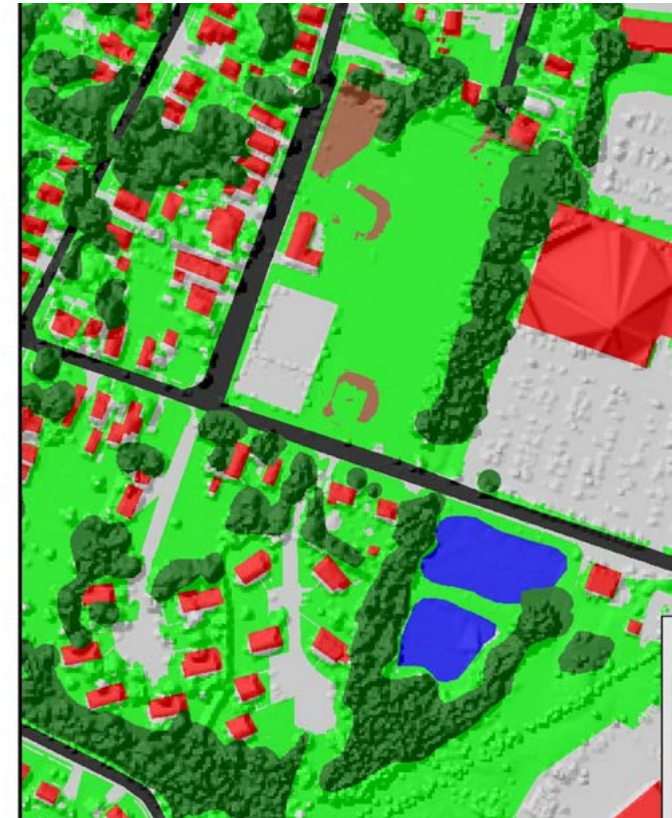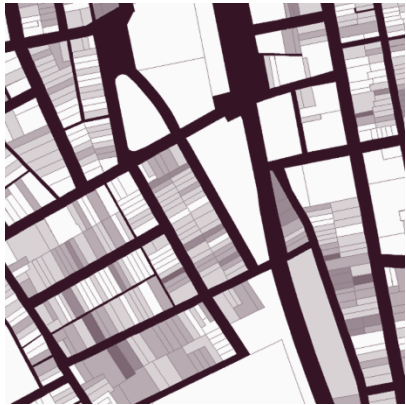# Geospatial Data and Imagery Acquisition related to the Treasurer's Report on Clean Water

HOUSE COMMITTEE ON NATURAL RESOURCES, FISH AND WILDLIFE
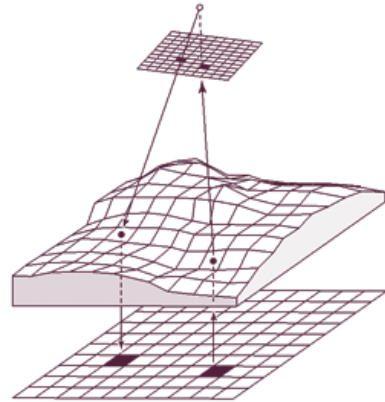
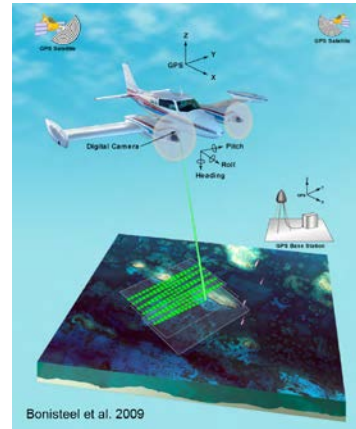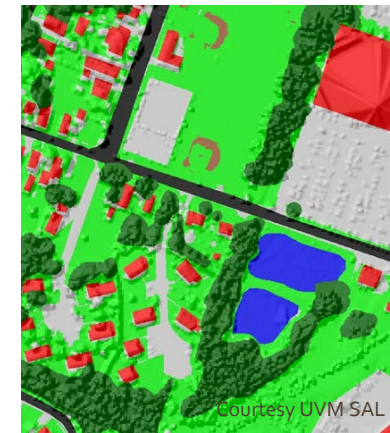FEBRUARY 2, 2017

JOHN E. ADAMS

VERMONT
VERMONT CENTER FOR GEOGRAPHIC INFORMATION

PARCELS

ORTHOIMAGERY

Bonisteel et al. 2009

LIDAR

Courtesy UVM SAL

**LAND COVER /
IMPERVIOUS SURFACE**

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Statewide Parcel Data Program

This interagency program will create a statewide, consistent, and up-to-date GIS database of parcel boundaries. Parcels will include SPAN information, that will allow the data to be linked to the grand list.

