



LAKE HENNESSEY AND  
MILLIKEN RESERVOIR  
WATERSHED  
MONITORING & ANALYSES

City Council

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# Lake Hennessey and Milliken Reservoir Watershed Monitoring and Analyses

## Topics

- Background
- Sampling and Analyses
- Next Steps



# Lake Hennessey and Milliken Reservoir Watershed Monitoring and Analyses

## Background

- City preparing a Master Plan for Reservoir and Watershed Operations
- City and County have shared interests in the Hennessey and Milliken watersheds
- City and County entered into an MOU in June 2017
- May 2019 staff presented model and Water Quality Monitoring and Analysis Plan



# Lake Hennessey and Milliken Reservoir Watershed Monitoring and Analyses

## Scope of the Study

- Create “tools” to evaluate water quality
- Developed Model: Watershed Analysis and Risk Management Framework (WARMF) software
- **Water Quality Sampling and Analyses**
- Confirm Runoff Water Quality
  - Is not affected by changing land use
  - or
  - Determine practice improvements to protect water quality



# Lake Hennessey and Milliken Reservoir Watershed Sampling and Analyses

## Sampling and Analyses

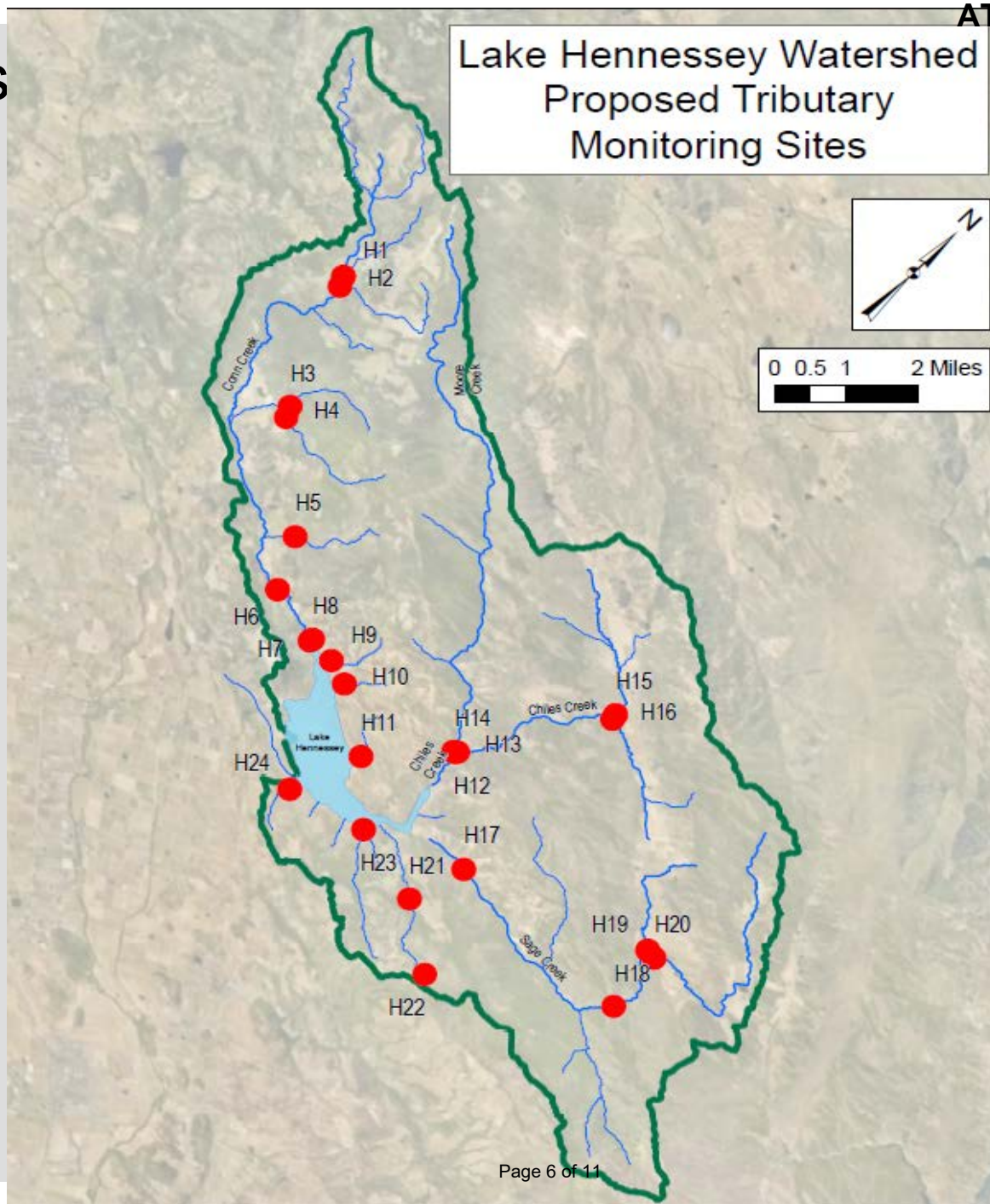
Runoff from Various Types of Land Use:

