
Seaside Weather Station Siting

By Jacob Taylor

Why?

- No public weather stations in Seaside
 - Public weather stations required for accurate weather data on digital devices
 - Seaside has unique microclimate preventing use of NOAA weather station data
 - Additionally, data can be used for automated solar panel evaluation
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What are weather stations?

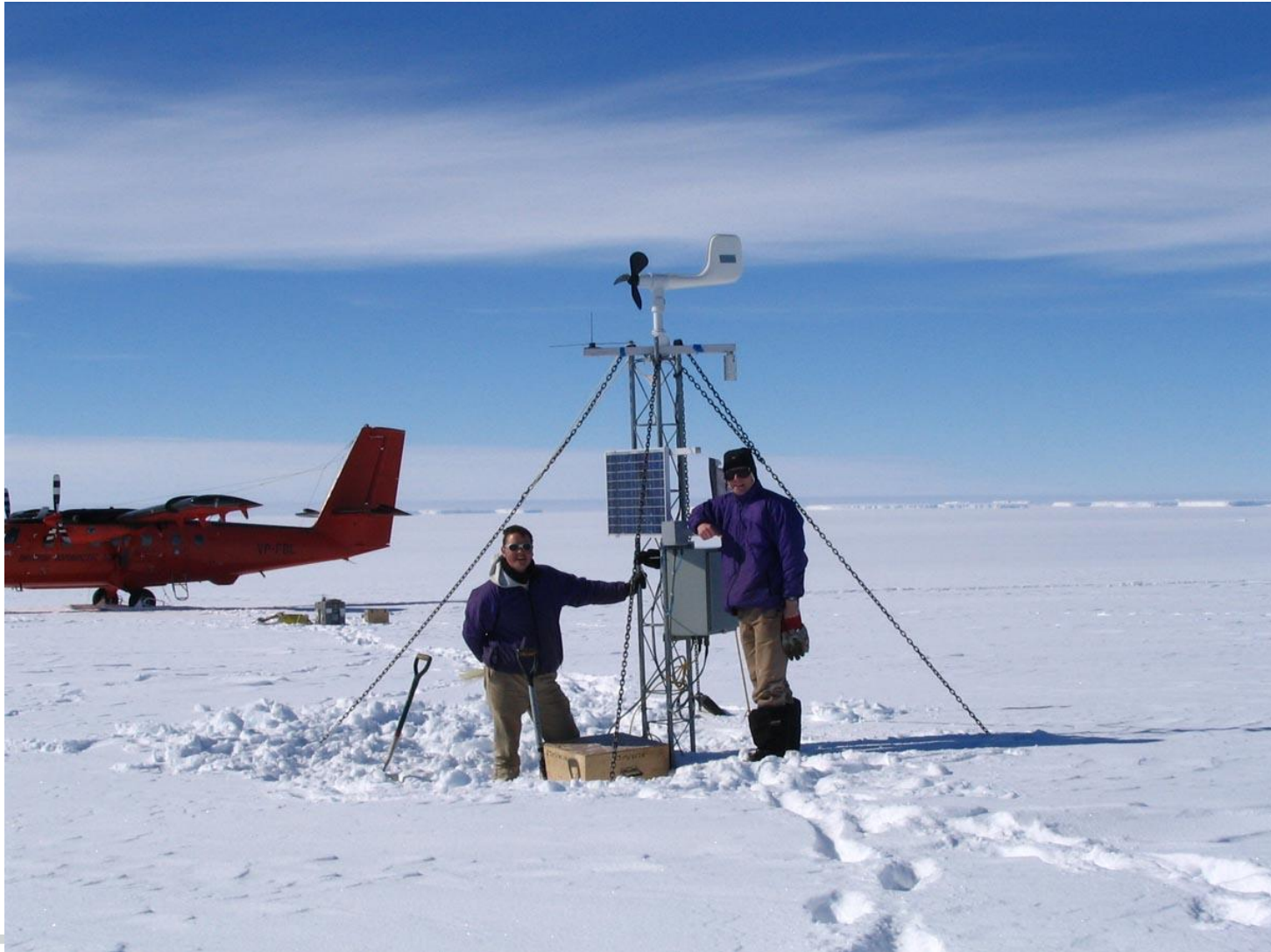
- They measure wind speed, wind direction, temperature, humidity, rainfall, UV and solar radiation.



What are weather stations?



What are weather stations?



What are weather stations?