1/3rd of the State will be updated every year for 3 years.

STATEWIDE COVERAGE GOAL: **End of 2019**

VT Parcel Mapping Data Status July 2016

Year of Parcel Data
- 1990 - 2013
- 2014 - 2016
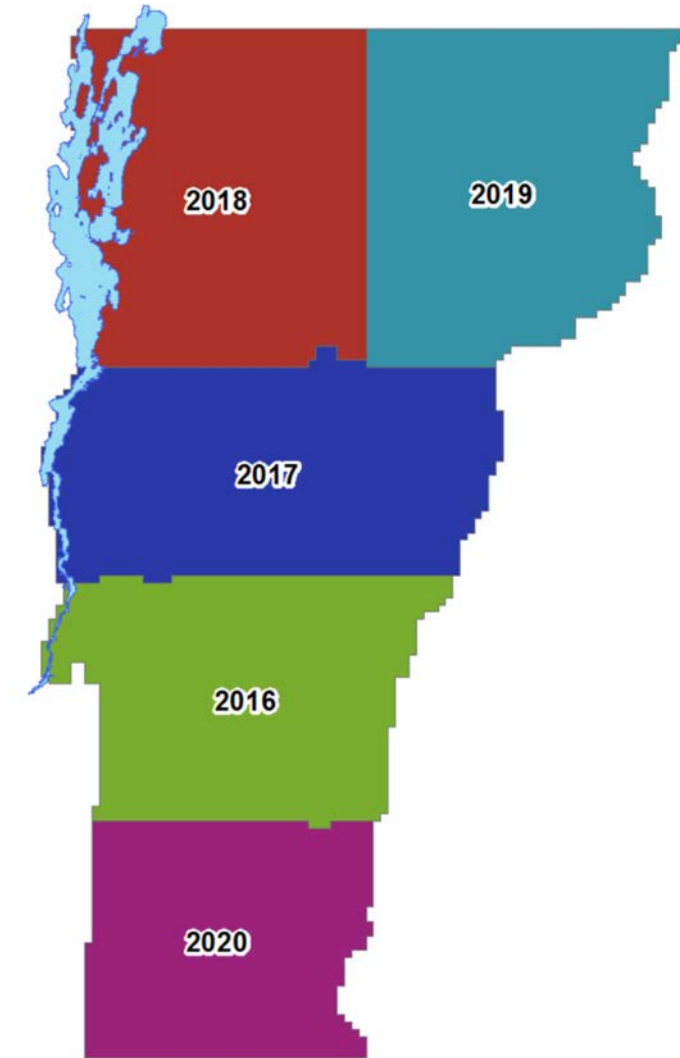- None or Unknown

