



Headwaters

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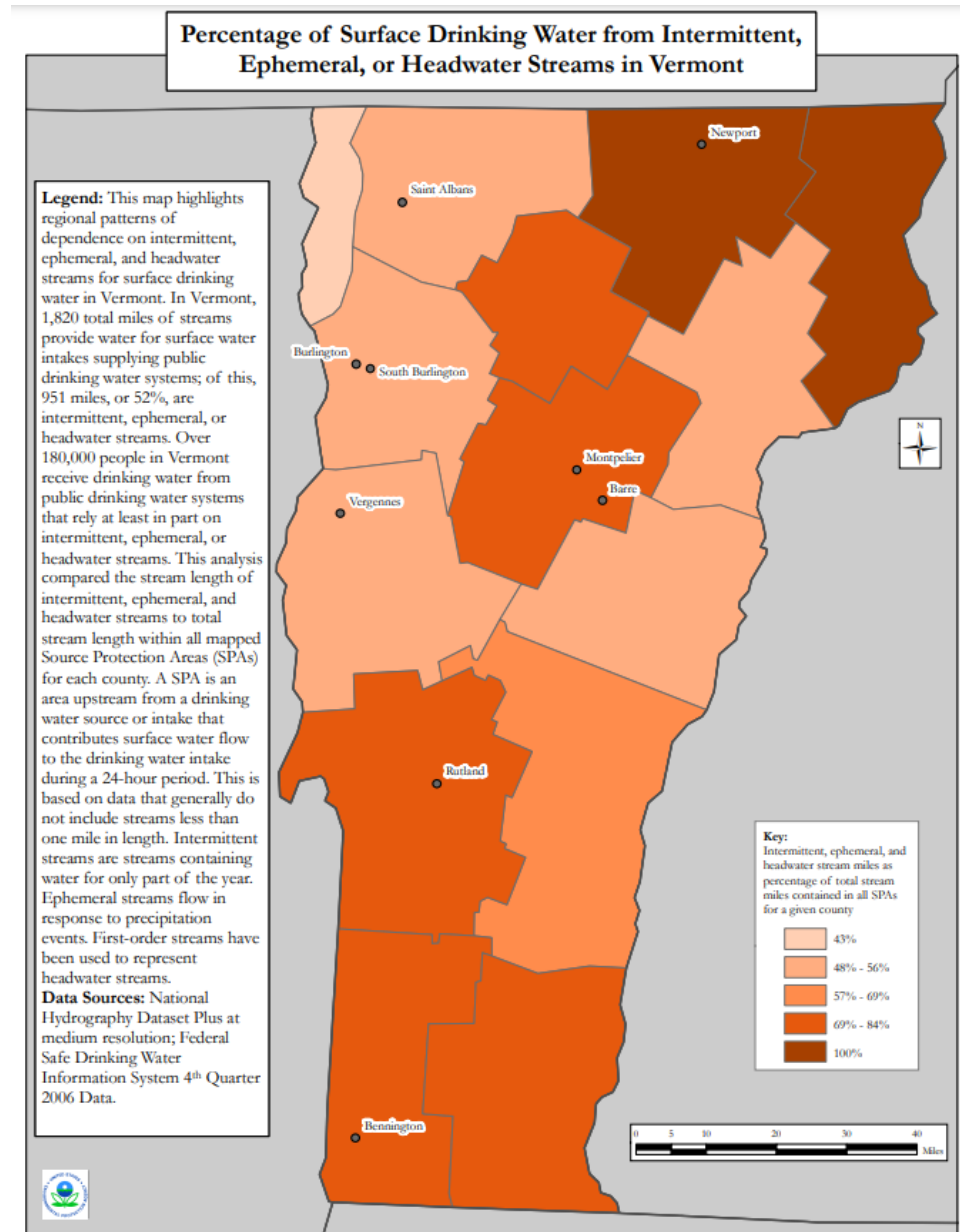
Headwaters, *Follow the Raindrop*

- The initiation points of all river networks
 - Comprise 79% of stream networks in US
- A distinct ecosystem
 - Unique physical conditions to support specific species
 - More dependent on organic matter from surrounding terrestrial landscape
 - Extremely sensitive to land use
- Activities in headwaters affect the entire watershed
 - Flooding*
 - Water quality*
 - Biodiversity/habitat connectivity*
 - Carbon sequestration/storage*

