

Lake Powell Inflows and Releases

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August 24, 2021

Overview

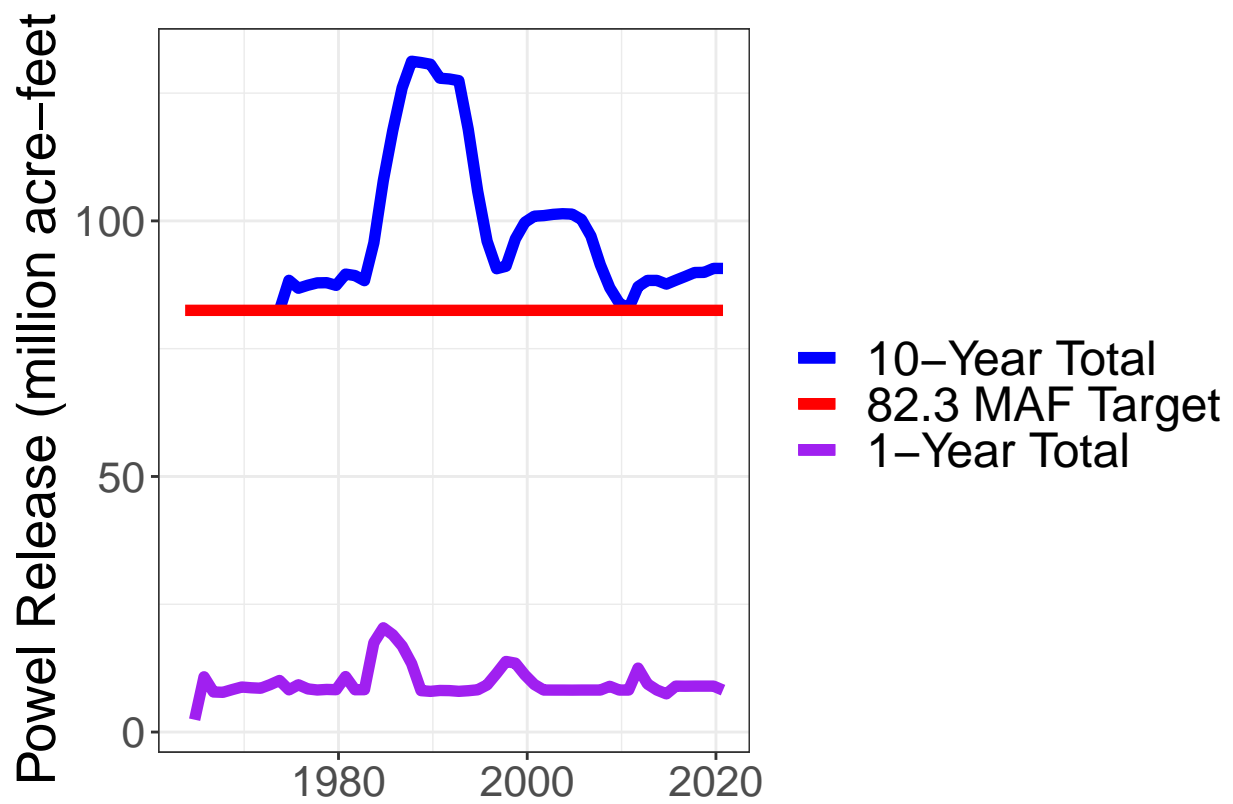
This is an R Markdown document. This document reads daily USBR data on Lake Powell Inflows and Releases (<https://www.usbr.gov/rsvrWater/HistoricalApp.htm>). The code aggregates data to yearly (water year starting Oct 1), 9-year, and decadal values and then compares Lake Powell releases to The 1922 Compact Article 3(d) requirement. The document also shows histograms of Powell inflows and releases.

- 10-year 75 maf requirement: Upper Basin delivers to Lower Basin by Article 3(d) of 1922 Compact
- 10-year 82.3 maf requirement: Upper Basin delivers to Lower Basin by 1922 Compact Article 3(d) and half of 1.5 maf per year United States obligation to Mexico by 1944 Treaty.
- Presently, the Upper Basin's 0.75 maf per year obligation to Mexico may be revised down by contingency plans in Minutes 319 and 323 to US-Mexico Treaty.
- 9-Year target is used to show Upper Basin flexibility to allow inflow to pass to Lower Basin in current 10th year.