GIS Relevance

- ArcMap works with Lidar data
 - Lidar data is perfect for bespoke topographic maps
 - topographic understanding is necessary to follow best practices for weather station siting
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GIS Data Model

Base TAZ

Lidar data

Road network

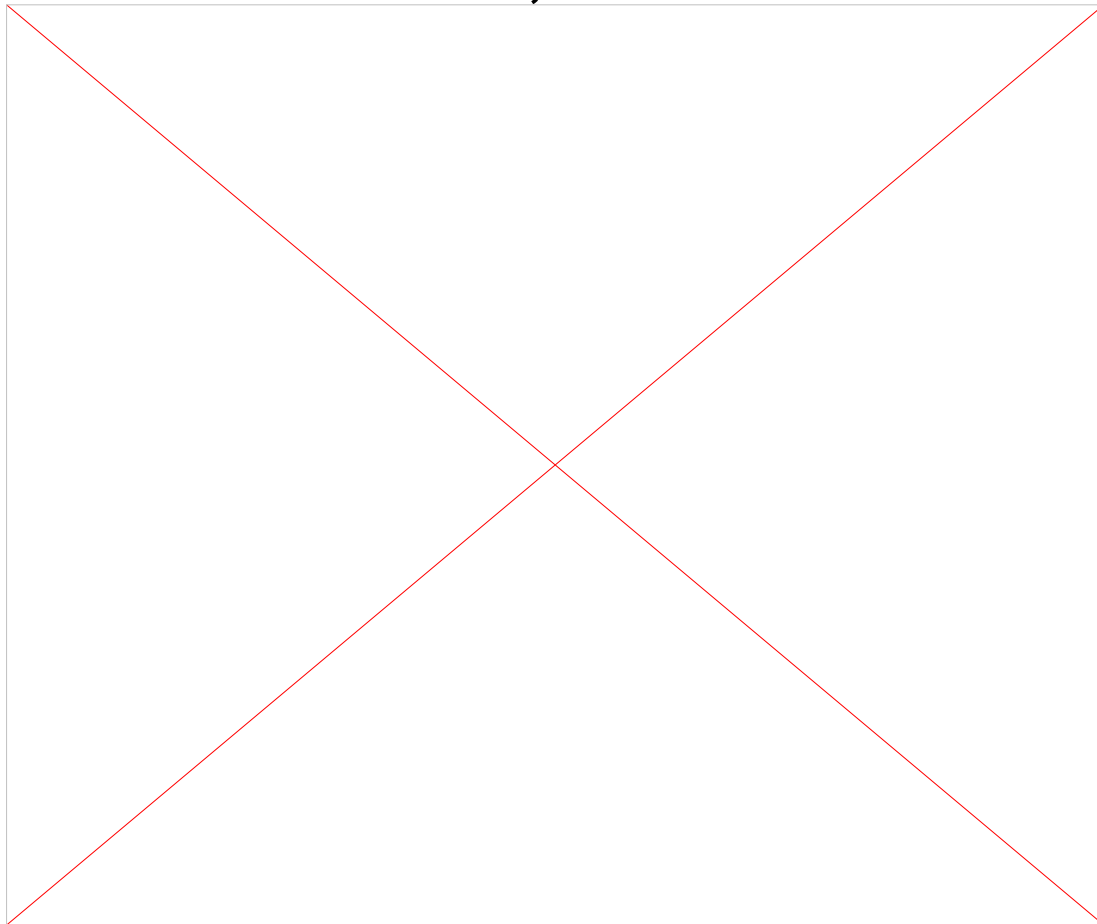
Manual analysis

Site Selection

- Want good local support for project
 - Avoid Parking Lots
 - Avoid Wind Tunnels (broadway)
 - Mount >5 feet above a roof, if on roof
 - Don't put it under a tree/shade
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Potential Site 1