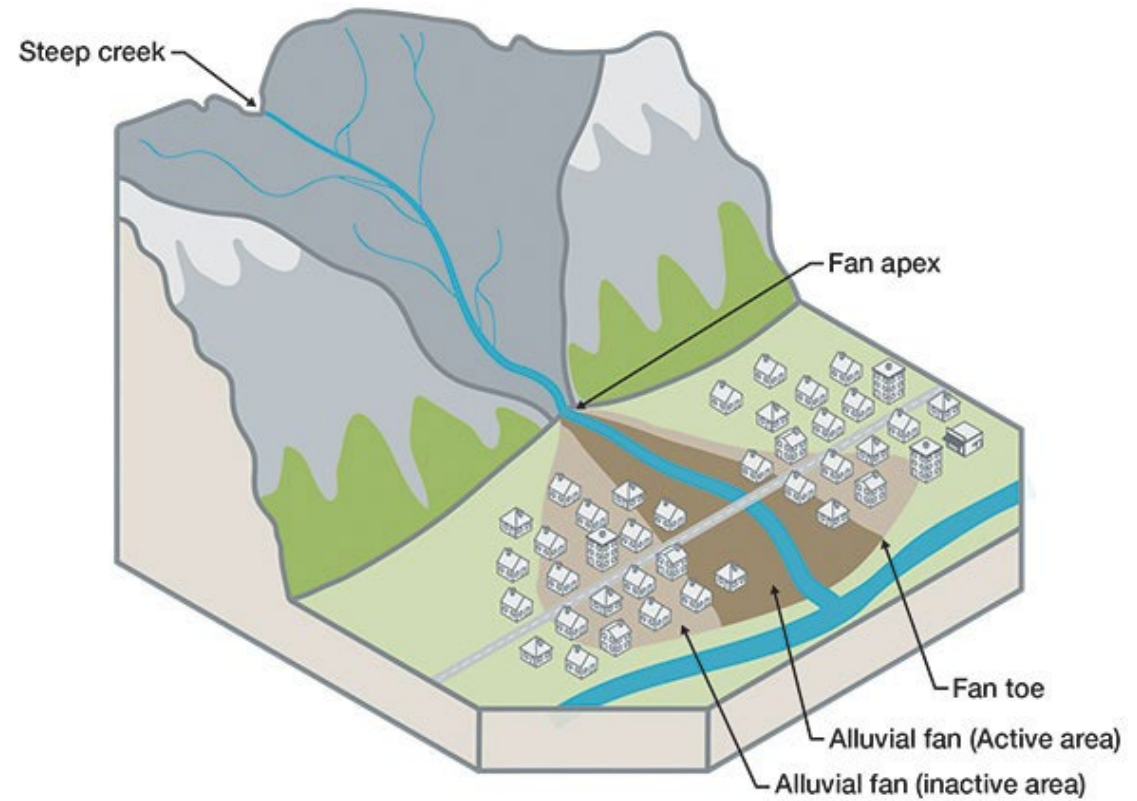
**State goals, requirements,
and/or commitments*