VERMONT
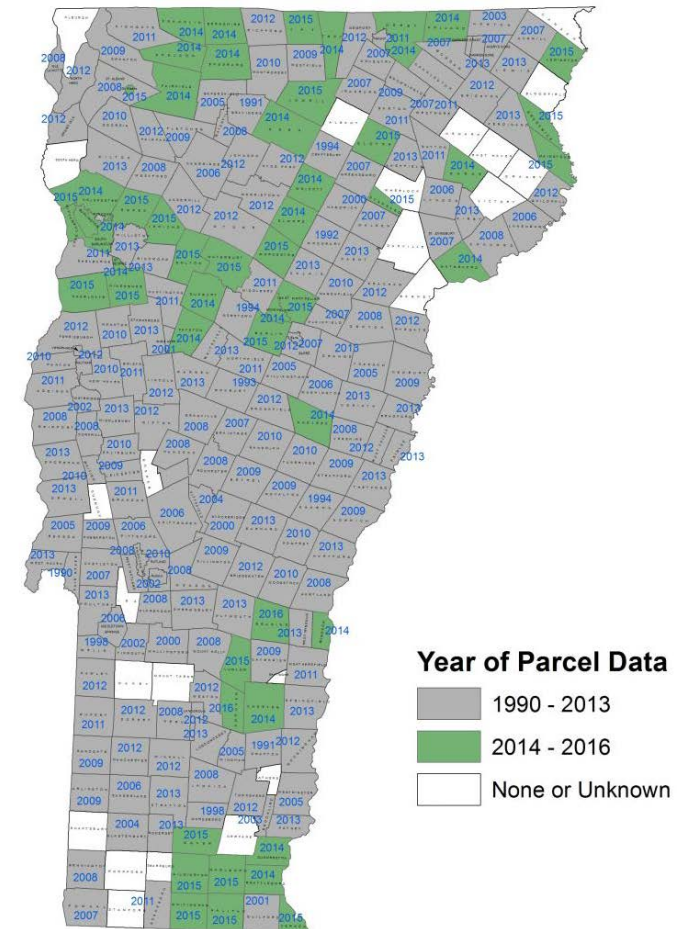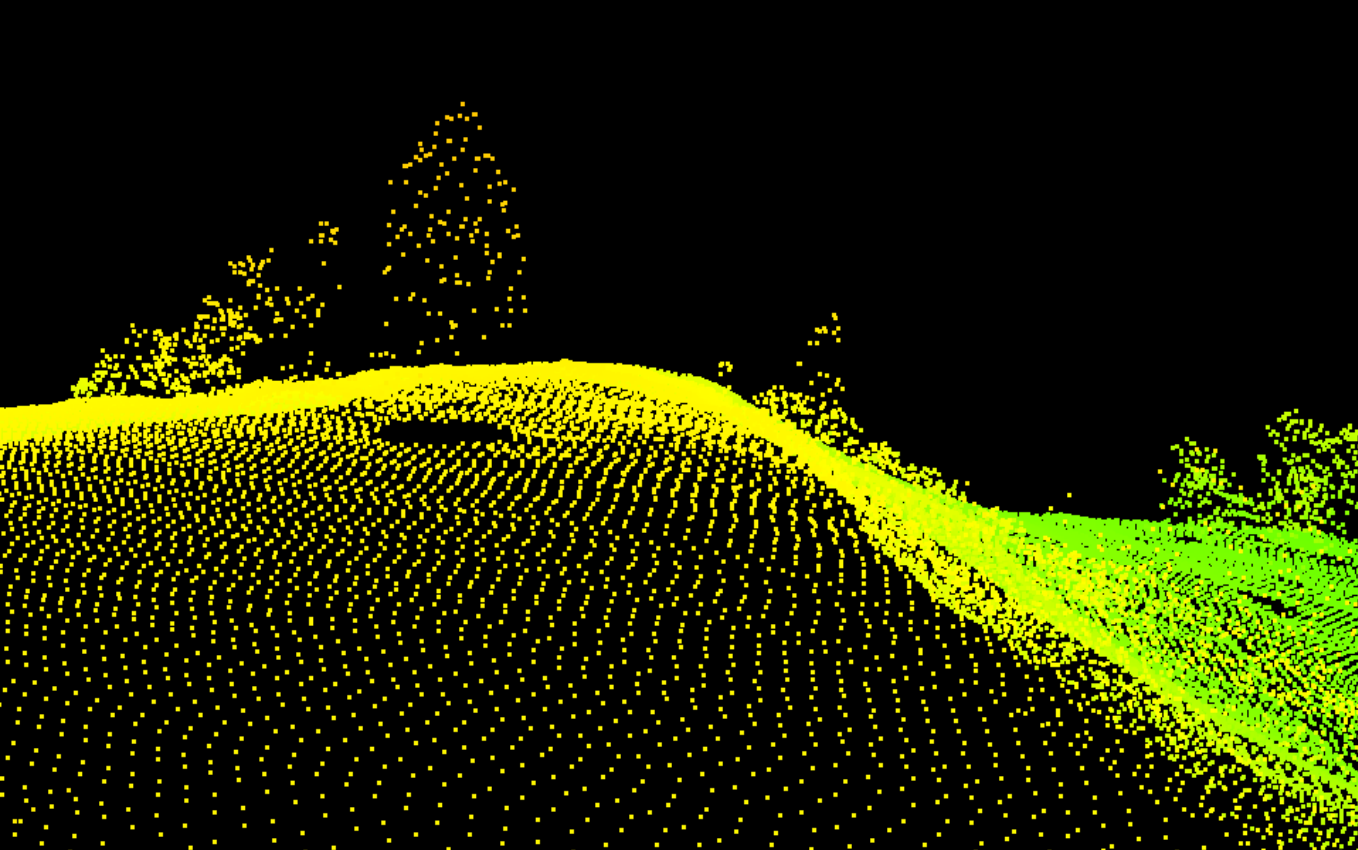