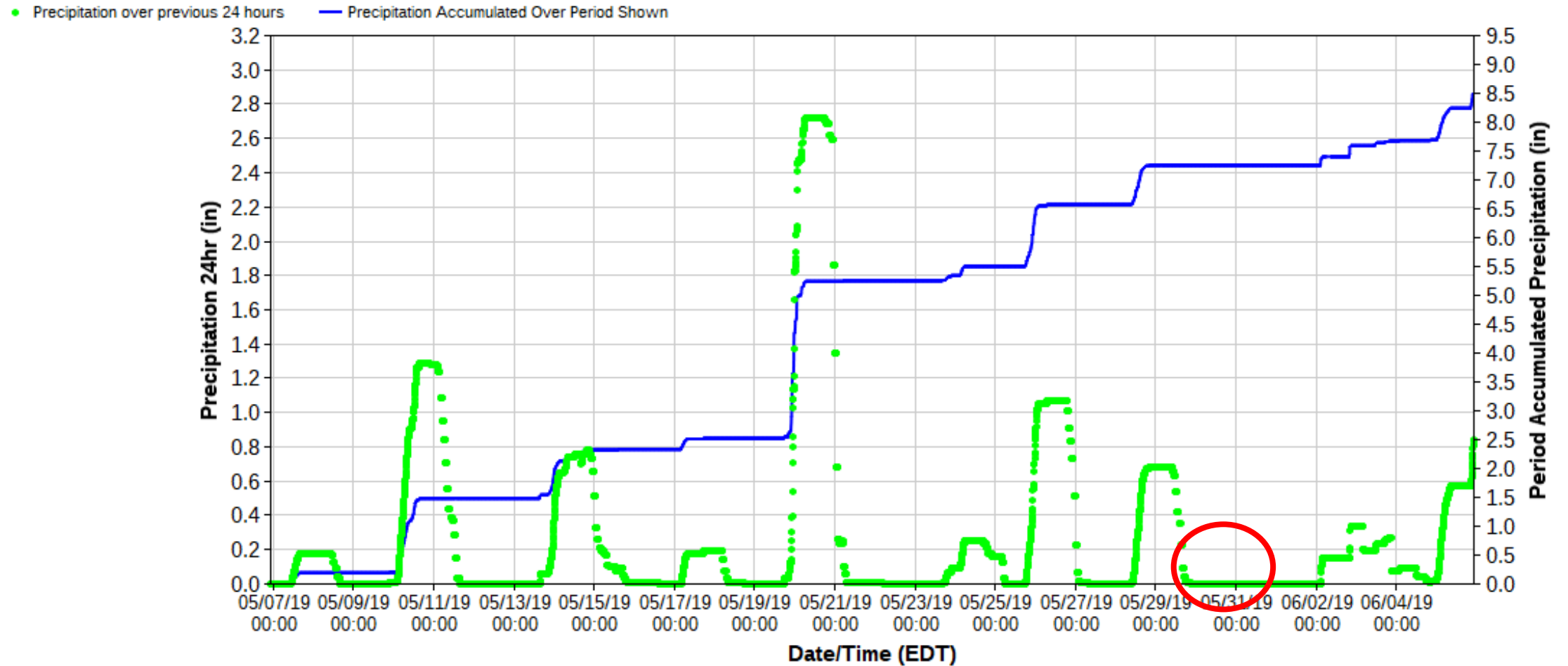


Little River and
Winooski River

6/24/2019



DW7227 Waterbury Center (D7227)



Green: Precipitation over previous 24 hours

Blue: Precipitation accumulated since 5/7/2019

Cotton Brook

Influence of glacial
lake sediment



Game camera images record change

7/1, 8 pm



New material dams the brook

7/2, 6 am



CameraName

55°F 12 °C

07-02-2019 06:00:01

Material erodes, mud increases, tree on sediment block slides in

7/6, 9 am



CameraName

86°F 30 °C

07-06-2019 09:00:01

Brook cut through sediment and is flowing again

7/6, 6 pm



CameraName

71°F 21 °C

07-06-2019 18:00:01