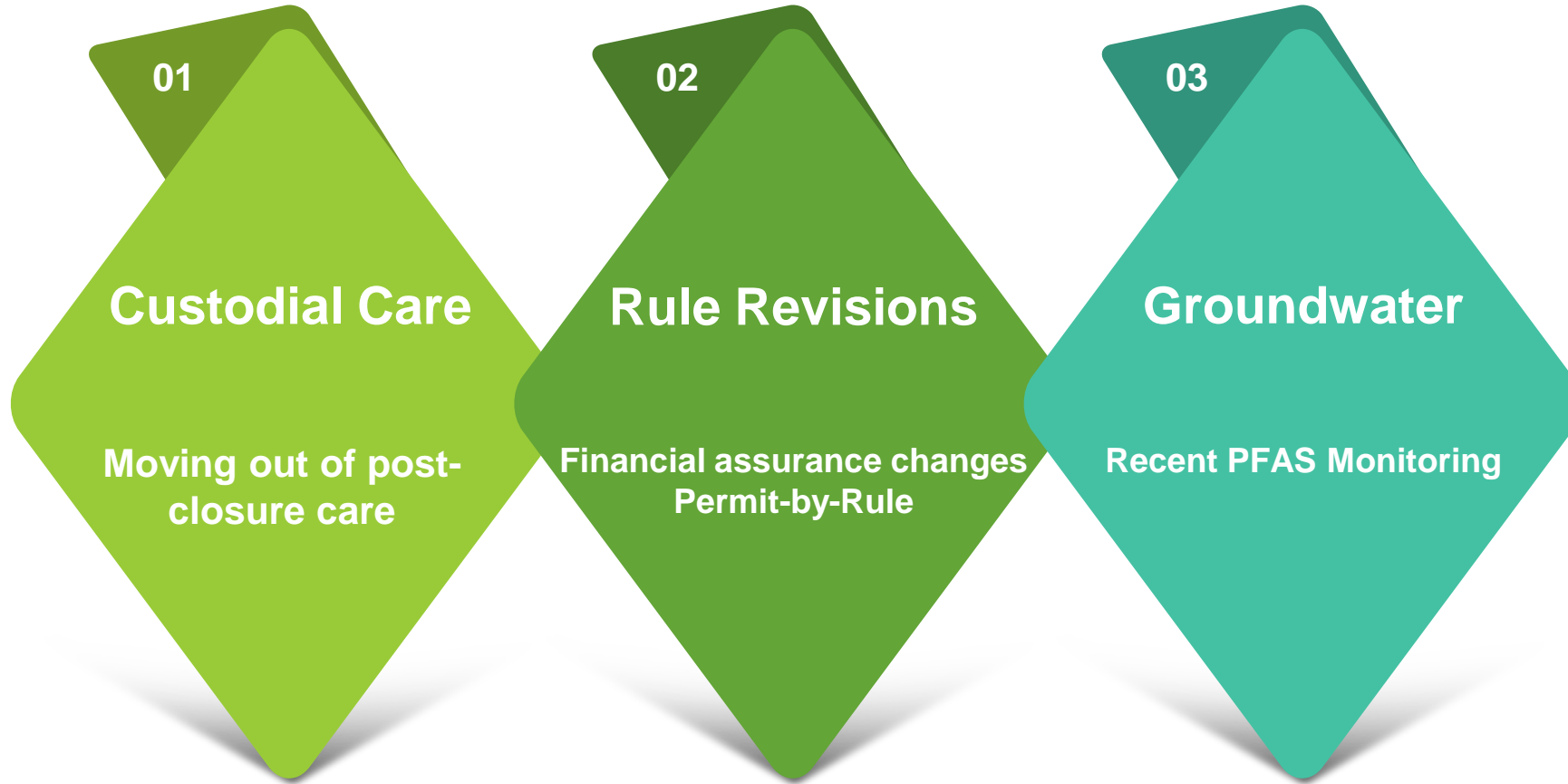

Improvements and Challenges:

Vermont's Post-Closure Landfill Program

Kasey Kathan
Solid Waste Management Program
kasey.kathan@vermont.gov



Topics



01

Custodial Care

Moving out of post-closure care

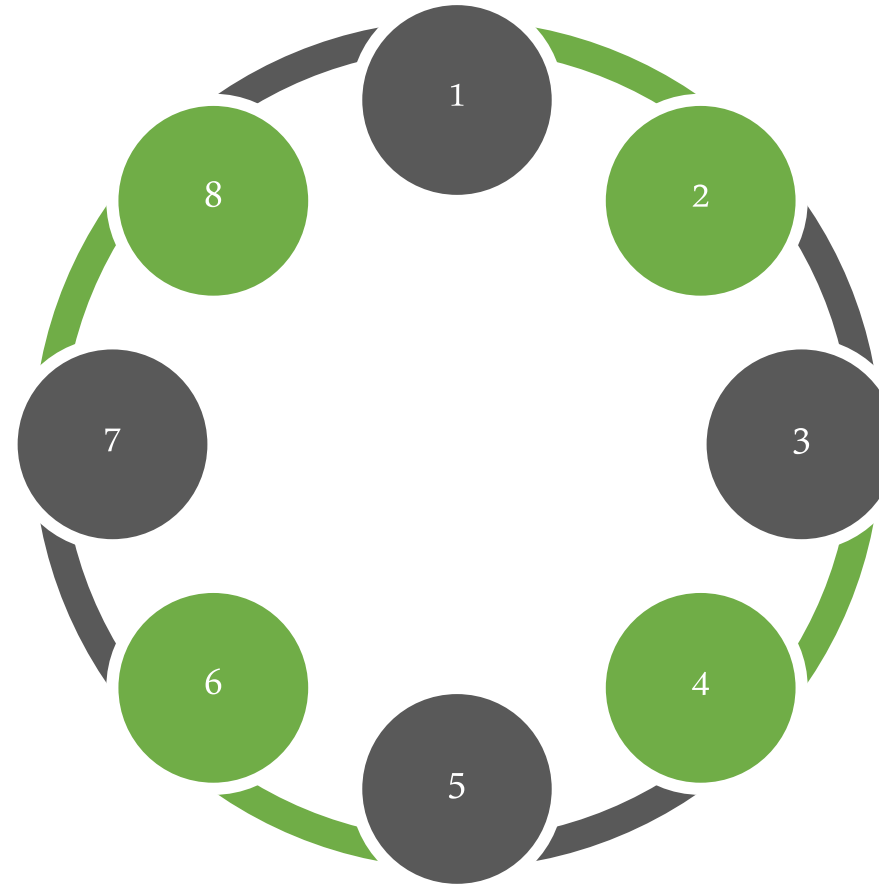
- Procedure developed in 2013
- Initially, few applicants
- Currently – Nine landfills have transitioned

End Use Functions **8**

Corrective Actions **7**

Surface Water Diversion and
Erosion Controls **6**

Vegetation **5**



1 Groundwater

2 Landfill Gas

3 Leachate

4 Settlement

Performance Criteria

- Custodial Care Plan
- Institutional Controls: Notice of Environmental Condition

The Property has been the site of a landfill which was under the supervision of the Waste Management Division of the State of Vermont Agency of Natural Resources (“Division”). The landfill on the Property is closed and under a post-closure care program, supervised by the Division. The program provides for continuation of monitoring, inspection and maintenance activities associated with the Property.

At least 30 days prior to conducting any subsurface work, excavation or groundwater extraction on the Property, the party proposing to undertake such work shall contact the Division in writing. They should provide a description of the work to be completed, the purpose and the location of the work.

However, if such work is necessary to prevent a health hazard, the party conducting the work shall give notification by calling 1-802-828-1138 and briefly describing the threat and location and nature of the work necessary. After providing such notice, work may proceed.

In the case of planned work or work necessary to prevent a health hazard, written notice shall be sent at a minimum of 30 days prior to initiation of the work to:

Vermont Agency of Natural Resources
Waste Management Division
1 National Life Drive – Davis 1
Montpelier, Vermont 05620-3704

Additional Submittals

02

Rule Revisions

**Financial assurance
changes
Permit-by-Rule**

- Substantial rule revisions underway
- Completed a preliminary stakeholder comment period and meeting

- Modelled after New York
- Applies to privately owned landfills
- Maintain 30-years of funding at current post-closure care costs per approved post-closure plan
- Opportunity to update the post-closure plan at any point



