CITY OF NAPA

2017 NAPA FIRES

CITY WATER SYTEM EMERGENCY RESPONSE TO PROTECT DRINKING WATER RESERVOIRS

Water Service

Reliability challenged

Lake Hennessey

Milliken Reservoir

Fine Sediment Management

Sediment Management

Why does it matter?

Drinking water quality compliance

2011 Stage II Disinfection Byproduct Rule

TOC → ~~TTHMS~~

>5ppm Total Organic Carbon

>80 ppb RAA Trihalomethanes

Fine Sediment Management

Waddle installation

- ❑ 7,500 linear feet (lf) installed
- ❑ 2 rows with #4 rebar staked every 12’
- ❑ above high water mark
- ❑ 10-man crew + captain
- ❑ 3-man City of Napa watershed crew

Fine Sediment Management

Waddle installation

Goals:

- ❑ slow and spread the inlet flow into the reservoir
- ❑ capture fine sediment in a series of waddles backed up by silt fence
- ❑ protect drinking water supplies from an estimated minimum 3 years of elevated total organic carbon (TOC)

Fine Sediment Management

Fine Sediment Management

Fine Sediment Management

Waddle installation above high water mark

Fine Sediment Management

Fine Sediment Management

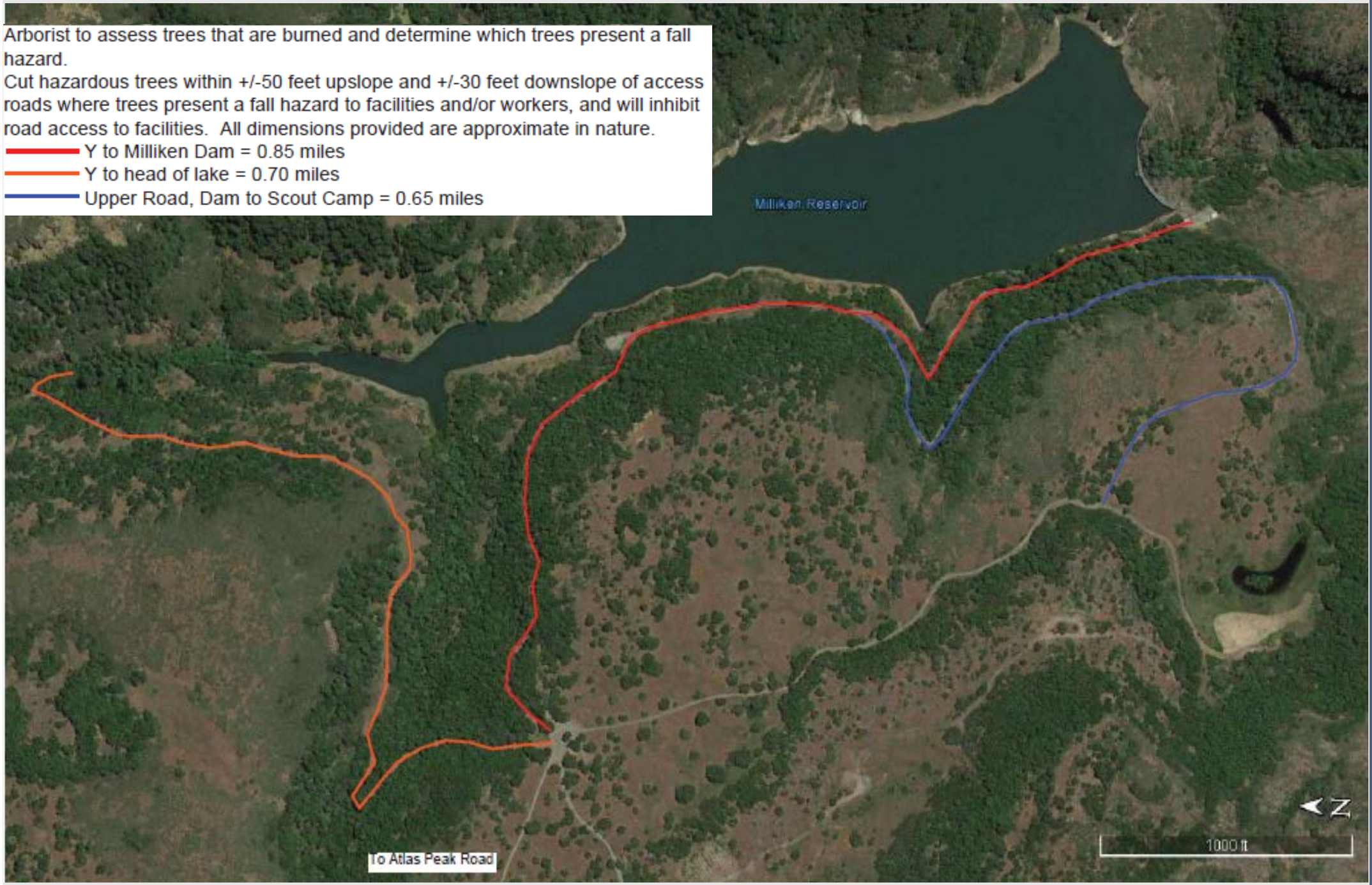
What's Next?