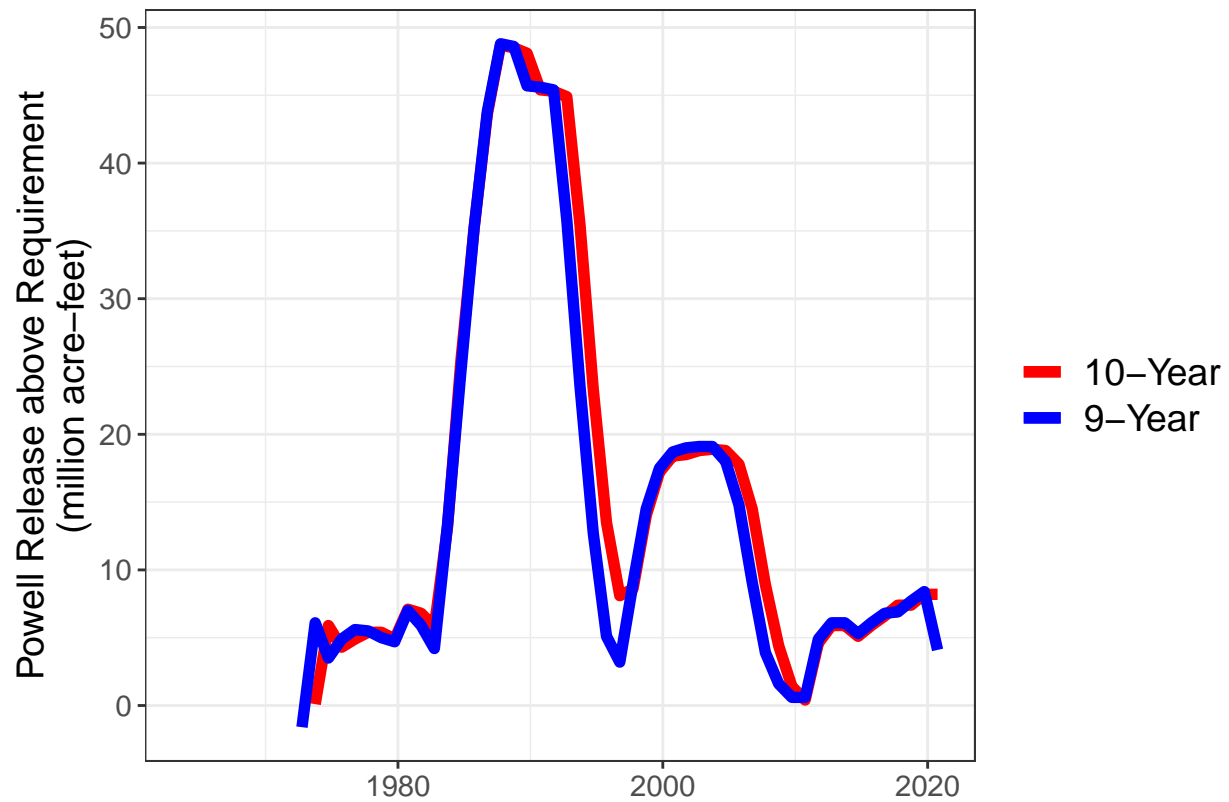
Requested Citation

David E. Rosenberg (2021), "Lake Powell Inflows and Releases." Utah State University. Logan, Utah.
<https://github.com/dzeke/ColoradoRiverFutures/tree/master/Powell10year>.

