

Figure 10. Lon Cooper collecting a GPS elevation measurement below the secondary spillway of Rugg Dam.



Figure 11. Portion of the image mosaic for 1938 showing green outlines for the footprints of individual images within the mosaic.



Figure 12. Plot of GPS-surveyed elevations along tributaries to the Grass River



Figure 13. Plot of GPS-surveyed elevations at road crossings along Rapid River, including Rugg Pond Dam.



Figure 14. Map of measured discharge values along the Grass River tributaries and Rapid River, including catchments for each point in shades of grey.



Figure 15. Map of the Grass River longitudinal transect depth measurements collected with the ADCP. Notice the zig-zag path of the boat, which was used to capture the depths of the entire navigable channel.



Figure 16. Plot of 50-meter average navigable channel depth along the Grass River, and average thalweg depth. The thalweg depth was calculated as the deepest point along each 50 meters of distance along the channel median.



Figure 17. Image of the confluence of Shanty Creek and Grass River. The perspective looks upstream at Shanty Creek. Note the active sand sediment plume from Shanty Creek on the right of the image. Note that this location differs from the Shanty Creek confluence on most maps, as shown in Figure 18 below.



Figure 18. Plot of observed location of the Shanty Creek confluence on recent satellite imagery (Copyright Google), compared to the historical (mapped) confluence.



Figure 19. Map of average navigable depth along the Grass River, averaged in 50 meter increments along the channel.



Figure 20. Plot of GPS elevations collected along the Grass River transect, including both raw data and a second-order polynomial fit.



Figure 21. Plot of average navigable stream bed elevation and thalweg bed elevation, given by the polynomial fit in Figure 20. Similarly to Figure 16, the data are averaged for 50-meter lengths of channel.