Financial Assurance – Rolling 30-year

- Would apply to both post-closure and custodial care management of landfills
- Currently issuing 5-year certifications
 - Time consuming and costly
- Will allow better allocation of staff time to reviewing semi-annual monitoring reports and providing assistance in helping municipalities move towards custodial care

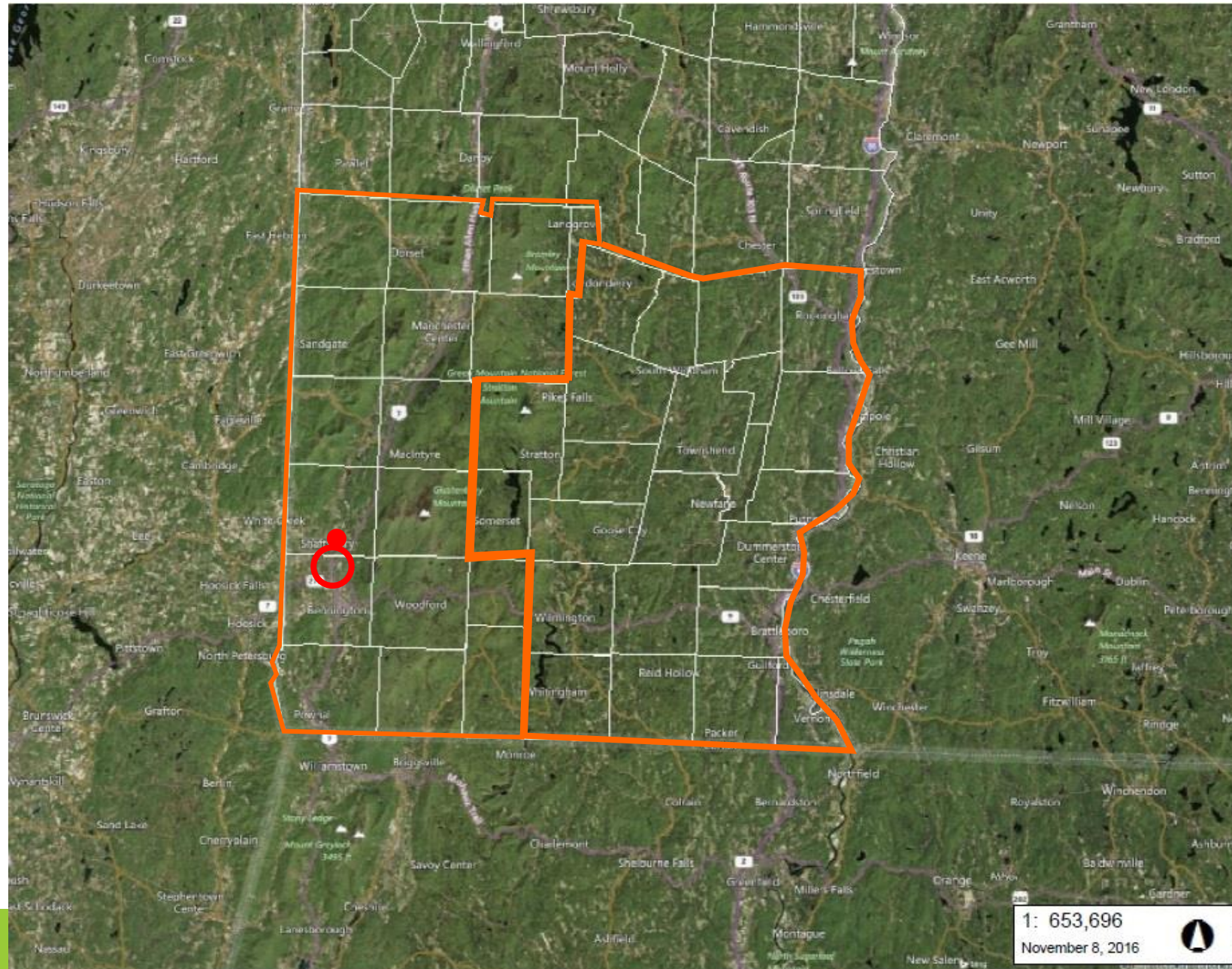
