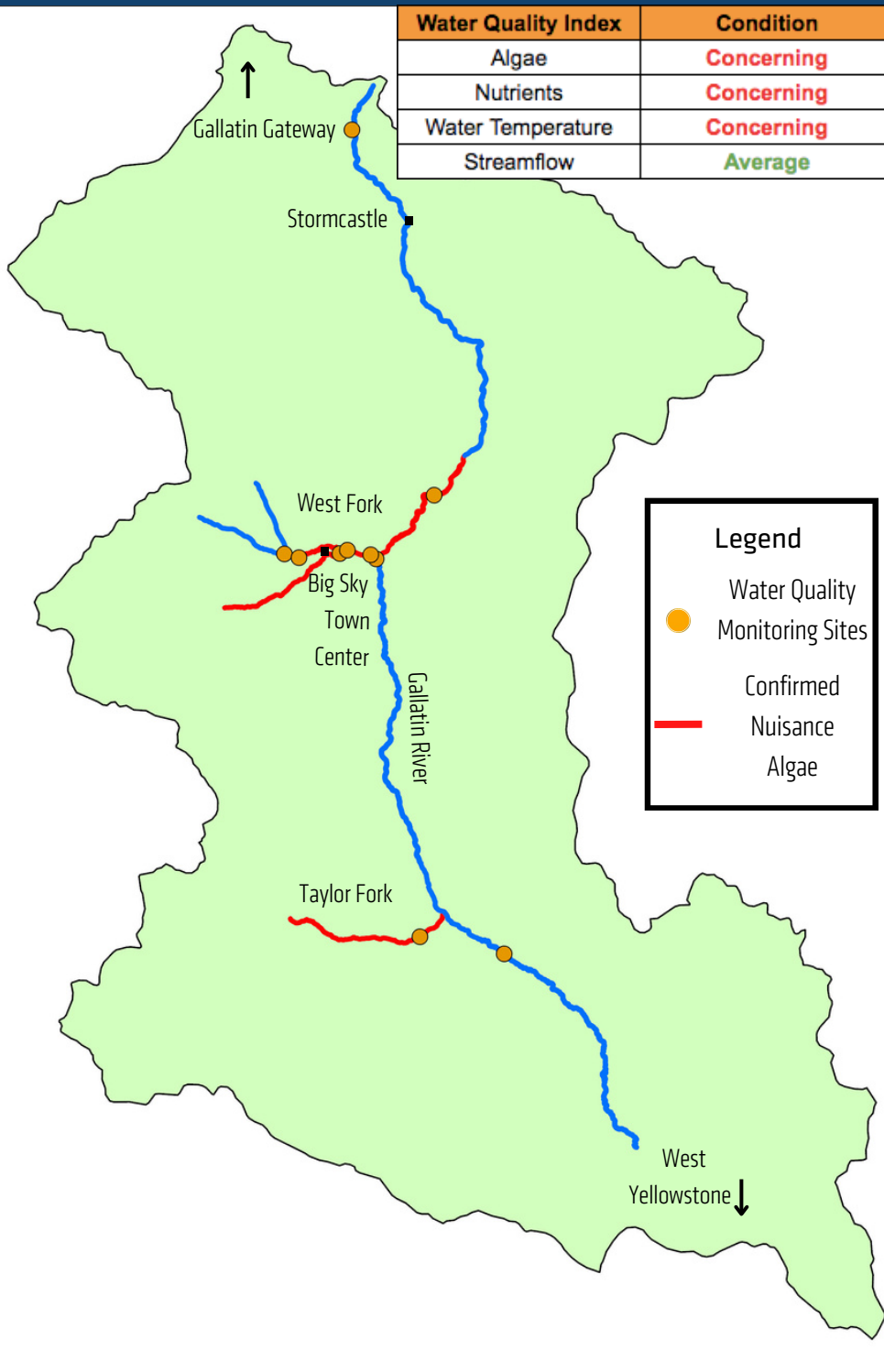




State of the Gallatin 2022

Since the first widespread nuisance algae blooms appeared on the Gallatin River in 2018, the Gallatin River Task Force and Montana Department of Environmental Quality have partnered to study water quality across the Gallatin River Watershed. While certain levels of algae are present everywhere and serve an important role in a healthy ecosystem, nuisance algae blooms pose a particular threat to rivers. Nuisance blooms are when natural growth becomes excessive and creates large mats of algae that pose substantial threats to aquatic life and water quality, as well as detract from recreation. The Gallatin River Task Force is a 501(c)(3) nonprofit in Big Sky that works to address issues such as excess algae, execute stream restoration projects, advocate for state and federal protection, and push for responsible local management of land and water.

Water Quality Index	Condition
Algae	Concerning
Nutrients	Concerning
Water Temperature	Concerning
Streamflow	Average



In 2022, widespread nuisance algae blooms appeared on the Upper Gallatin River, the West Fork, South Fork, and Taylor Fork. Data suggests that nuisance algae blooms are caused by a variety of factors:

- **Excess Nitrogen and Phosphorus:** Though nitrogen and phosphorus are nutrients associated with algae blooms, they can be healthy in moderation. The West Fork, Middle Fork, and South Fork are all listed as impaired by the state of Montana for excess nitrogen. In 2022, nitrogen levels exceeded the state threshold on the West Fork, and despite being similar to levels in 2021, algae blooms occurred in 2022 where they did not in 2021. This points to the complicated nature of understanding what causes algae blooms.
- **Water Temperature:** Air temperatures were above average in 2022, leading to higher water temperatures and ideal growing conditions for algae in late July and August.
- **Streamflow:** Despite streamflow being above average at the beginning of the summer due to a high June runoff, values returned to and eventually dropped below average. Low streamflow leads to increased impacts of rising air temperature and sunlight influence on algae growth.

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