Headwaters source Vermonters with Drinking Water

Source, EPA



The Alluvial Fan Example



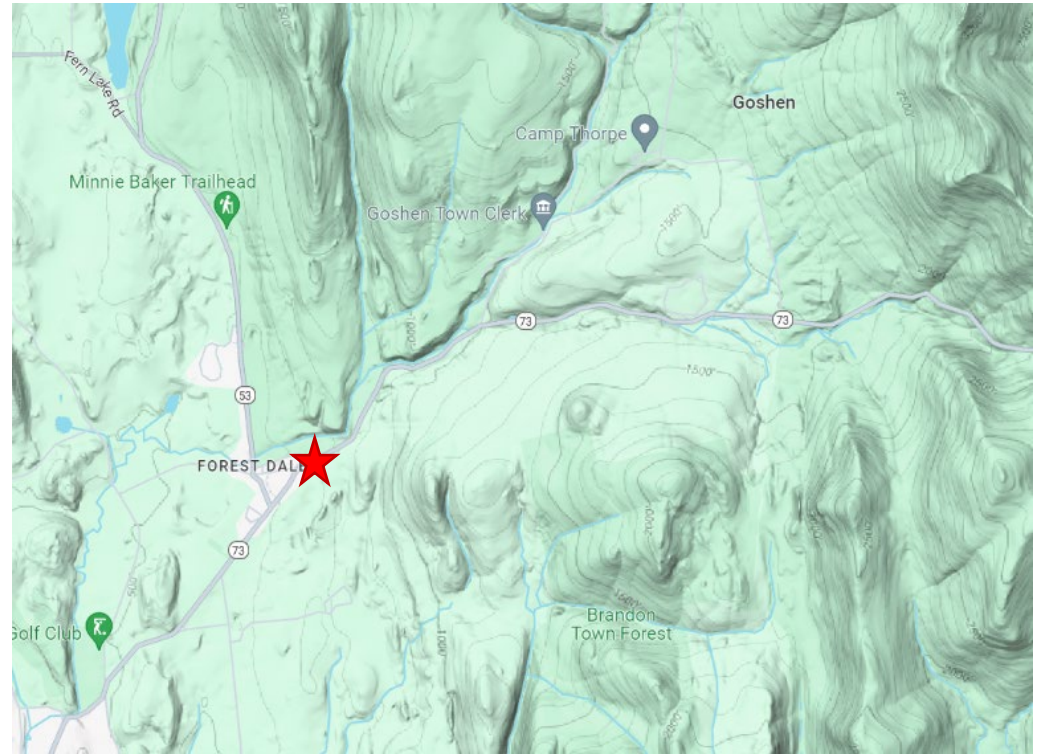
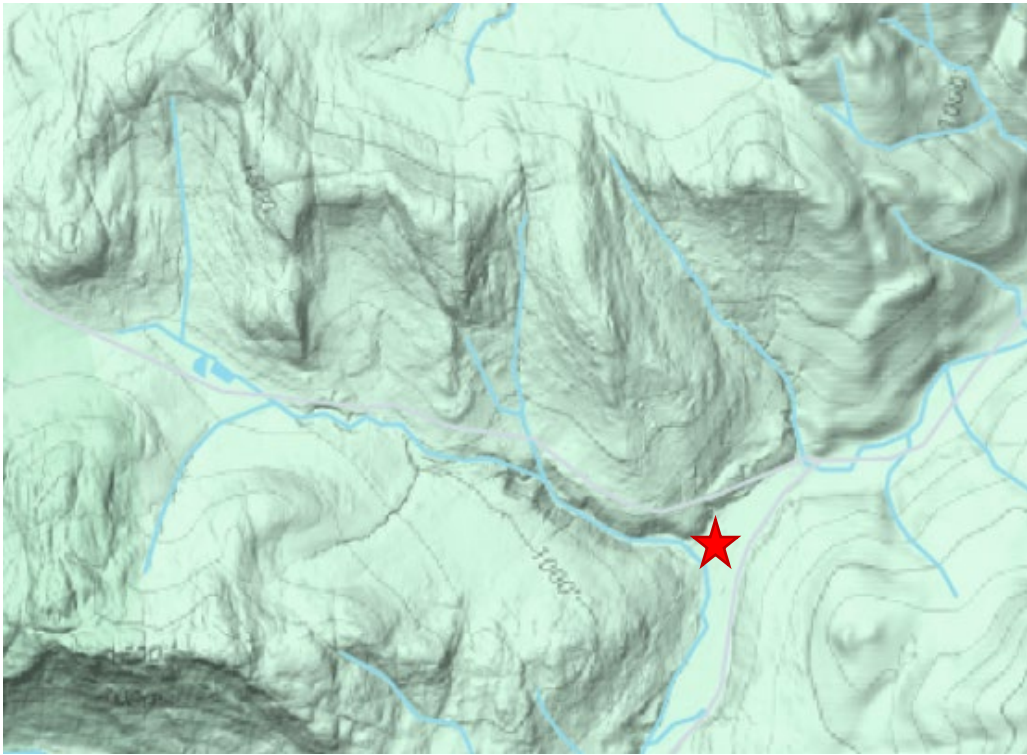


Photo credit: Patrick Crowley, VTDigger





Headwater Protection: *Good for Biodiversity & Community Resilience*

- Positively impacts river hydrology
- Retains sediment, preventing debris movement during high precipitation events
- Supports rich biodiversity for entire river networks/watersheds
 - Disproportionate contribution to biological diversity
- Across State Plans:
 - Priority action of 2023 SHMP
 - Priority action of 2021 VT CAP
 - Identified as “key areas” in Lake Champlain TMDL; legacy old road networks identified as a “major challenge”
 - 2017 Forest Action Plan – “because headwater streams have significant influence on downstream river processes, direct protection and conservation efforts to maintain and enhance forest cover”