Permit-by-Rule

03

Groundwater Impacts

Recent PFAS Monitoring

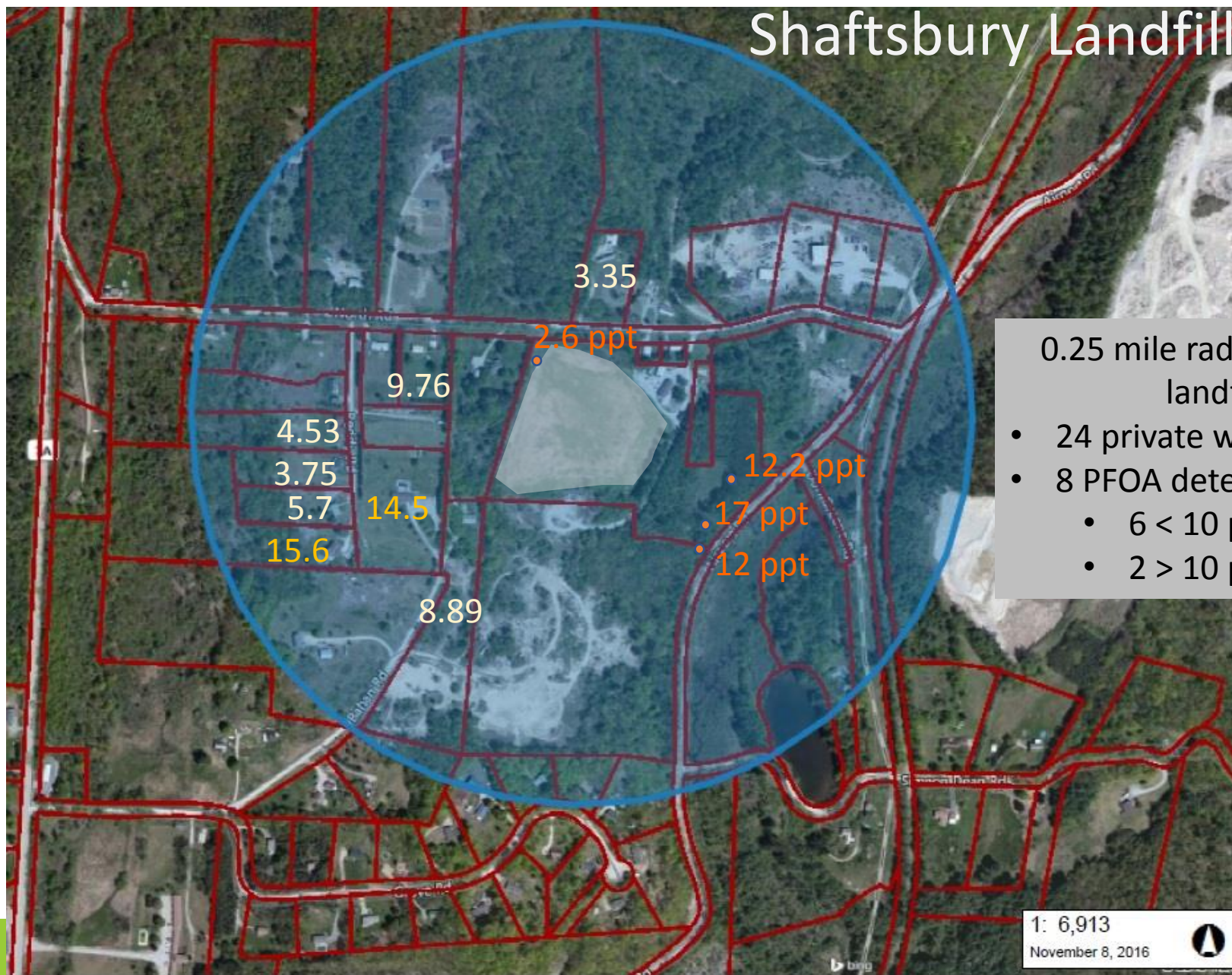
- Groundwater protected as a public trust
- Proposed rule revisions to the Groundwater Protection Rule and Strategy
- Conservative drinking water standards adopted by Vermont Health Department



- N. Bennington
 - Former Chemfab facility
- Bennington Landfill
- Burgess Landfill