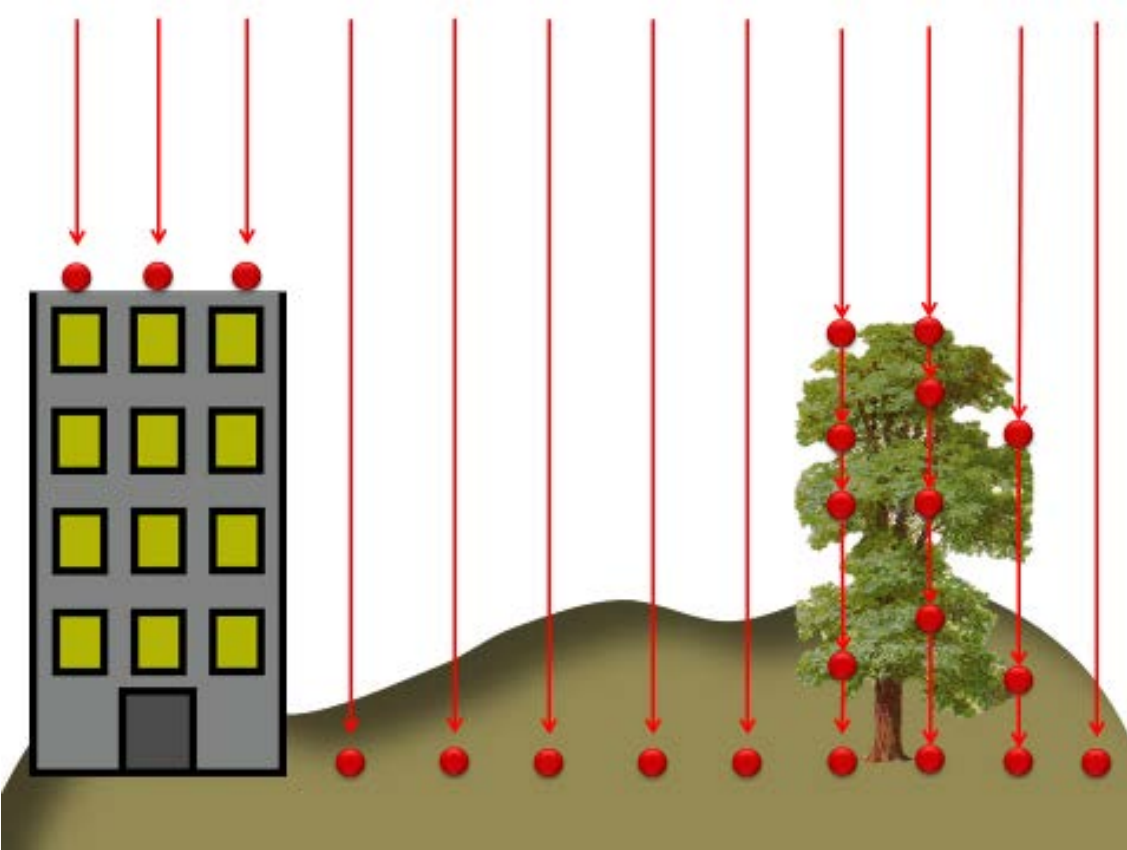
Orthophoto Program

