First want to acknowledge I didn’t have any intention of poaching on Dan Coe’s turf with this map. The idea for this actually stemmed from a ski trip I took in 2018 when a group of friends were thwarted by the weather on an attempt to climb and ski Mt. Rainier. Dejected we began considering 2nd options and that’s when I was introduced to this fairly unsung peak in the Cascades of Washington.
Glacier Peak is the fourth highest peak in Washington State at a little over 10,500 ft (and 3200 meters). We quickly looked at alternative options yet again when we rationalized the sheer remoteness of the mountain and our condensed timeline. The easiest approach is 22 miles (35 km) and contain over 2500m of elevation gain.
So we went to option #3, and decided to climb and ski a slightly easier objective in Washington’s 2nd highest peak, Mt. Adams. While higher in elevation, the mountain is easier to access and very straightforward for skiing and climbing.
Around 2018, I had also just completed my first 3D oblique map with the National Park Service, this panorama of Katmai National Park and Preserve. I felt really excited about the experience and wanted to continue to hone my skills and expand on my experience with the Katmai map.

I started to obsess over Glacier Peak, wanting to explore it more. And figured, I’d just make a map for myself, and if it worked out, I’d print a few copies for friends and family.
First, though I had to see what kind of data existed, and surprisingly found 1m high-resolution DEMs available for much of the area on the USGS National Map Downloader. Off to a good start!
Next, I dove into the NAIP imagery archives and found another amazing discovery. The NAIP from 2017 (the year before) was blanketed with a fresh coat of snow. While beautiful, it also masks the true extent of the glaciers which flank the mountain.
I was able to find imagery from two years earlier that resembled the seasonality of a true NAIP image, but decided I couldn’t let go of the snow covered peaks.
Then came bringing the DEMs into Natural Scene Designer and selecting a map view. This can be a tendious and excrutiating process. With endless options to explore, between the camera angle, focal length,
Selecting a Map View

Aspect.
Whether to include a horizon and sky?
I ultimately chose this view which shows the Suiattle River sweeping along the flanks of Glacier Peak, and frames the mountain and its ridges perfectly. It also worked with a vital element that I’ll share shortly.
After rendering the Shaded Relief. I draped and rendered a layer of terrain texture shading. Thank you, Leeland!
Next came draping and rendering the NAIP image. With this viewing angle, the images embedded shadows neatly work to illuminate the terrain on its own. Had I chosen the first rendering angle I showed, featuring the mountain's north face, I would be fighting those shadows throughout the rest of the process.
So now, I’ll dive under the hood in Photoshop to examine how the base map came together.
Highlighted layers indicate Photoshop adjustment layers being applied to the NAIP image, as well as a layer to smooth some of the pixelated crevasses high on the mountain.
Highlighted layers show isolated illumination, highlights and shadows, of the scene. I added a pink layer of shadows to give a sense of alpenglow high on the snowy peak.
Adding vector hydrography to the raster base map. This allows added effects like Bevel and Embossment which “set” the rivers into the terrain. It also allows for added embellishments which I’ll talk about shortly.
Fred Beckey’s Cascade Alpine Guide routes from the same aspect.
Using Beckey's map, I added the routes to the alpine areas on Glacier Peak.
The very popular PCT runs along the base of Glacier Peak so I added extra emphasis to the trail where it winds over the ridges and valleys.
Embellishments
Here’s where embellishments such as sun glints on lakes and shadowed rivers and creeks give your map a little more nuance and panache. These highlighted layers include light and dark brush strokes over a mask of the rivers and lakes.
Using NSD’s distance mask, I added background haze and foreground darkness to add depth to the scene and focus the reader’s eyes on the main part of the map.
Background Haze - Dark Foreground
By selecting the ridgelines in Photoshop, I manually “dodged and burned” the base map to get prominent areas to “pop”.
The effects are subtle...
Finally, I added a small cartouche which includes a small locator map of Washington. I also waxed poetically about the history and remoteness of Glacier Peak.
Finally map!