PFAS Sampling

Shaftsbury Landfill

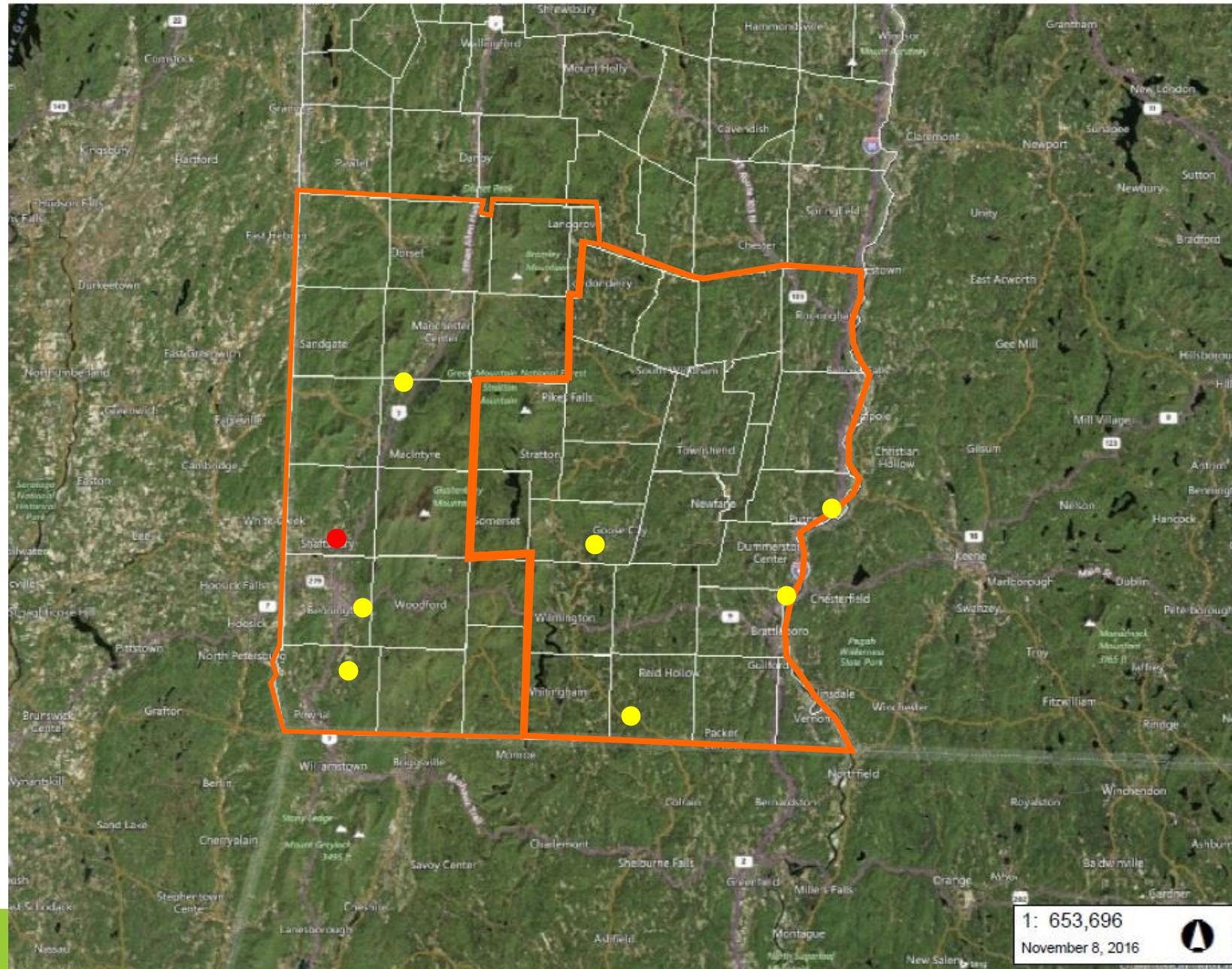


351.0 0 176.00 351.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere 1" = 576 Ft. 1cm = 69 Meters

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DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.