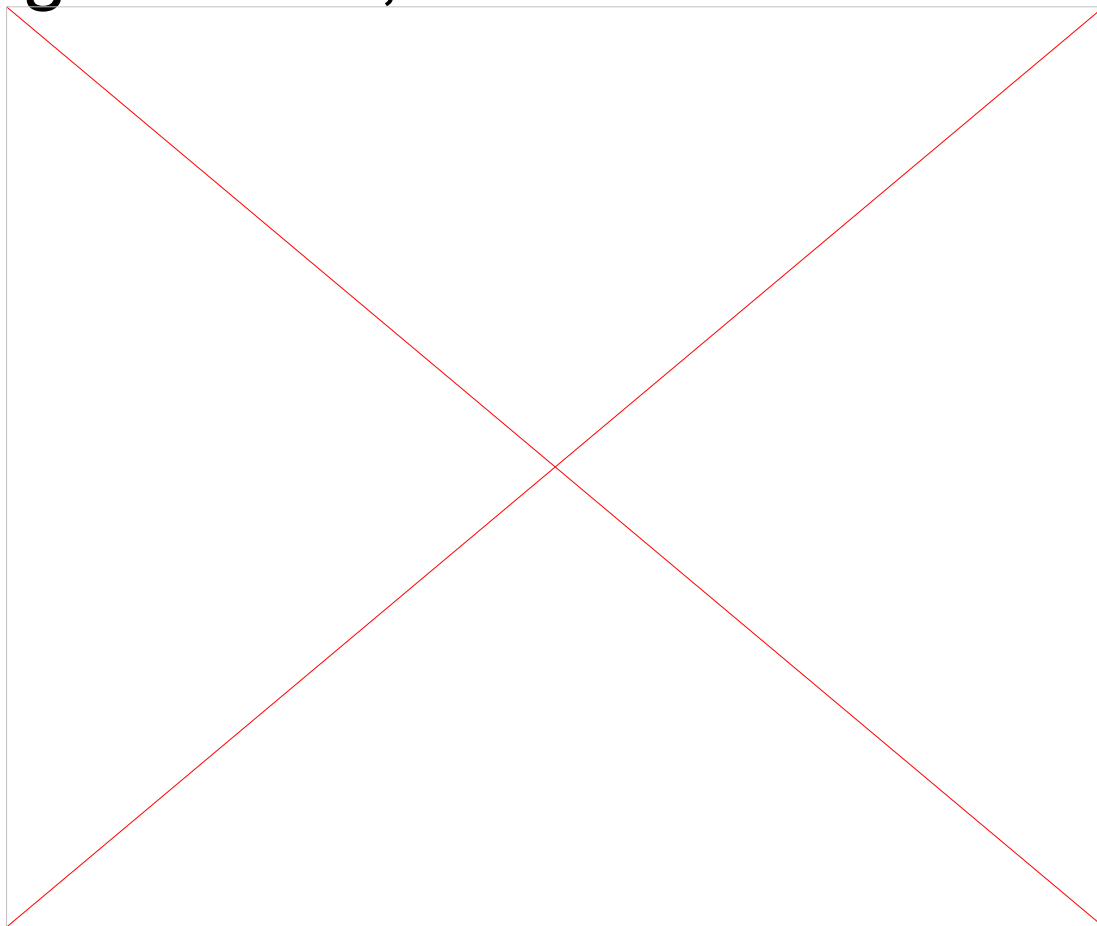
St Francis Xavier Church, 1475 La Salle Ave



Potential Site 2

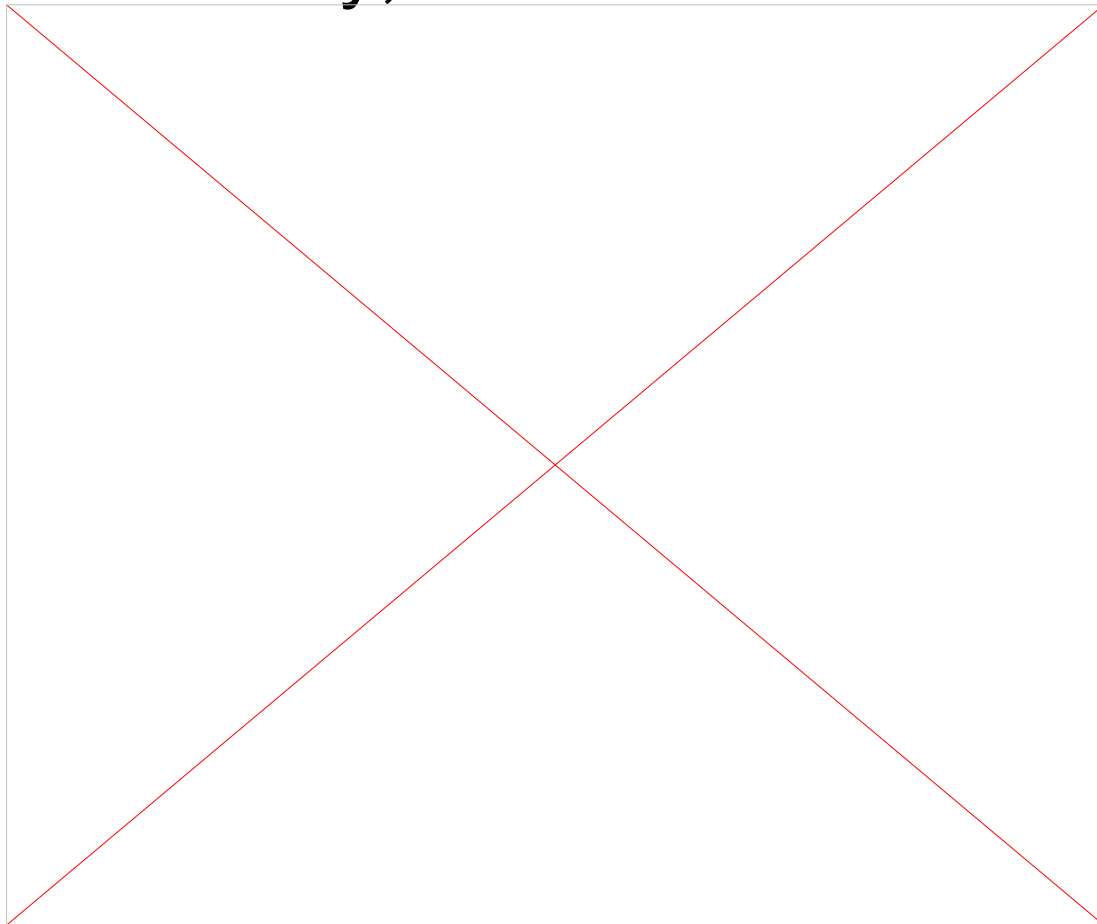
Seaside High School, 2200 Noche Buena St