OVERVIEW

- Collected in sections with 5 year cycle
- Leaf-Off, No Snow, No Clouds, Infrared

2016-2020 ACQUISITION PLAN

- Minimum 30cm resolution
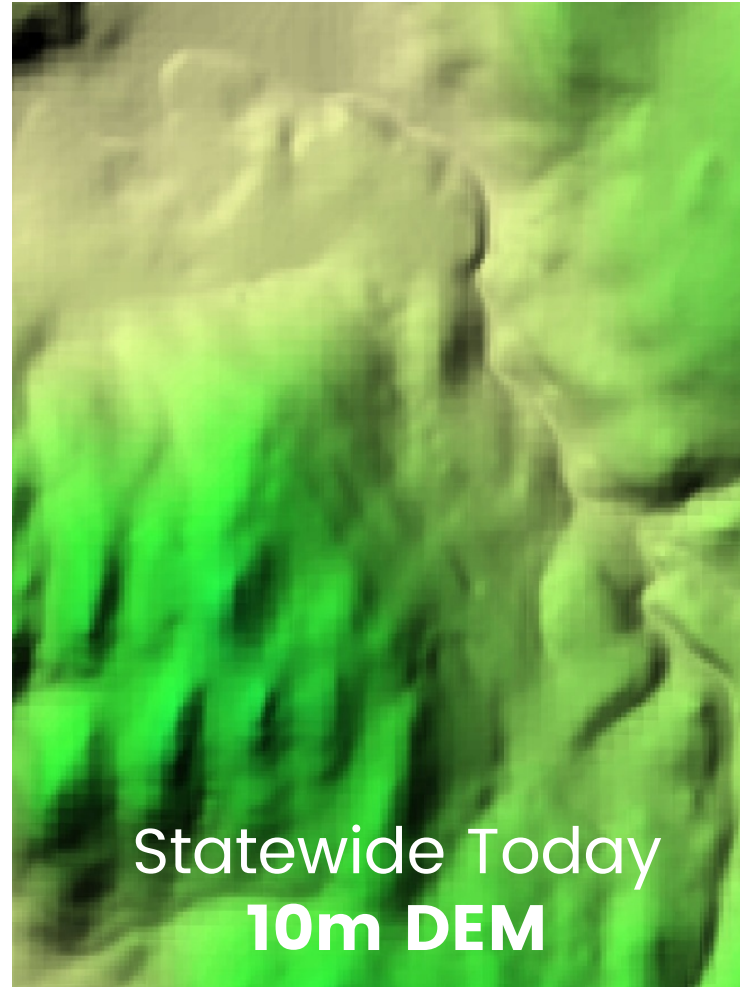- Accuracy within 73.4cm meeting NSSDA accuracy