10-Year Powell Release in relation to Compact Article IIIId Requirements



Difference between Release and 82.3 MAF (10-Year) and 74.1 MAF (9-Year) Targets

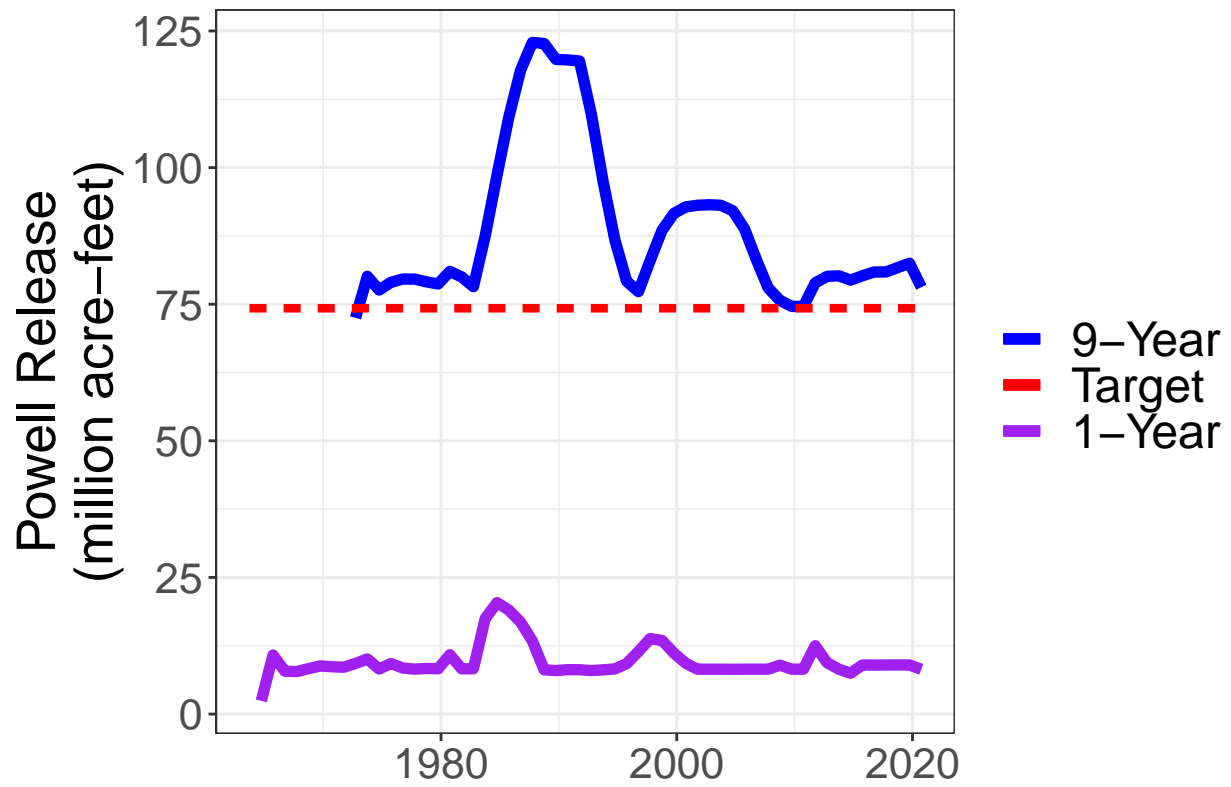


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## [1] "Nine year Lake Powell release of 78.1 