Expanding Communication With A Microwave Tower

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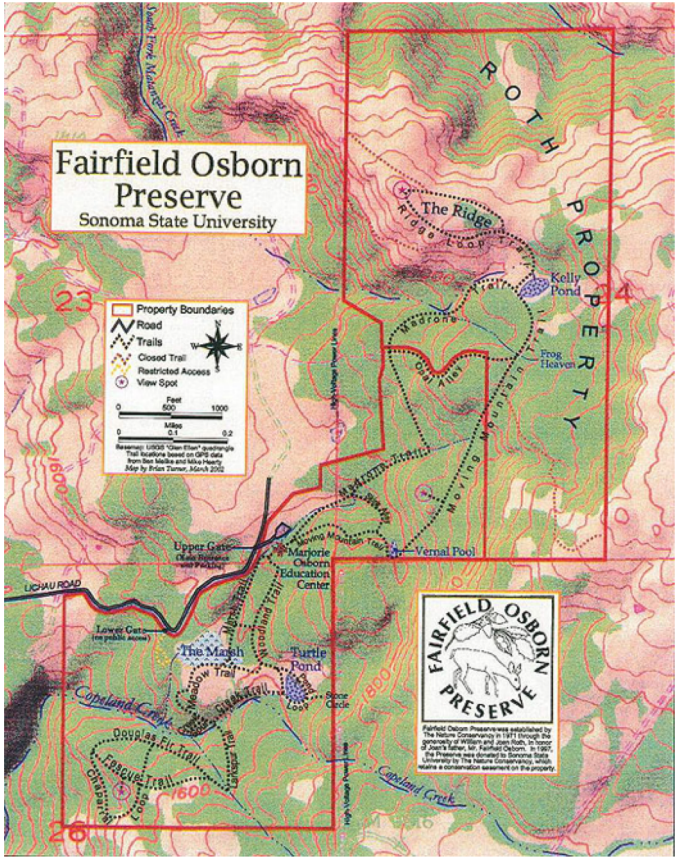
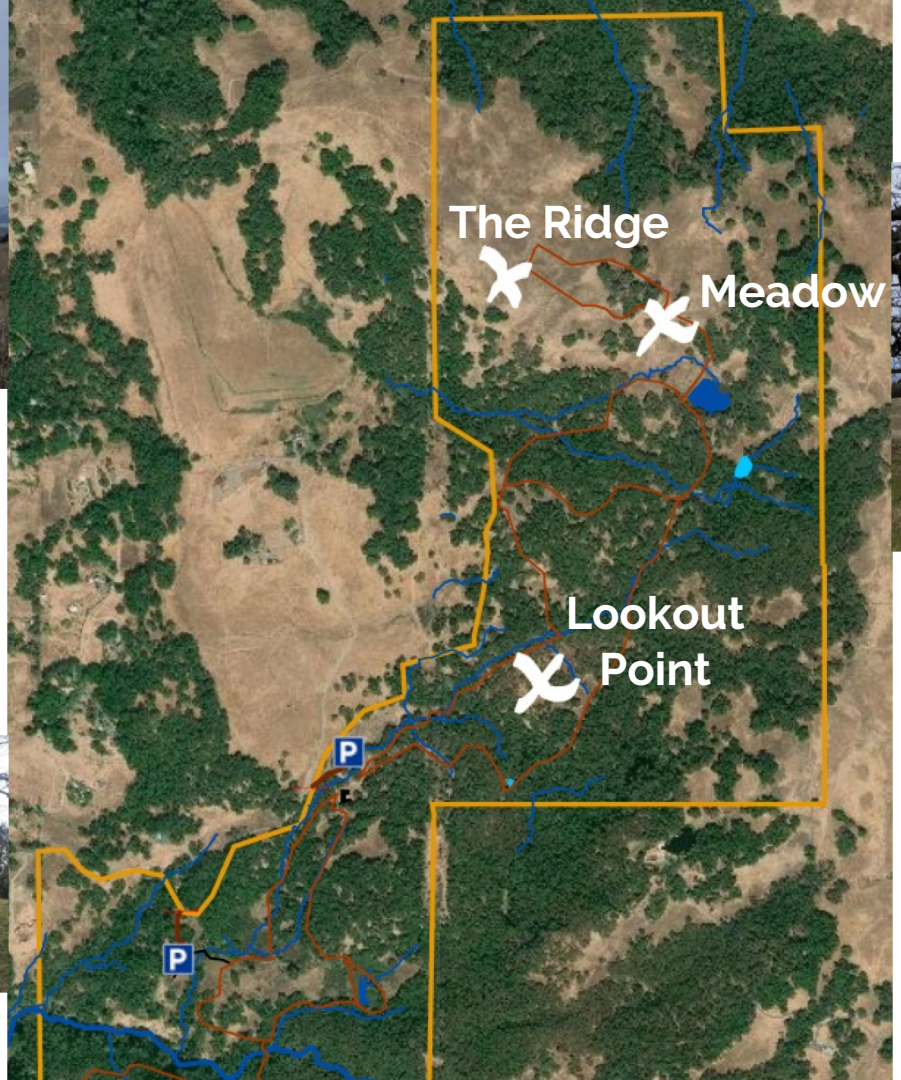
Background