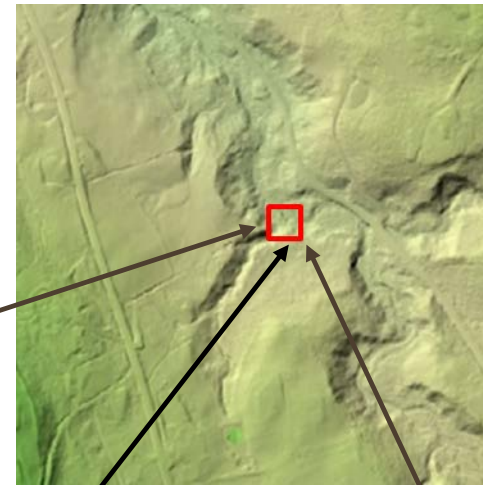VERMONT

LiDAR: Light Detection and Ranging

LiDAR Resolution

National Elevation Dataset: Reported vertical accuracy= <u>8 ft.</u>

LIDAR: Vertical accuracy= <u>3.6 in.</u>

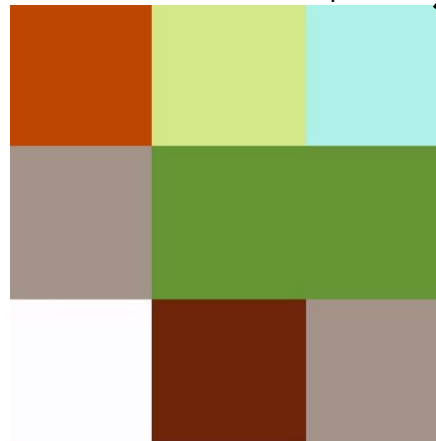
Statewide 2009
30m DEM

Statewide Today
10m DEM

Statewide 2018 Goal
0.7m DEM

LiDAR Resolution

Cell size: 9688 sq ft

Cell size 1078 sq ft

Cell size 5.27 sq ft
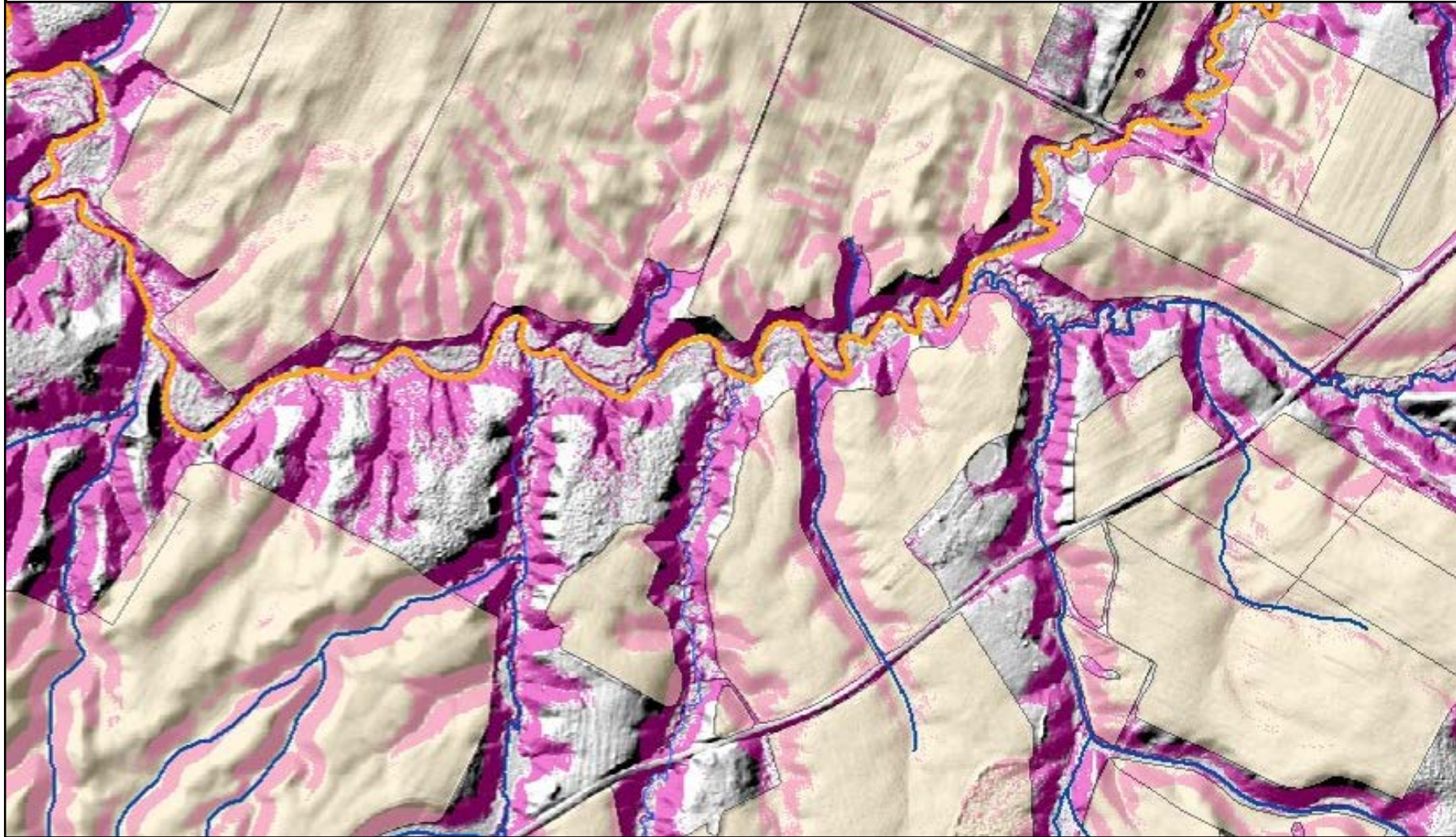
2009
30m DEM

Statewide Today
10m DEM
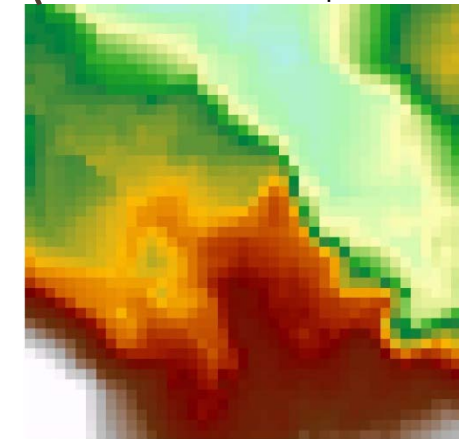
2018 Goal
0.7m DEM

1836x more detail

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Using LiDAR to Locate Ravines & Gullies: Conduits of Nutrients and Sediment into Lake Champlain; Caroline Alves –USDA / NRCS (NEARC 2015, Burlington, VT).

