

Changes in the Salton Sea

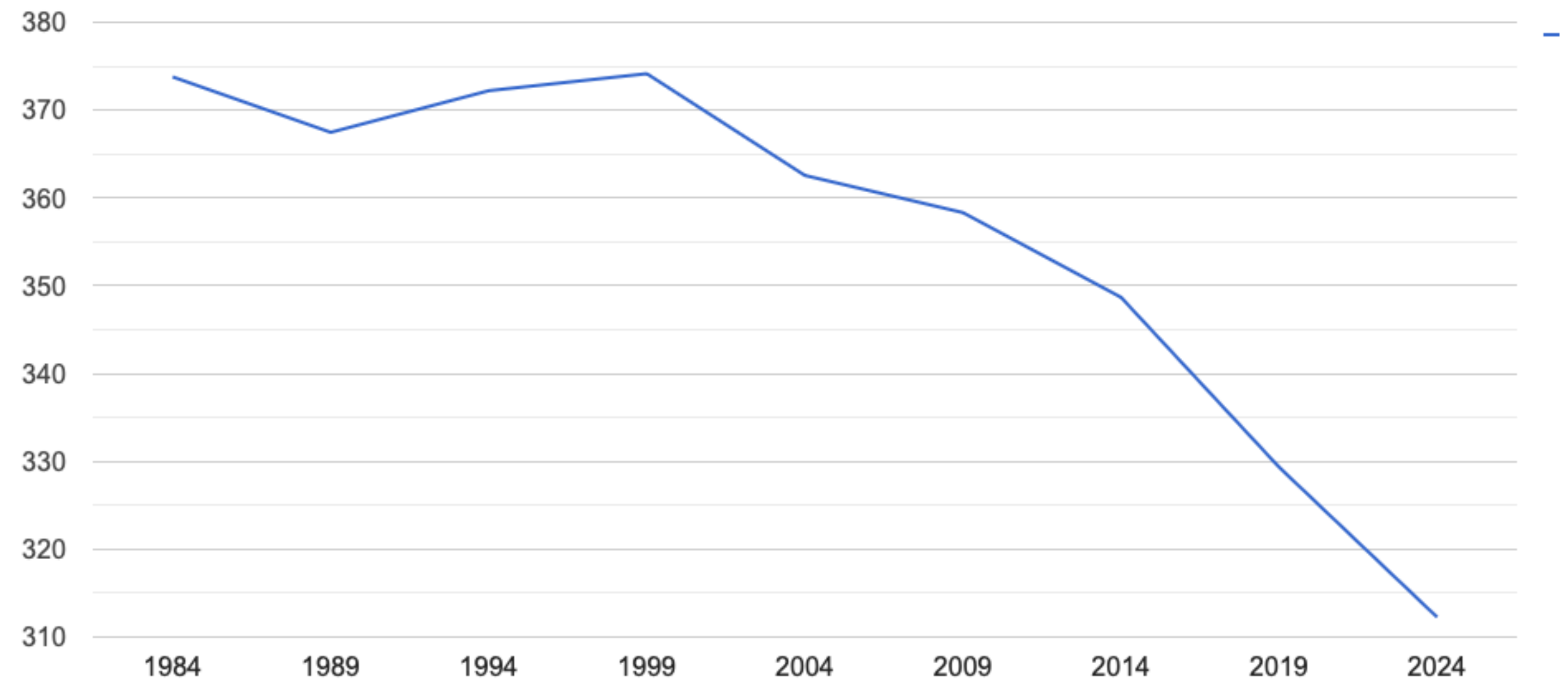
Wai-Yin Kwan, Winter 2025 GIST F058

Salton Sea

- Largest lake in California
- Created in 1905-1907
- Lake is shrinking



Salton Sea Area Change



Code

- custom functions
- easily add additional years
- analyze rate of change

```
var clusterCount = 5;
var palette = ["8bbfd0", "dfd7c7"];
var landcoverNames = ["water", "land"];
var finalClustered

var options = [
  { year: 1984, landsatVersion: 5, newClustersMapping: [0, 1, 0, 1, 1] },
  { year: 1989, landsatVersion: 5, newClustersMapping: [1, 1, 1, 1, 0] },
  { year: 1994, landsatVersion: 5, newClustersMapping: [0, 0, 0, 1, 1] },
  { year: 1999, landsatVersion: 5, newClustersMapping: [1, 0, 0, 1, 0] },
  { year: 2004, landsatVersion: 5, newClustersMapping: [1, 1, 1, 1, 0] },
  { year: 2009, landsatVersion: 5, newClustersMapping: [1, 0, 0, 1, 0] },
  { year: 2014, landsatVersion: 8, newClustersMapping: [1, 0, 0, 1, 0] },
  { year: 2019, landsatVersion: 8, newClustersMapping: [1, 0, 1, 1, 0] },
  { year: 2024, landsatVersion: 8, newClustersMapping: [1, 0, 1, 0, 1] },
];

options.forEach(function (option, i) {
  var landsatImages = createLandsatMapLayerProject(
    option.year,
    option.landsatVersion
  );
  var clustered = createCluster(landsatImages, clusterCount, SaltonSea, option.year)

  // viewEachCluster(clustered, clusterCount);

  finalClustered = remapClusters(
    option.newClustersMapping,
    clustered,
    palette,
    option.year
  );

  calculateArea(finalClustered, landcoverNames, SaltonSea, option.year);
});
```


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