maf (2012 to 2020) is 4.1 maf above 74.1 maf requirement"
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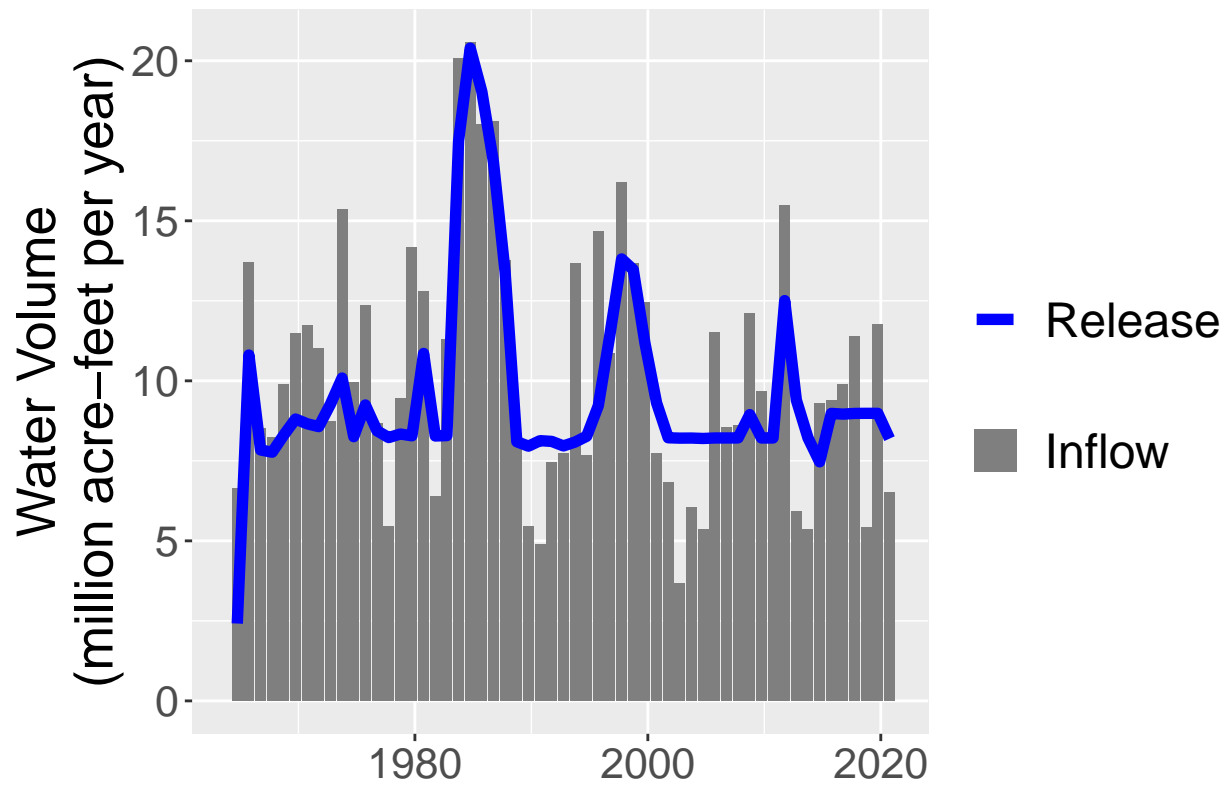
9-Year Release in comparison to delivery target



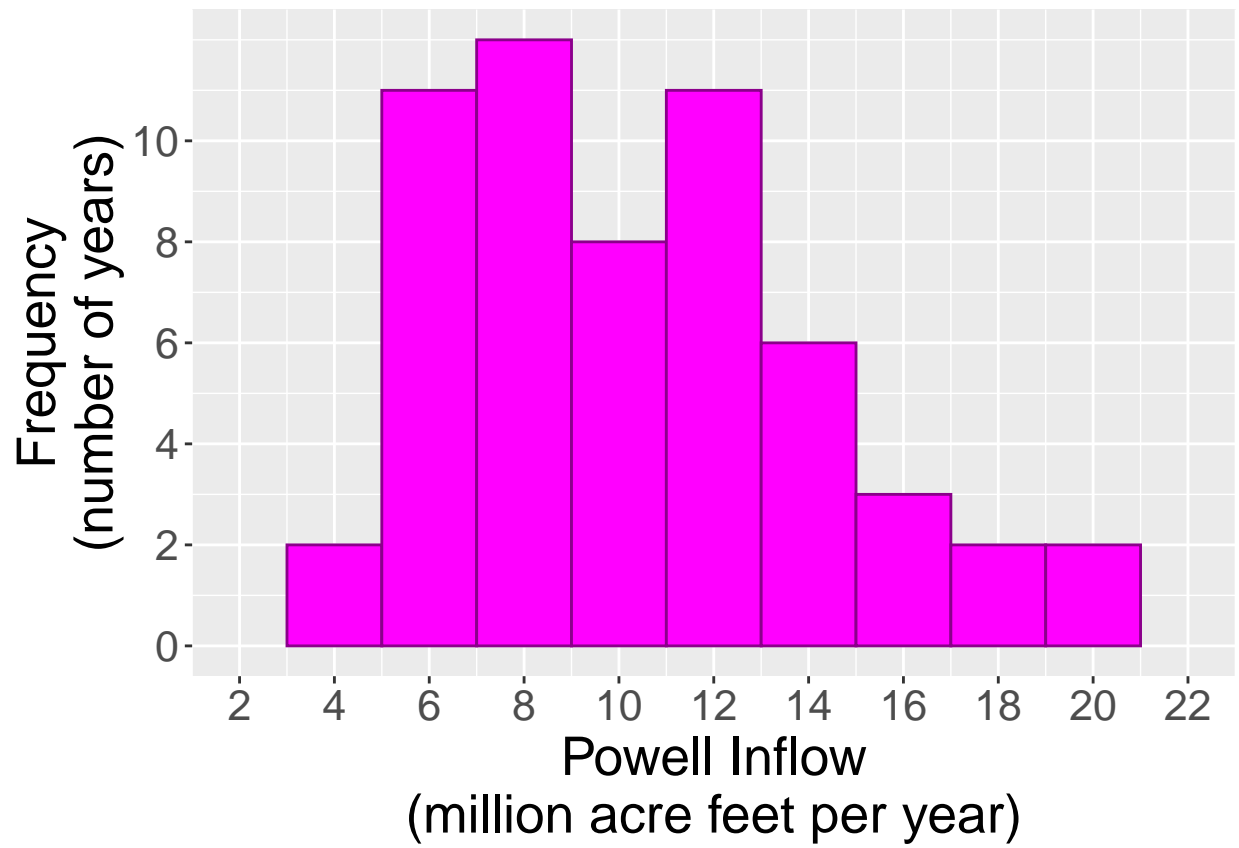
9-Year Powell Release in relation to target and 1-year