Final Result: Gullies and Ravines shown in shades of magenta, Agricultural Areas in beige, Impaired Waters in orange. Flow accumulation & streams buffered 35 meters and used to extract slopes >8% in and near farm fields
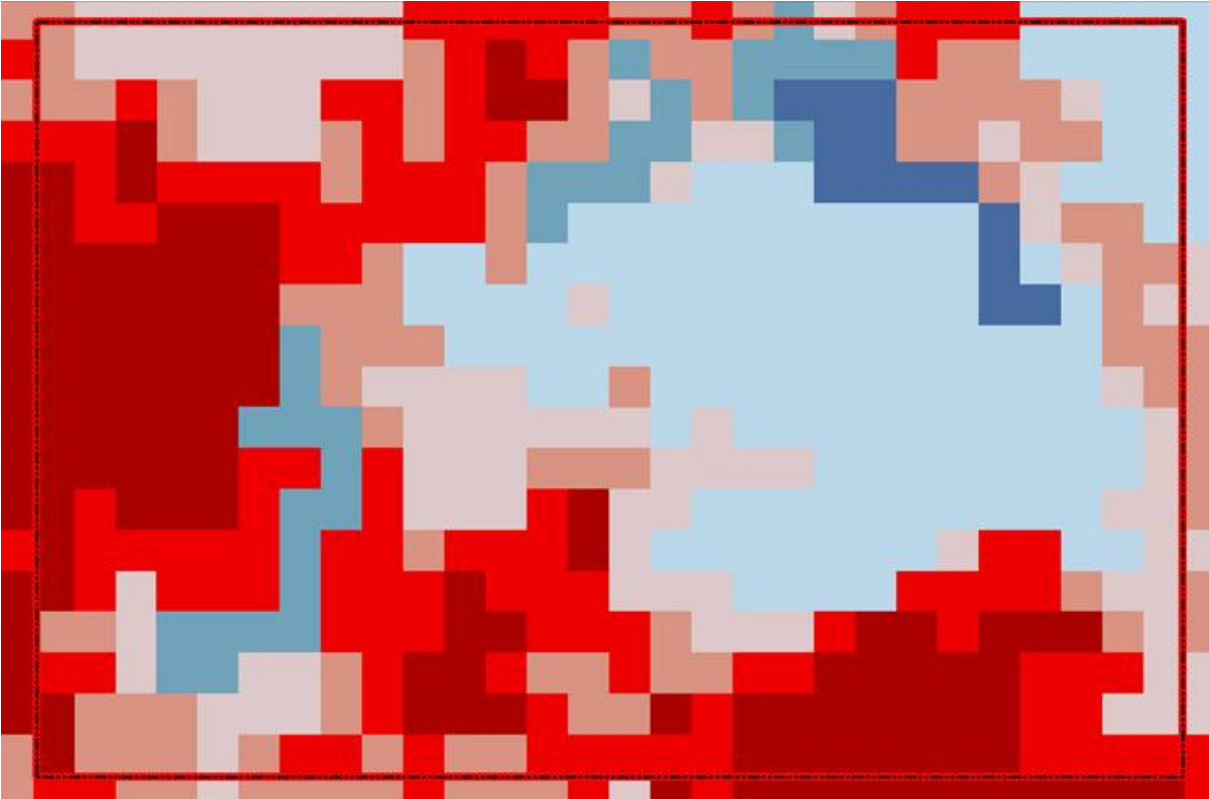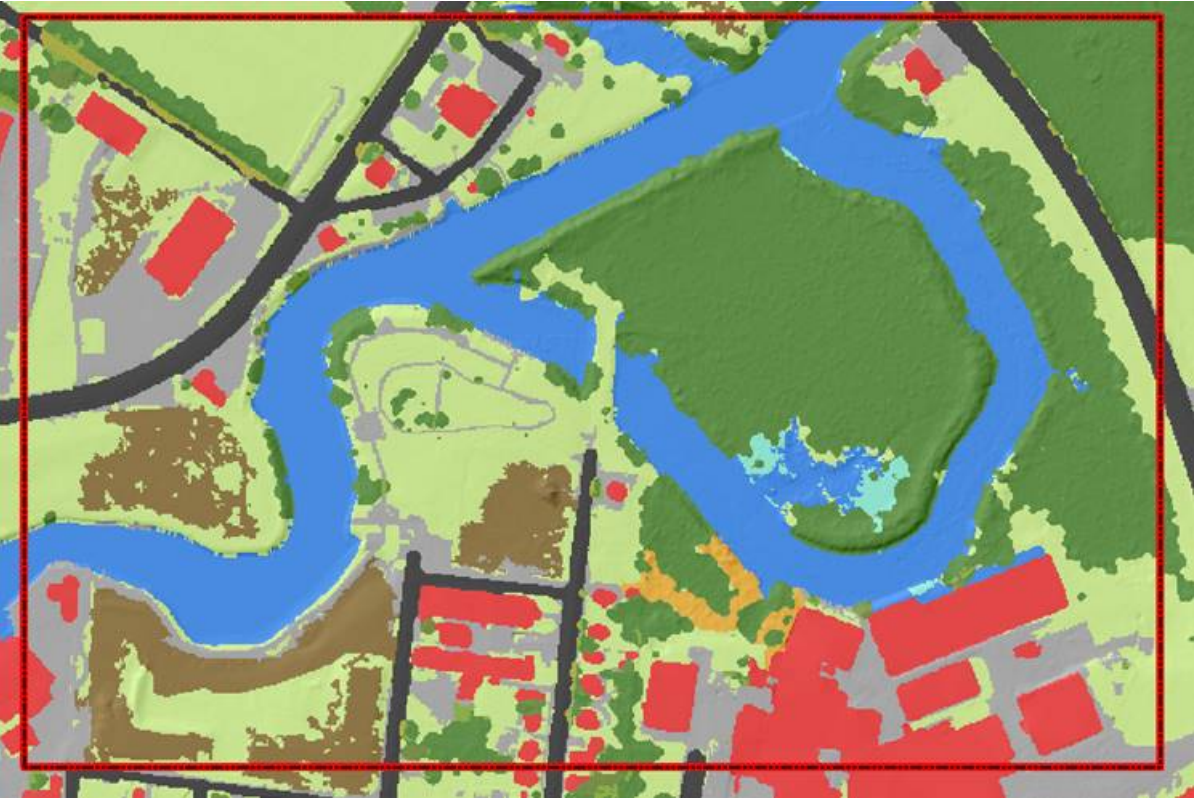
LiDAR Data Availability (QL2)
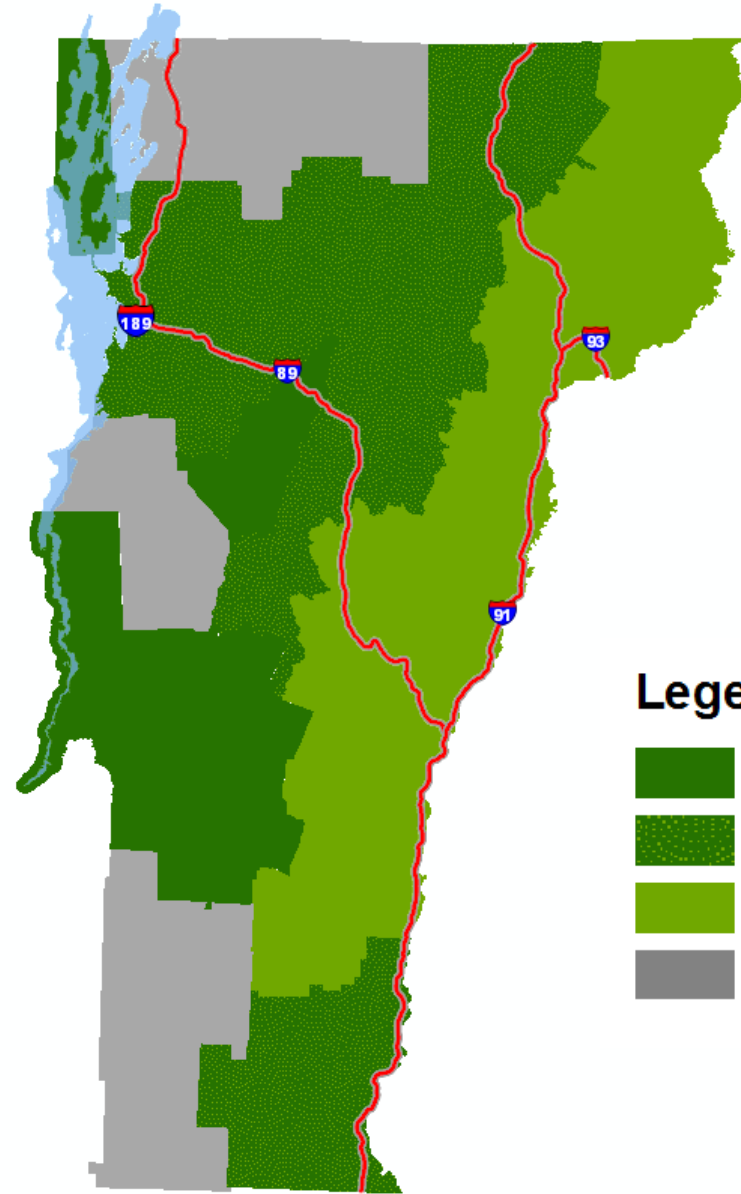
Legend

- ■ QL2 Data Available
- ▦ QL2 Data Available Feb 2017
- ■ QL2 Flights Completed (Data Anticipated: Late 2017)
- ■ QL2 Flights Pending (Data Anticipated: Late 2018 or 2019)

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Land Cover / Impervious Surface

30M Resolution Land Cover

1M Resolution Land Cover

UVM SPATIAL ANALYSIS LAB

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QUESTIONS?