

# USGS Repeat Photography Protocol

The USGS Repeat Photography Project appreciates your help documenting the glaciers of Glacier National Park. To participate as a volunteer photographer please refer to the protocol below and contact us with any questions. Your submissions will need to be accompanied by the USGS Copyright Release Form listed at the end of the protocol.



## Timing is everything...

When photographing glaciers for the purpose of documenting their size, the window of opportunity falls between late August and early October. For our purposes, it is crucial that most of the previous winter's seasonal snow has melted sufficiently to expose the glacial ice margins. Photos taken earlier than the middle of August will usually be of little value for our needs. By October, early snowfall and strong shadows limit photography.



## Plan your trip...

Use [Glacier National Park's website](#) to help you plan your trip and secure any backcountry campsites you'll need for your travels.

From our citizen science website, [download any photos](#) along your travel route that you might have an opportunity to take. The photos provided on our website have **approximate** lat/long locations and credits embedded in the photos. Print photos at full page resolution to aid in aligning features and matching physical features while in the field.

*Jackson Glacier, 1911- 2009*

## Repeat Photography Equipment List

- digital camera (any digital camera with 6+ megapixels will work, including cell phones)
- [printed historic photo\(s\)](#)
- GPS capable device
- all necessary personal, safety, and camping equipment
- backcountry permit (for overnight backcountry travel)

## In the Field...

### 1) Find the photo point

Navigate to the general location of the photo by using the map or waypoints provided on the images. The waypoints associated with each historic image may be used to position yourself in roughly the same location as the historic photographer. The waypoints will only guide you to the *approximate location*. By moving around the landscape in this region, and by using permanent landscape features, you can hone in on the exact position of the original photographer. Matching the lines of intersection along the horizon's ridges and peaks will aid in alignment of the photo. Some photos have semi-permanent foreground features like rocks or vegetation patches that can also be helpful. Finding the correct alignment of features can take a while and sometimes requires moving up or down, or forward/backward on a slope. Move about and keep checking alignment of features. Look for obvious flat spots that the original photographer might have used.

The Alpine of the Americas Project has a nice [tutorial video about relocating historic photo points](#) on their website:

## 2) Take Repeat Photo:



Bitty Smet photo

- Once the site of the historic photo is found, frame the shot to include a little more than the historic photo and take the shot, or multiple shots at different exposures.

- Record GPS waypoints of the site where the repeat photograph was taken. This is important information to submit with the photo in order to help relocate the same site in the future.

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## 3) Take SitePhotos (optional, but very helpful):



Take at least one photograph of the site where the repeat photo was taken in order to help relocate the site if the shot is repeated in the future. Try to record some object in foreground of photo that can be recognized at a later time (e.g. rock or tree). A photo of the site, in combination with the GPS waypoints, will make subsequent location of re-photography sites much easier.

### Collect at each repeat photo location:

- 1) Repeat photo of glacier
- 2) GPS waypoints of repeat photo site
- 3) One or two photos of repeat photo site

## When you get home...

- 1) Complete [USGS Copyright Release](#) form. Submit with photos via email below (or fax (406)888-7923)
- 2) Email photo submissions and corresponding GPS waypoints to: [lisa\\_mckeon@usgs.gov](mailto:lisa_mckeon@usgs.gov).

*USGS reserves the right to accept or decline offers of photographs.*

### For questions regarding the USGS Repeat Photography Project contact:

Lisa McKeon  
[Lisa\\_McKeon@usgs.gov](mailto:Lisa_McKeon@usgs.gov)  
(406)888-7924

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