

Watershed Information & Conservation Council



Using Citizen Science: Monitoring Streamflow and Trash



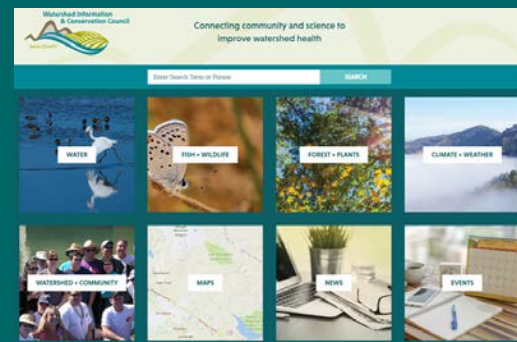
A Tradition of Stewardship
A Commitment to Service

December 12, 2018

www.napawatersheds.org

Objectives

- ◆ Visually monitor streamflow
When and where do our streams go dry in Summer and re-wet in Fall?
- ◆ Identify trash pollution
Litter and garbage can be a problem in urban streams
- ◆ Provide a community engagement tool
- ◆ Build foundation for larger WQ monitoring program
- ◆ Start simple – keep it simple



Watershed Information & Conservation Council
Connecting community and science to improve watershed health

Exact Search Term or Place SEARCH

WATER FISH + WILDLIFE

WATERSHED + COMMUNITY MAPS

Watershed Information & Conservation Council
Napa County

Water Fish + Wildlife Forest + Plants Climate + Weather Watershed + Community Maps

Watershed + Community

Our Watersheds
Watershed Care
Community Stewardship
Historical Ecology
Streamflow & Litter Observations
Add Your Observation
See Observation Results

Citizen Science Stream Flow & Trash

Why it's important How to use the tool

Citizen science is a way for the community to help monitor our streams and rivers.

Stream Flow - Napa County's climate regime of wet winters and dry summers causes many of our local streams to run dry in the summer. This natural cycle or pattern of flowing and non-flowing conditions in our waterways is an important function and critical to our native aquatic plants, animals and fish. Too much or too little water at the wrong place or at the wrong time can cause changes in stream ecology and diversity.

Trash - Trash is pollution and harms water quality and degrades stream habitat. It is important to keep litter out of our local waterways. Knowing where trash is accumulating and how it got there is crucial to solving the problem. Targeting community education on the environmental impacts of littering helps solve the problem.

Ten monitoring sites have been selected due to their importance within our watershed. At each stream site the focus is assessing two parameters: **Stream Flow** and **Trash**.

Frequent monitoring of these select sites at regular intervals allows Citizen Science to know when certain stream reaches go dry and if there is a trash problem in the area. Click on the 'how to use the tool' tab above to add your observation to the map.

Observation Guides

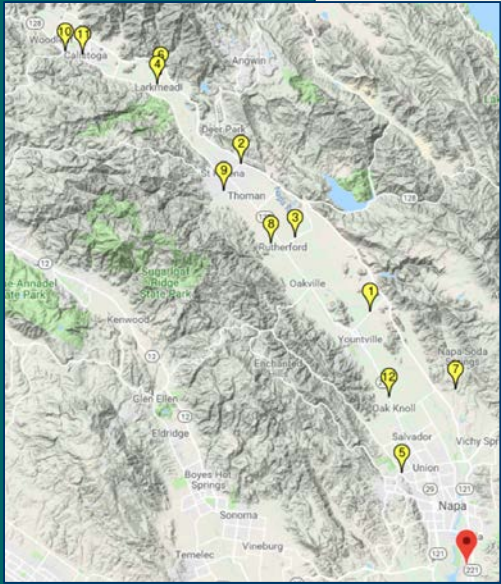
- Trash
- Stream Flow
- Water Level



The Citizen Science Tool can be used on any mobile device with internet access.



This tool helps record data while in the field.



Water is moving quickly, white caps can be visible, but are not a requirement.