Large Debris and Sediment Management

- ❑ Fell and chip dead trees
- ❑ Maintain access roads
- ❑ Install sediment traps at culvert outfalls
- ❑ Construct sediment traps at major inlets

What's Next?

Large Debris Management



What's Next?

Large Debris Management

- ❑ Install booms to protect face of dam
- ❑ Corral and manage debris

What's Next?

- Increase Frequency of Monitoring and Analyses
- Enhance Treatment Process
  - Granular Activated Carbon (GAC)

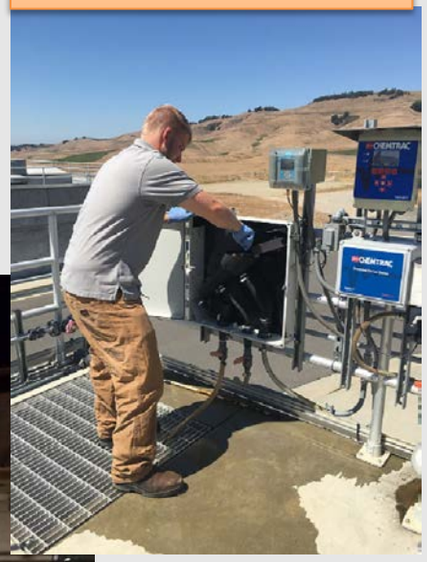
Water Service

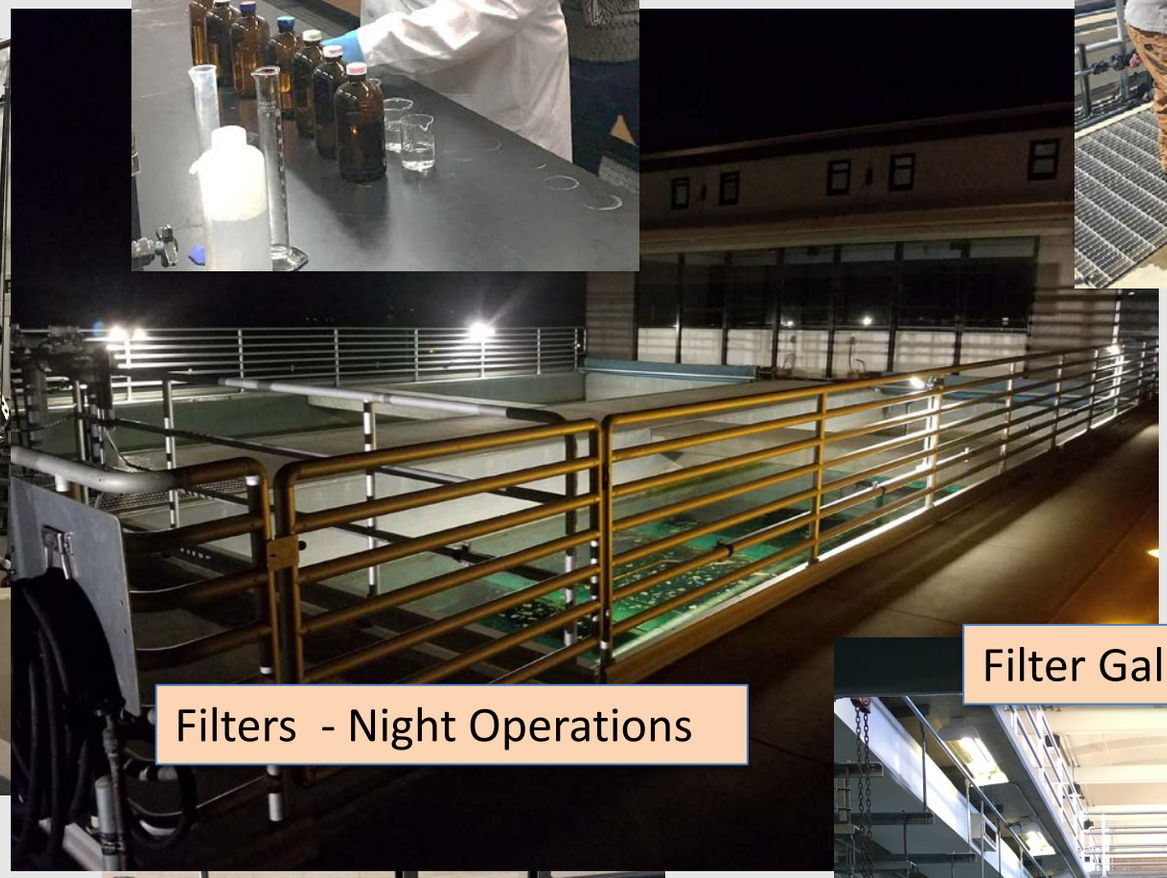
24/7 Treatment

Chemical Feed Pumps

Chemical Analyses

Instrumentation and Controls





Filters - Night Operations

Turbidimeters

Filter Gallery

CITY OF NAPA

Questions or Comments?

Tuesday Silverado CC Evacuated – Temp Hillcrest Pump Station running

Hillcrest Pump Station

2017 Fires