

Water Quality Monitoring and Modeling of Moro Cojo

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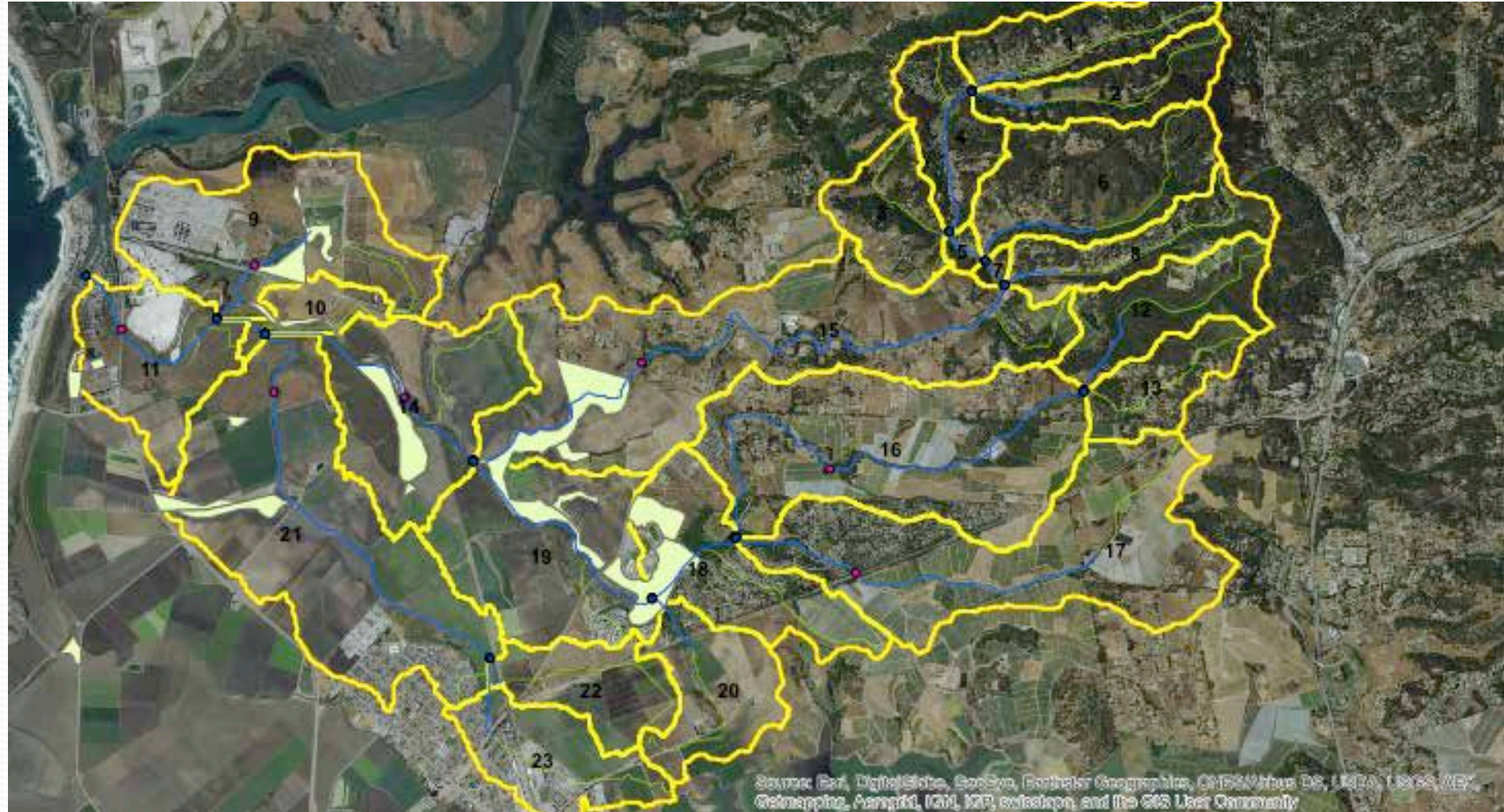
Introduction: Monitoring and Modeling

- **Monitoring** by collecting samples to fill knowledge and data gaps to improve our understanding of the watershed
- **Modeling** may be used to guide water quality improvement strategies
- **Both** can be used for better informed decision making to improve management practices and water quality impairments



Why Moro Cojo?

