



**CLIMATE CHANGE:
2021 and Beyond**

Preparing our communities for the future.

Great Lakes and St. Lawrence Cities Initiative Presents:

**Understanding Climate Change
Physical Changes in the Region Over the Next Century**

Understanding Lake Level Changes

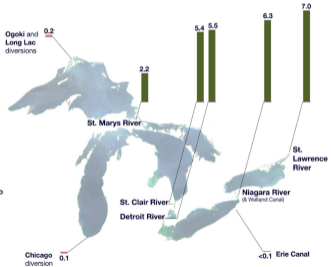
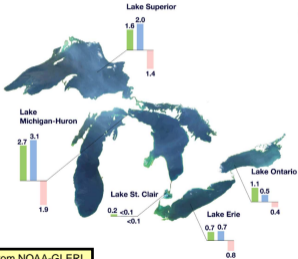
Andrew D. Gronewold, Ph.D., P.E.



- Runoff
- Overlake Precipitation
- Overlake Evaporation

- Flow Between Lakes
- Diversions

All values are averaged over the period 1950-2010 and are in thousands of cubic meters per second.

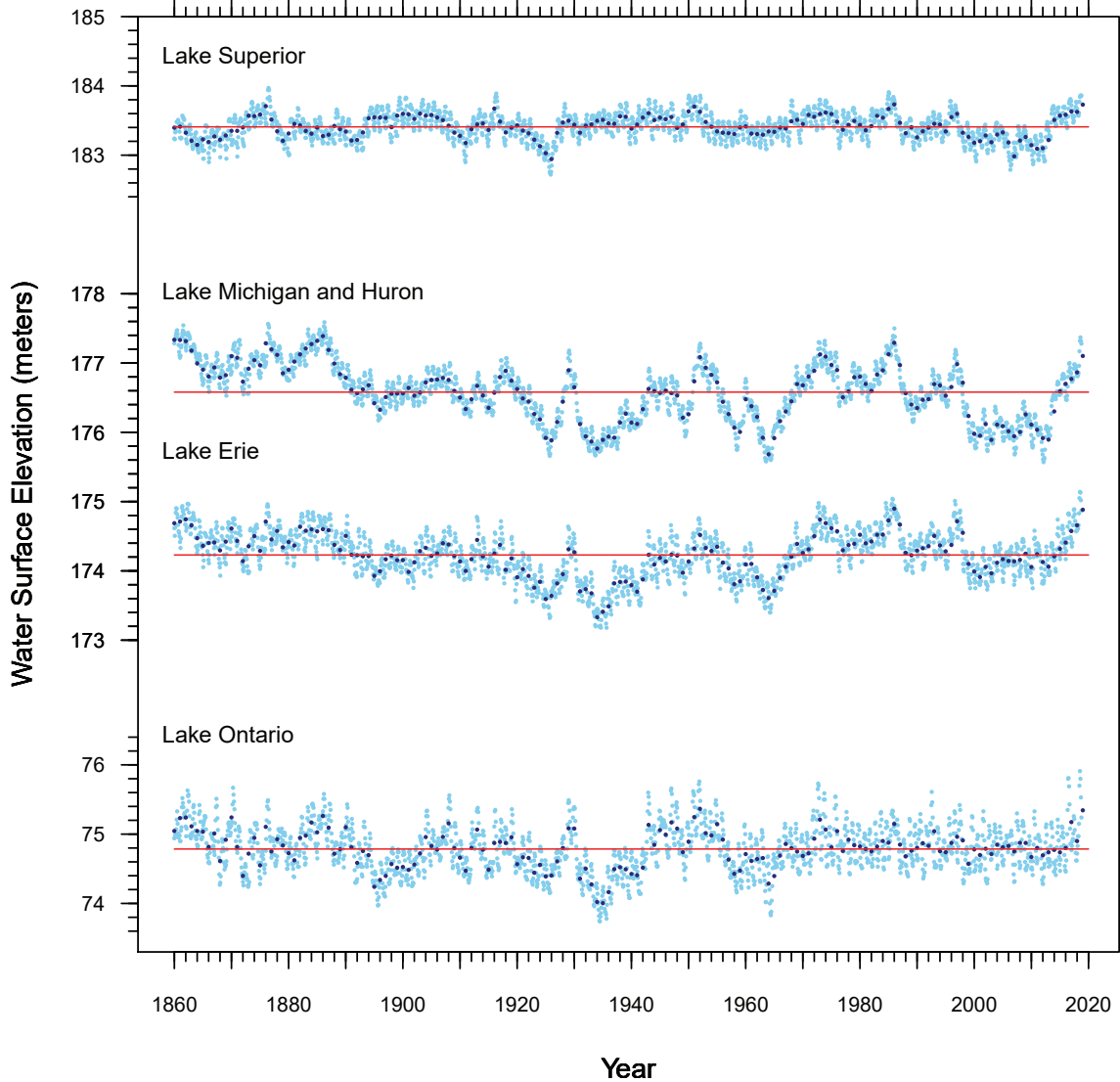


From NOAA-GLERL

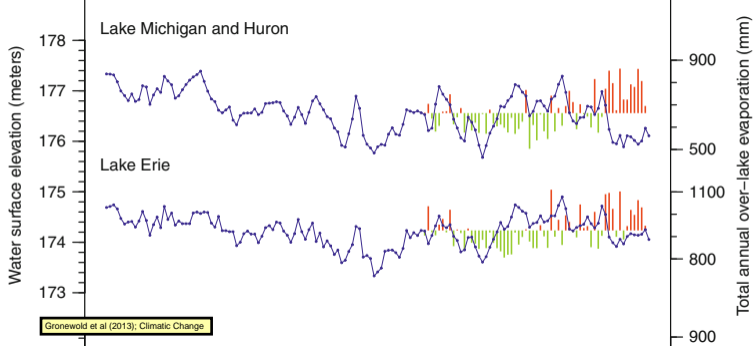
Table 1

Annual Average Discharge (in Cubic Meters Per Second, cms) of North America's Eight Largest Rivers (Rounded to the Nearest Hundred)

River	Annual average discharge (cms)
Mississippi	18,400
St. Lawrence	10,800
Mackenzie	9,900
Columbia	7,500
Yukon	6,400
Fraser	3,600
Nelson	2,800
Koksoak	2,400









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