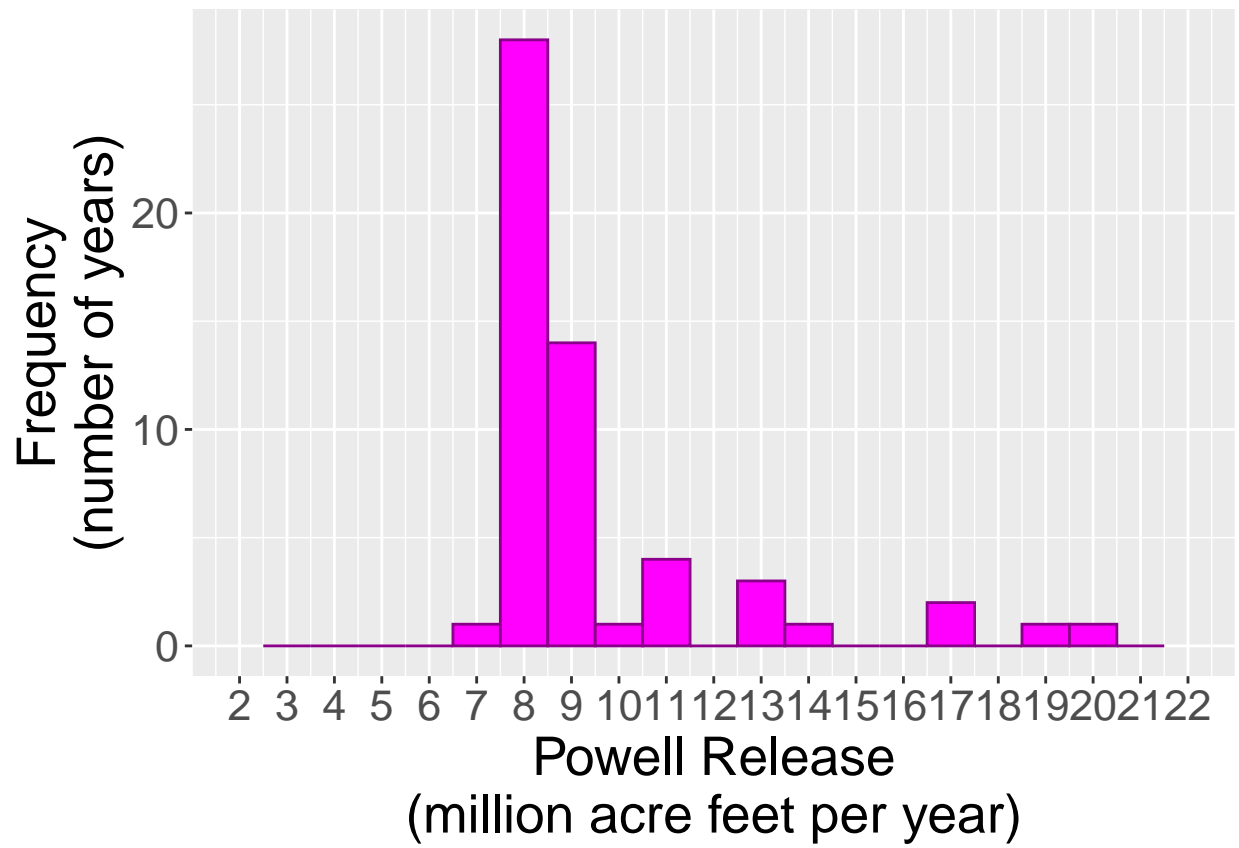
Powell Annual Regulated Inflow and Release