- Impaired water quality
- Important habitat
- Water management
- Start small, expand (~10,000 acres; 3,000 ag)
- Relationships and partnerships



Monitoring and Modeling Approach

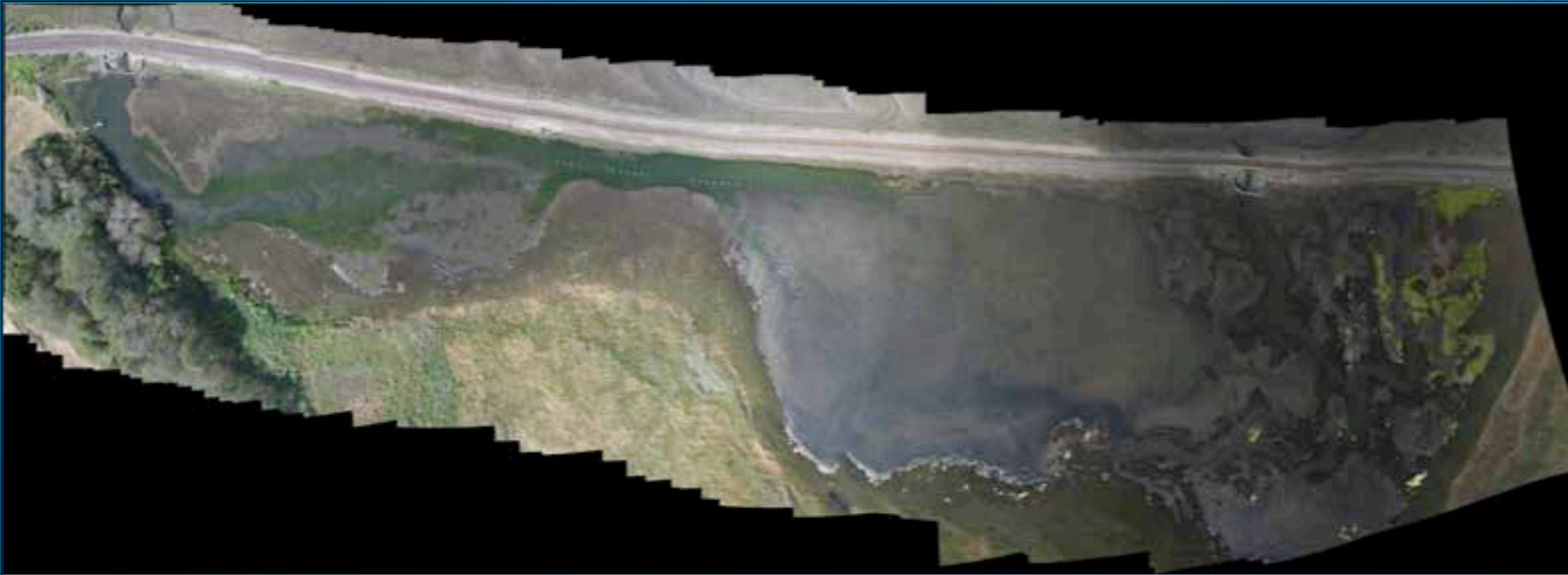