West
Edge



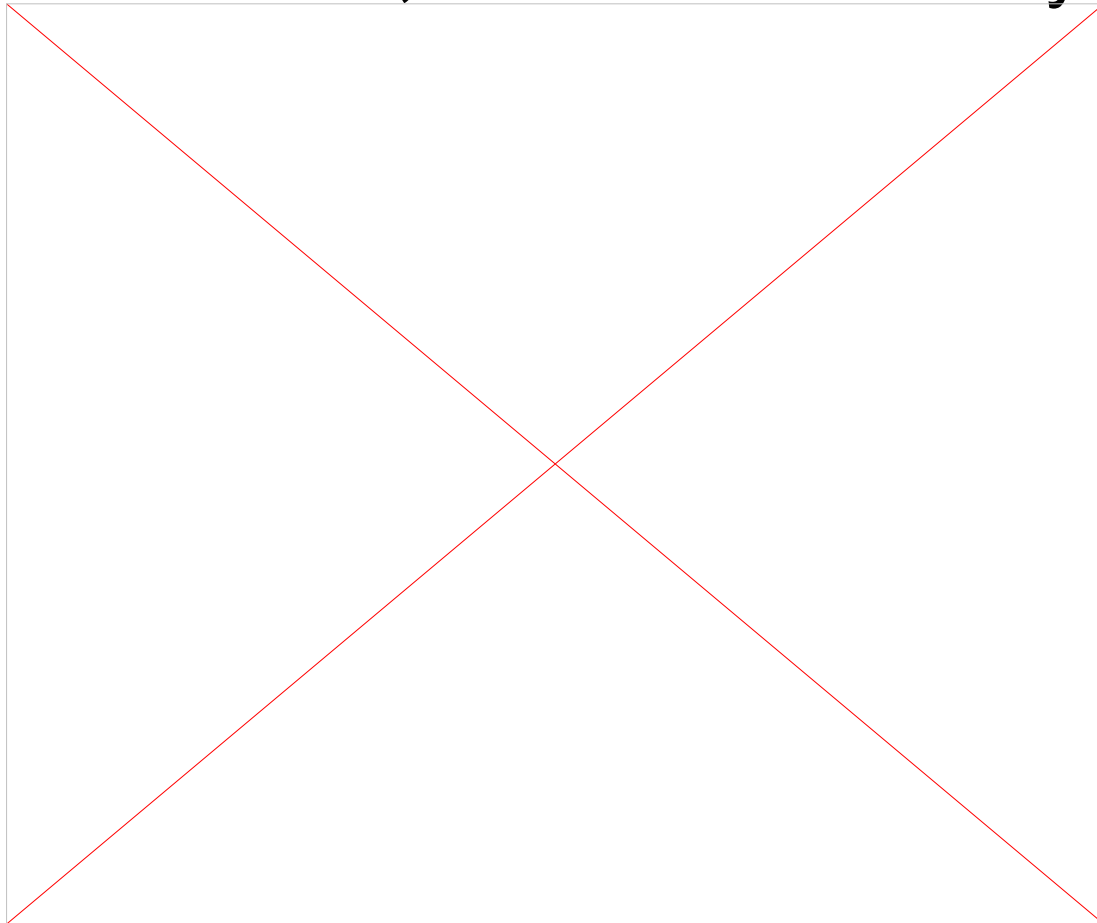
Potential Site 3

Highland Elementary, 1650 Sonoma Ave



Potential Site 4

Seaside USPS Office, 1093 Obama Way



Successes

- Clear goal, with clear results for users
 - Produced four excellent sites
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Challenges

- Lidar data is exceedingly difficult to work with in Arcmap
 - Insufficient time to write classification/siting algorithm
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Thanks

- Dr. Patel for Lidar, TAZ data.
 - USGS for Lidar data.
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