- Bennington and Windham Counties
- 8 closed landfills
- 4 of 8 resulted in >20 ppt detections

33,208.0 0 16,604.00 33,208.0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere

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1" = 54475 Ft. 1cm = 6537 Meters

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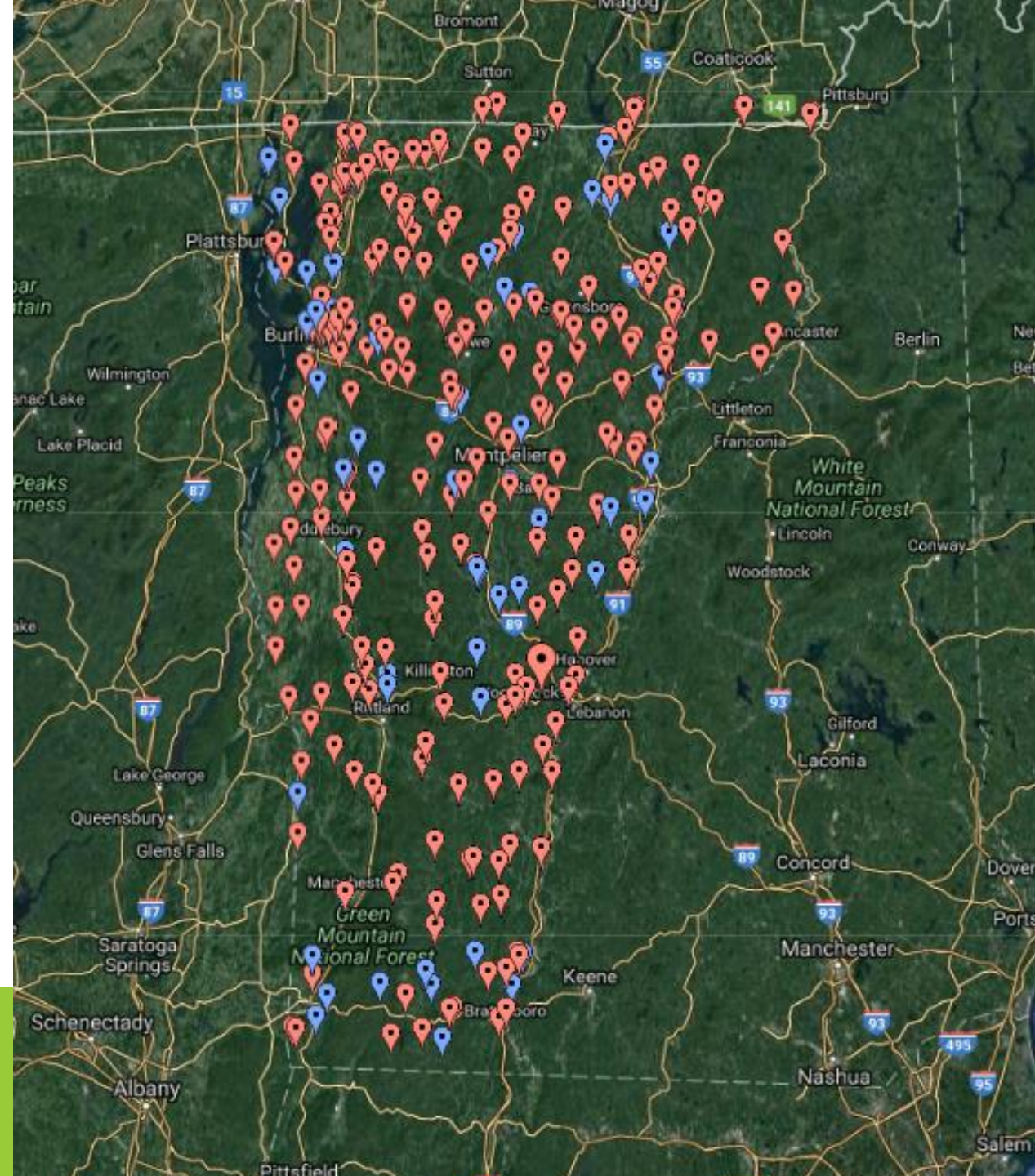
1: 653,696

November 8, 2016



PFAS Sampling

- Additions of regular PFAS sampling to semi-annual monitoring events
- Legislative action on PFAS issues
 - **S.11** – An act relating to the liability of municipalities for hazardous material releases from landfills
 - **S.10** – An act relating to liability for the contamination of potable water supplies



- Expand groundwater sampling at closed landfills
- Initiate leachate sampling at active and closed landfills

PFAS Sampling: Next Steps

Kasey Kathan
Solid Waste Management Program
kasey.kathan@vermont.gov
(802) 522-0561



Questions?