- Osborn is looking for a location to place a new microwave tower to improve wireless communications
- A microwave tower is a tower that uses microwave frequency to transmit data between two locations
- Microwave frequency: 30-300 ghz vs. Wifi frequency: 2.5-5 ghz
    - Vegetation causes less interference with microwave frequencies

Methods

- We went to potential locations for the tower & observe environment and visibility
  - Unable to obtain receiver/transmitter
- Recorded elevation and general directions of visibility free of vegetation




The Ridge
Meadow
Lookout
Point
P
P

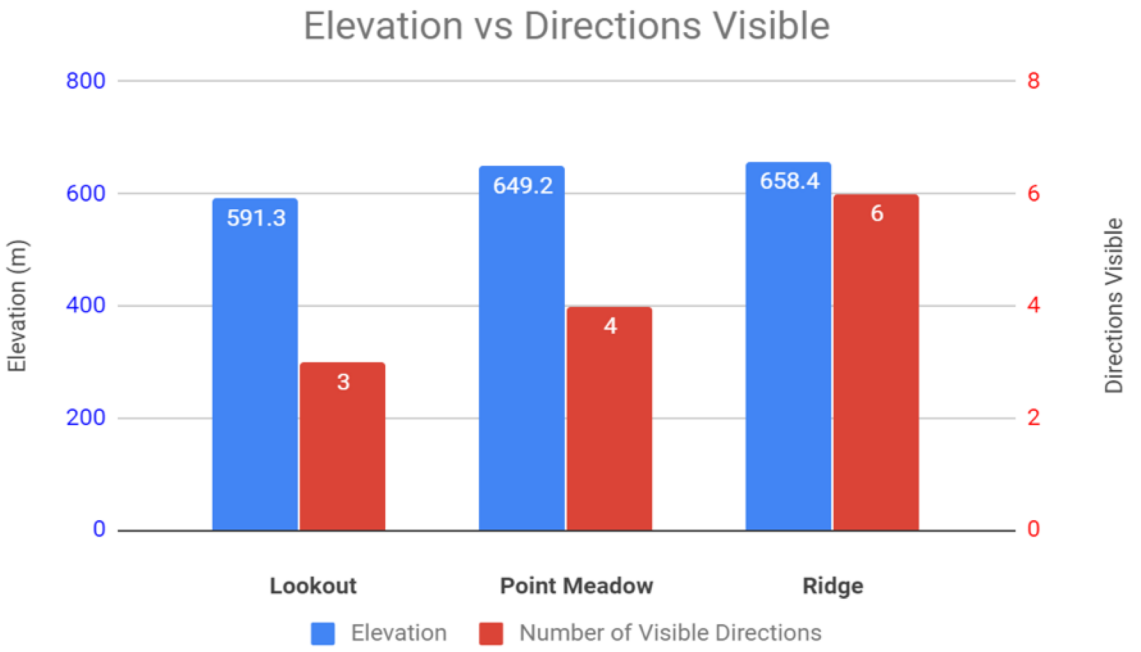
Results

8 directions = N, S, E, W, NW, NE, SW, SE

Red = Lookout Point

Orange = Meadow

Blue = Ridge



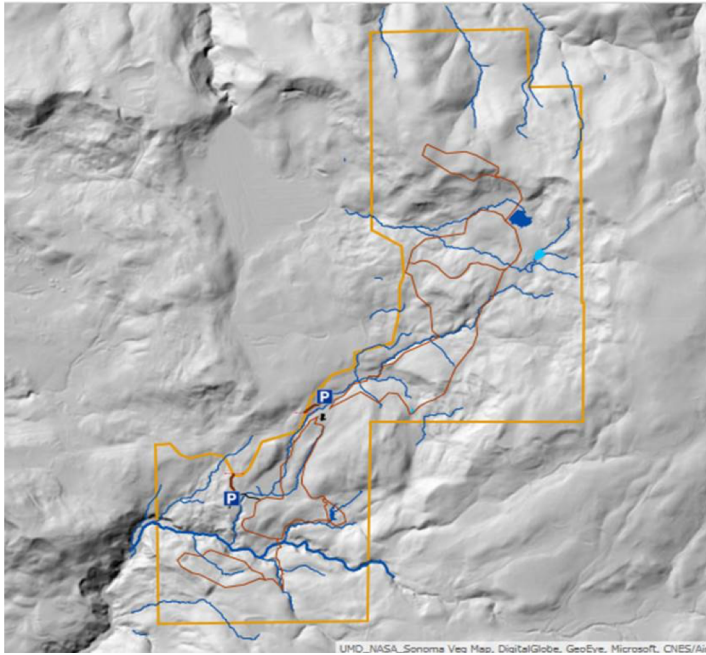
Lookout Point	N, NW, NE	591.3 m
Meadow	N, S, NW, SW	649.2 m
Ridge	N, S, W, NW, SW, NE	658.4 m

The ridge is the best possible location due to high elevation and lack of vegetation.

Conclusions

Our hypothesis was supported; The ridge is most likely the best possible location due to elevation and lack of vegetation.

This would benefit the efficiency of communications throughout Osborne Preserve.



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