- Urban i.e. Angwin
- Bare land i.e. undeveloped
- Rural Residential i.e. Greenfield Road
- Agricultural i.e. Vineyard

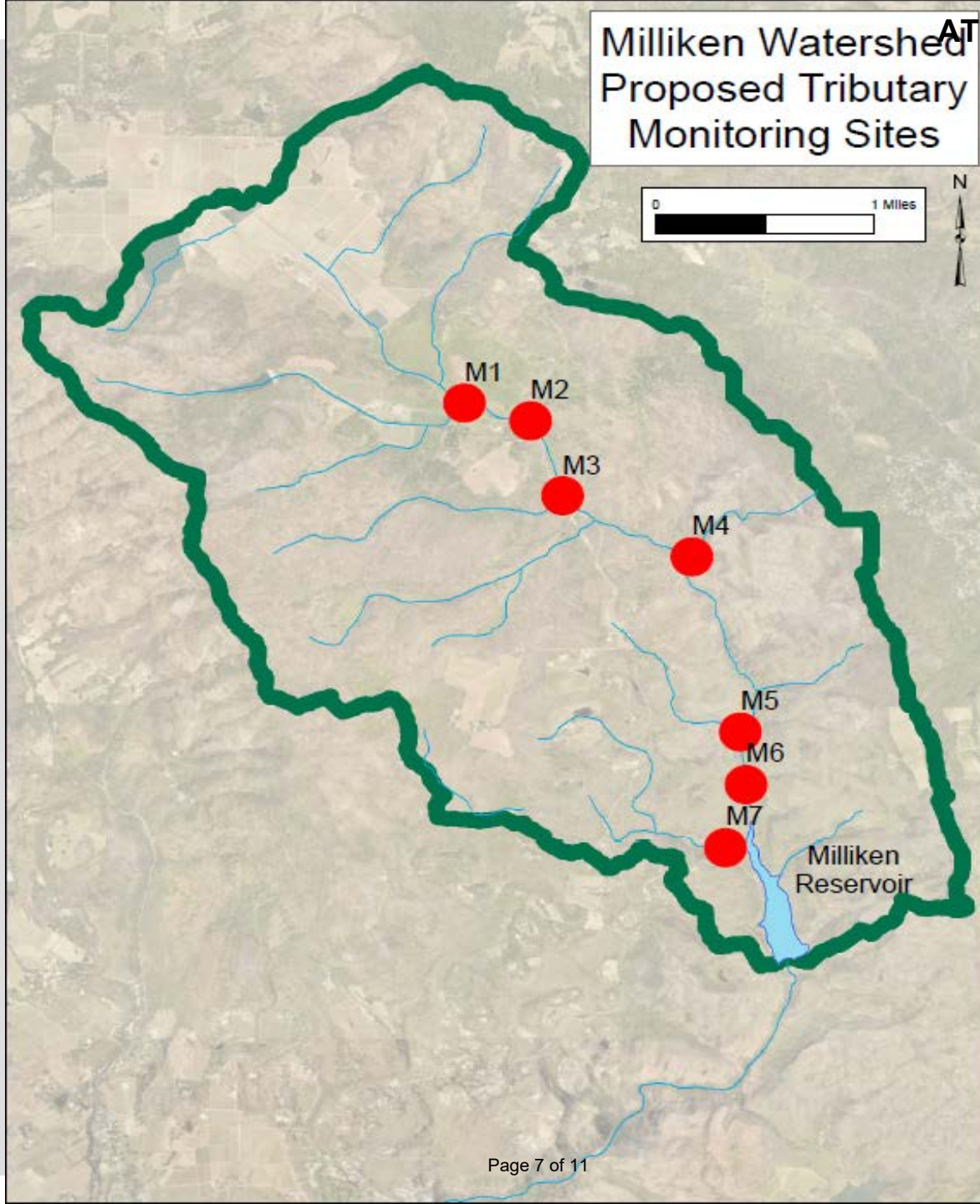




25 sites



7 sites



# Lake Hennessey and Milliken Reservoir Watershed Sampling and Analyses

## Water Quality Analyses

- Nitrogen
- Dissolved solids
- Phosphorous
- Sulfates
- Pesticides
- Coliforms
- Many other parameters





# Lake Hennessey and Milliken Reservoir Watershed Sampling and Analyses

## Next Steps

- Execute the MOU with the County
- Implement sampling and analyses plan
- Develop database and analyze data
- Update the WARMF model based on data trends



# Lake Hennessey and Milliken Reservoir Watershed Sampling and Analyses

Questions or Comments?



# Lake Hennessey and Milliken Reservoir Watershed Sampling and Analyses

## Recommendation

Authorize the Utilities Director to execute the MOU with the County of Napa to Implement the Lake Hennessey and Milliken Reservoir Water Quality Sampling and Analysis Plan.