Histogram of Powell Regulated Inflows

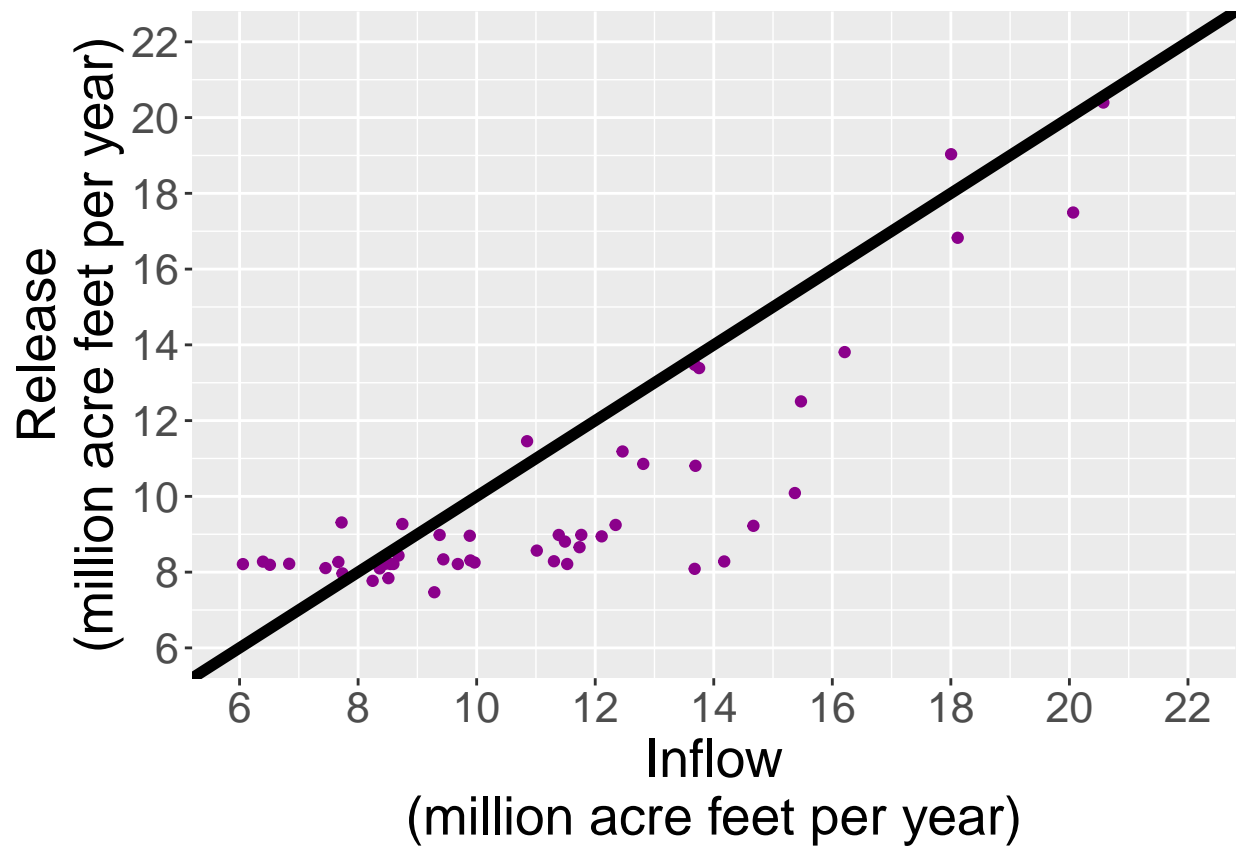


Histogram of Powell Releases

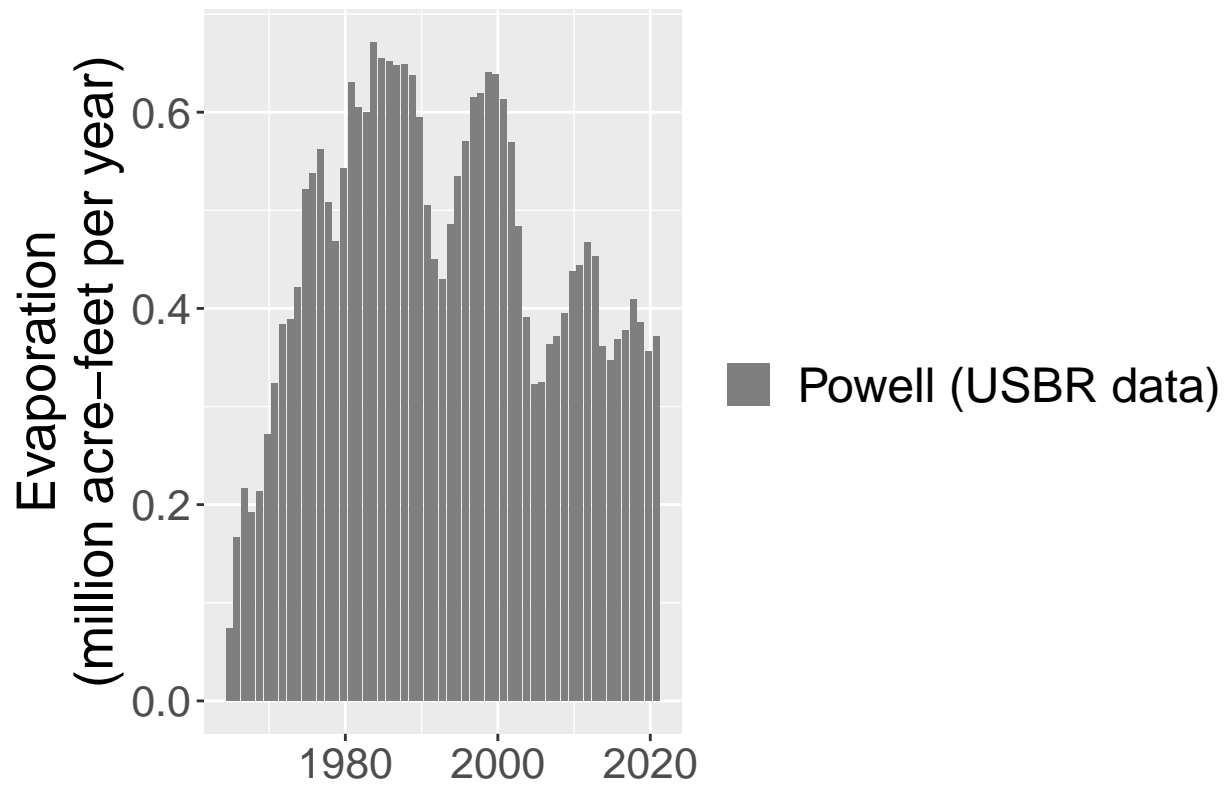


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## [1] "Number of Years of Powell releases = 58"
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Compare Powell Releases and Inflows



Powell Evaporation



Powell 10-Year Evaporation (USBR Data)

