

# Green Algae in the Trinity River

## Is it Good? Is it Bad?

**Good:** Some algae are necessary for river health

**Bad:** Some are toxic, harmful, or invasive

**Know the difference**

Beneficial Green Algae  
(Cladophora sp.)



Photo: Mary Power via UC Berkley News on Google Images

Toxic Blue-Green Algae  
(Cyanobacteria sp.)



Photo: California State Parks on Google Images

Invasive Didymo "Rock-Spot"  
(Didymosphenia geminata)



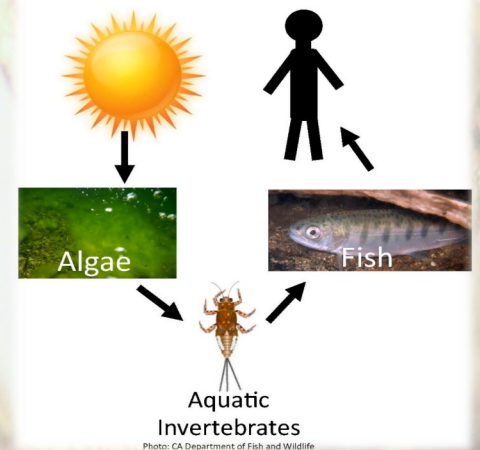
Photo: Invasive Species Council of BC on Google Images

### **Benefits of Green Algae (Cladophora)**

- Helps clean river/stream water by absorbing nutrients and heavy metals
- Forms foundation of the aquatic food web:
  - Algae is the main food source for many bugs that feed young fish
- Indicates the productivity and health of the river

Ecologists have studied the varying abundance of algae in Northern California's rivers for decades. Based on those studies, local scientist working on the Trinity observed that the 2018 algae abundance is likely a result of natural environmental factors. This theory was formed by observations that the algae growth is consistent below Lewiston Dam as throughout the river. Since water below the dam comes directly from the bottom of Trinity Lake, it is believed that the abundance of algae in the upper river is not caused by human influence such as nutrient runoff.

### Aquatic Food Web



### **Possible reasons for an abundance of algae**

- Algae abundance is more likely after wet years when high flows can wash away larger insects that feed on and control algae levels
- Increase of predators that feed on the bugs that eat green algae
- Air and water temperature
- High nutrient levels in water from a variety of sources including sediment run-off after a wildfire

For more information about how algae plays a key role in river health:

<https://cloudfront.escholarship.org/dist/prd/content/qt90f0p629/qt90f0p629.pdf>

Algae ID guide:

<http://www.krisweb.com/ERRP/Canada%20Algae%20Field%20Guide.pdf>