



Montana's Smith River Algae App Frequently Asked Questions

What is the Montana Smith River Algae App?

The Montana Department of Environmental Quality (DEQ) developed a mobile application (App) to engage citizens in collecting information about algae growth in the Smith River in 2018. The App allows users to easily take and submit photos of algae in the river. Recipients of Smith River float permits are intended users of this App; however, other people recreating or working on the Smith River may use it as well. The App is not intended for use on other Montana rivers or lakes.

Why did DEQ develop the App?

Algae growth can affect our uses of the water including recreation, fisheries, and agricultural water diversions. There are no obvious new sources of nutrients facilitating the recent change in algae growth; however, the App was developed as a grass roots effort to help DEQ collect information about algae conditions in the Smith River by using information gathered and submitted by the public.

How do I download the App?

Download the Montana Smith River Algae App on your device before your trip. If you are using an Apple device, the application can be found in the App Store. If you are using an Android device, the application can be found in Google Play. Search "**Montana Smith River Algae App**." The App is 47.1 megabytes. It is recommended you download the App prior to arriving at the river.

How do I use the App?

The App is easy to use. Open the App on your device, read the introductory language, and read/accept the Terms and Conditions of using the App. Click the Camera icon to take a photo of algae conditions in the Smith River. The App will record the photo, location, date, and time. Once the photo is taken, answer two questions about each photo. That's it! Take as many photos as you want throughout your trip. When your trip is over and you are in cell/Wi-Fi range, open the App and click the "Final Submittal" button on the bottom right of your screen. Only photos taken in the App using the camera icon can be submitted. The App will send your pictures and responses to DEQ. Note that DEQ recommends connecting to Wi-Fi prior to submitting the photos to avoid data charges. The App is not intended for use on other Montana rivers or lakes.

What should I take photos of?

Take pictures of algae, not moss or rooted plants. Algae do not have leaves, flowers, stems or roots. Some algae form long, stringy hair-like strands attached to rocks while others form slimy, dense mats on the river bottom. Algae may also attach to moss or rooted plants. Algae beginning to establish is often bright, vibrant green whereas mature algae may be darker green and dead or dying algae becomes pale or brownish.



ALGAE



ROOTED AQUATIC PLANTS (NOT ALGAE)



MOSS (NOT ALGAE)

Include as much river bottom as possible: Photos showing large areas of river bottom are more useful than photos of small, isolated areas. Avoid zooming in too close.

Minimize glare from the sun so the river bottom is visible: Adjust the angle of your device or the direction you're facing to find the view with the least amount of glare from sunlight on the water surface.

Exclude people in photos: We want these algae photos to remain anonymous. Please exclude people.

Include items to provide scale: Where possible, include the horizon to distinguish the size of the area the photo encompasses. Boats, oars or other recognizable items may also help to provide scale.

Take photos throughout your float if possible: Every individual photo is valuable, but it is especially helpful if we get photos from the entire length of the Smith River float, from put-in to take-out. It helps to see where algae is growing *and* where it is not.

Conserve battery: Between photos, remember to conserve battery life by turning your device off and using airplane mode.

How is the information stored on my device?

Photos taken while using this app are stored on your device and are deleted when you delete the app. Do not delete the app until you have successfully submitted all photos and your survey to DEQ when back in coverage or Wi-fi. It is recommended you verify that your device has sufficient data storage available for storing photos prior to using the App.

How will the photos and data be used?

DEQ will use your photos and survey responses to map and describe algae conditions over space and time, and to perform public outreach in response to this emerging water quality concern.

What if I forget to download the app before I get to Camp Baker?

There is limited Wi-Fi available at Camp Baker for use in downloading the App. **HOWEVER**, it is strongly recommended you download the App prior to your trip.

Why are algae a problem?

Many types of algae grow in Montana, especially when nutrient, temperature, light and flow conditions allow. Sometimes there is enough algae that it becomes a nuisance. Excessive algae in water bodies can negatively affect recreational experiences and can harm fish and other aquatic life by changing oxygen levels and the pH of the water.

Where can I get more information about this project? Contact DEQ's Darrin Kron at 406-444-4765 or dkron@mt.gov, or Katie Makarowski at 406-444-3507 or kmkarowski@mt.gov. Maps will be available showing the results of the survey on DEQ's website by early 2019.