Stream Flow Observation Guide

The presence and timing of stream flow is an indicator as to the health of a stream. It is important to monitor stream flow conditions over the course of the year to determine when a stream goes dry, since the timing can be critical to local animal, plant and fish species. To help you choose the correct stream flow rate refer to the images below.

Dry



The creek bed is completely dry, there is no water.

Separated Pools



The water is not connected, it is isolated, separated by rocks or other streambed materials.

Flowing - Still



The water is not moving but is continuous, if a leaf were on the surface of the water it would not move downstream.

Flowing - Slow



Water is slowly moving. Small ripples can be seen on the surface.

Flowing - Fast



Trash Observation Guide

Trash is a form of pollution that negatively affects our waterways. To help you choose the level of trash present refer to the images below.

Not Littered



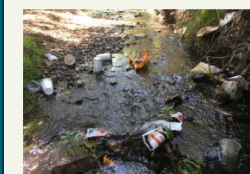
Trash cannot be seen on the banks or in the water without searching for it; less than one piece of trash is seen for every 30 feet.

Slightly Littered



A few pieces of trash can be seen, but the majority of the area is free of trash. There is less than 10 pieces on the bank or in the water.

Littered



Trash is spread throughout the majority of the area, with a few areas remaining clean. There are 10 or more pieces of trash within the vicinity.

Very Littered



Trash is seen throughout the area, large piles have accumulated. A serious lack of concern for the area is felt.

Contribute Your Observation

Help contribute information to improve our understanding of stream functions and conditions

Add your observation

Map Satellite

Stand on the bridge opposite the stop sign, facing South-East. Take your photo and observations looking downstream.

Directions to here

Legend

- Contribute to the map! Upload your own photos and stream observation.
- Your Location
- Observation Stations
- Major Streams
- County Boundary

Redwood Creek at Dry Creek Road

Stand on the bridge opposite the stop sign, facing South-East. Take your photo and observations looking downstream.

Directions to here

Filter by Location

Choose a location

Station	Date	Name	Org	Photo	Trash	Condition	Flow
Cyrus Creek on Hwy 128	12/3/18 1:56 pm	Mackenzie Gilliam			Slightly Littered	Low	Flowing - Slow
Berry Street Bridge on Napa River, Calistoga	12/3/18 1:49 pm	Mackenzie Gilliam			Not Littered	Low	Flowing - Slow
Selby Creek at Larkmead Ln.	12/3/18 1:37 pm	Mackenzie Gilliam			Not Littered	Dry	Dry
Napa River at Larkmead Ln	12/3/18 1:33 pm	Mackenzie Gilliam			Not Littered	Low	Flowing - Slow
Sulphur Creek on Valley View St.	12/3/18 1:17 pm	Mackenzie Gilliam			Not Littered	Low	Flowing - Slow
Sulphur Creek on Valley View St.	12/3/18 1:16 pm	Mackenzie Gilliam			Not Littered	Low	Flowing - Slow
Napa River at Pope St	12/3/18 1:06 pm	Mackenzie Gilliam			Not Littered	Low	Flowing - Slow
Soda Creek on Soda Canyon Road	12/3/18 9:58 am	Tyler owens			Not Littered	Low	Flowing - Slow

Uploaded by Tyler owens

Trash Level: Not Littered
Water Level: Low
Flow: Flowing - Slow

Napa, California

1707 Yountville Cross Rd, Yountville, CA

Options:

- via CA-29 N: 17 min, Fastest route, the usual traffic, 10.8 miles
- via Silverado Trail: 15 min, 11.5 miles

Over 250 observations!

Next

- ◆ Create compelling infographics
- ◆ Illustrate results alongside stream gage data
- ◆ Engage youth through school programs via RCD partnership
- ◆ Add additional monitoring parameters
- ◆ Develop mobile app to allow uploads from any location

<https://www.napawatersheds.org/observation-help>

Sign-up on the site to get weekly WICC Info!



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Jeff Sharp
707-259-5936
jeff.sharp@countyofnapa.org