Photo credit: Mo Wise

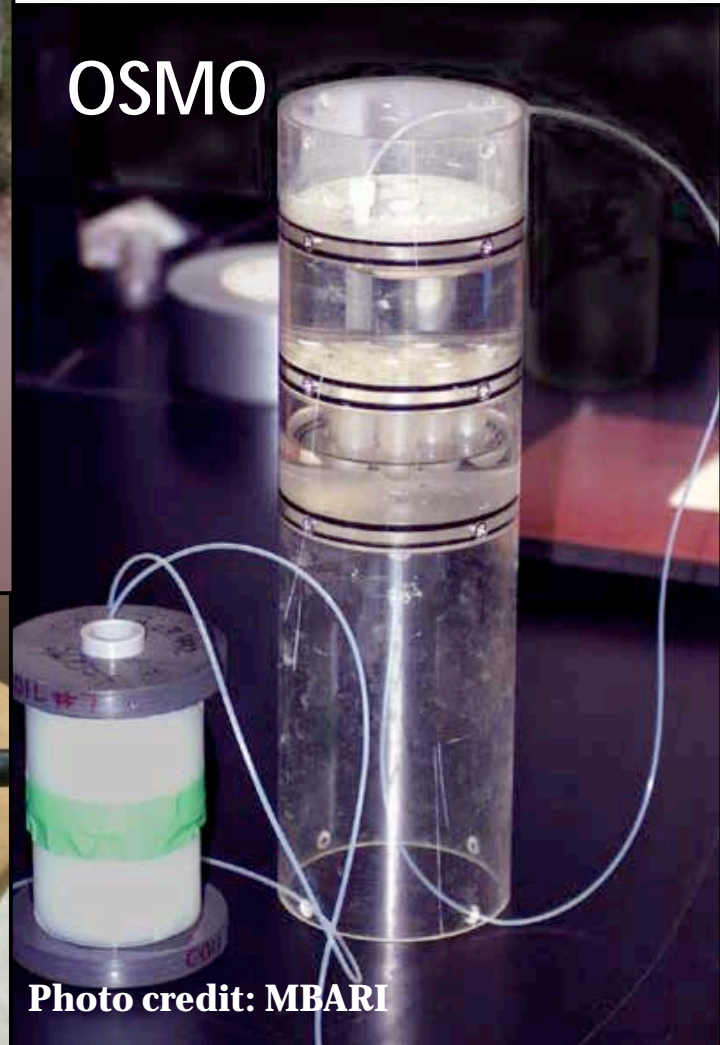
Water Quality Monitoring



Photo credit: Tom Connolly



ADCP

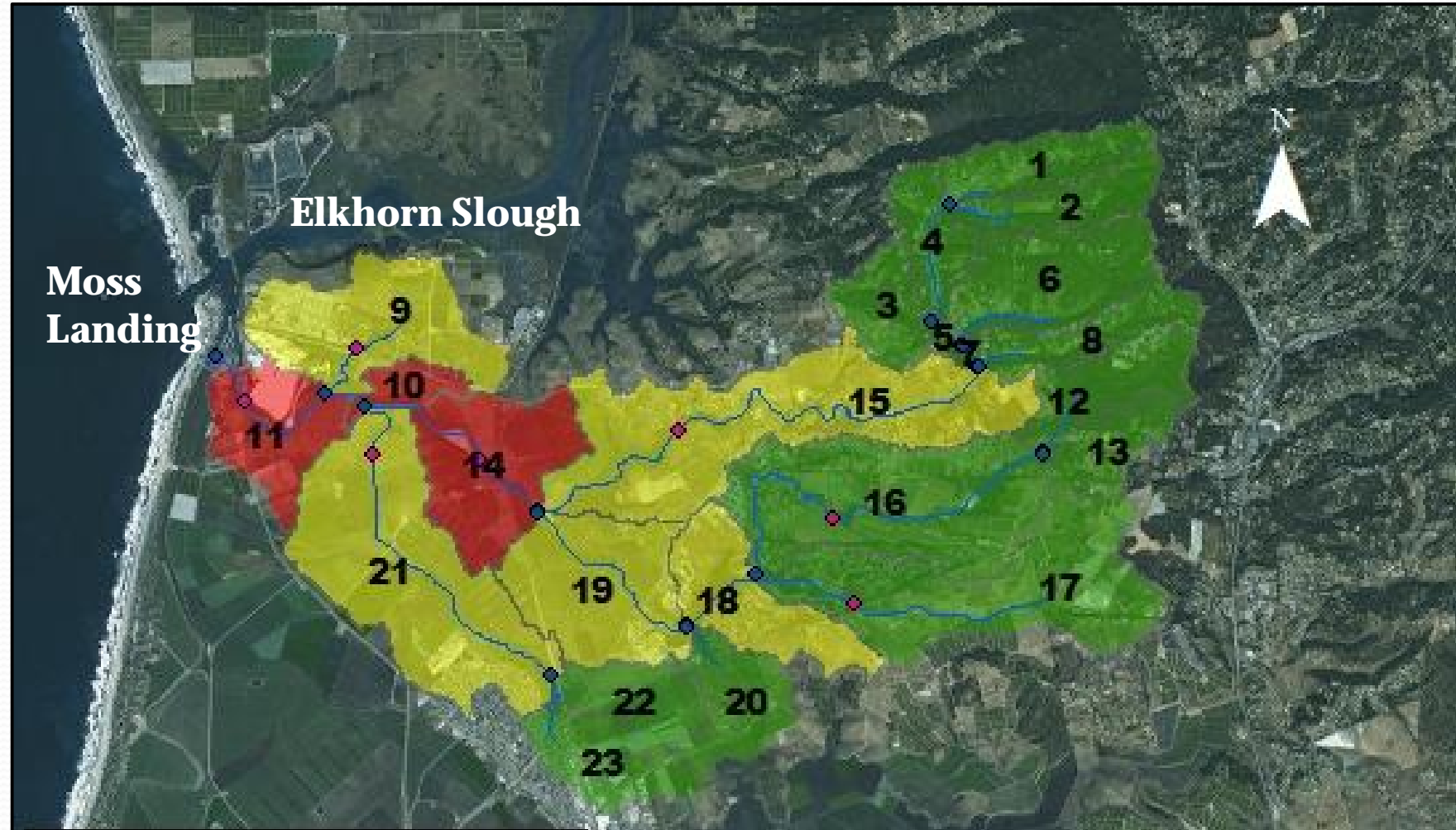


OSMO

Photo credit: MBARI

Moro Cojo nutrient transport model

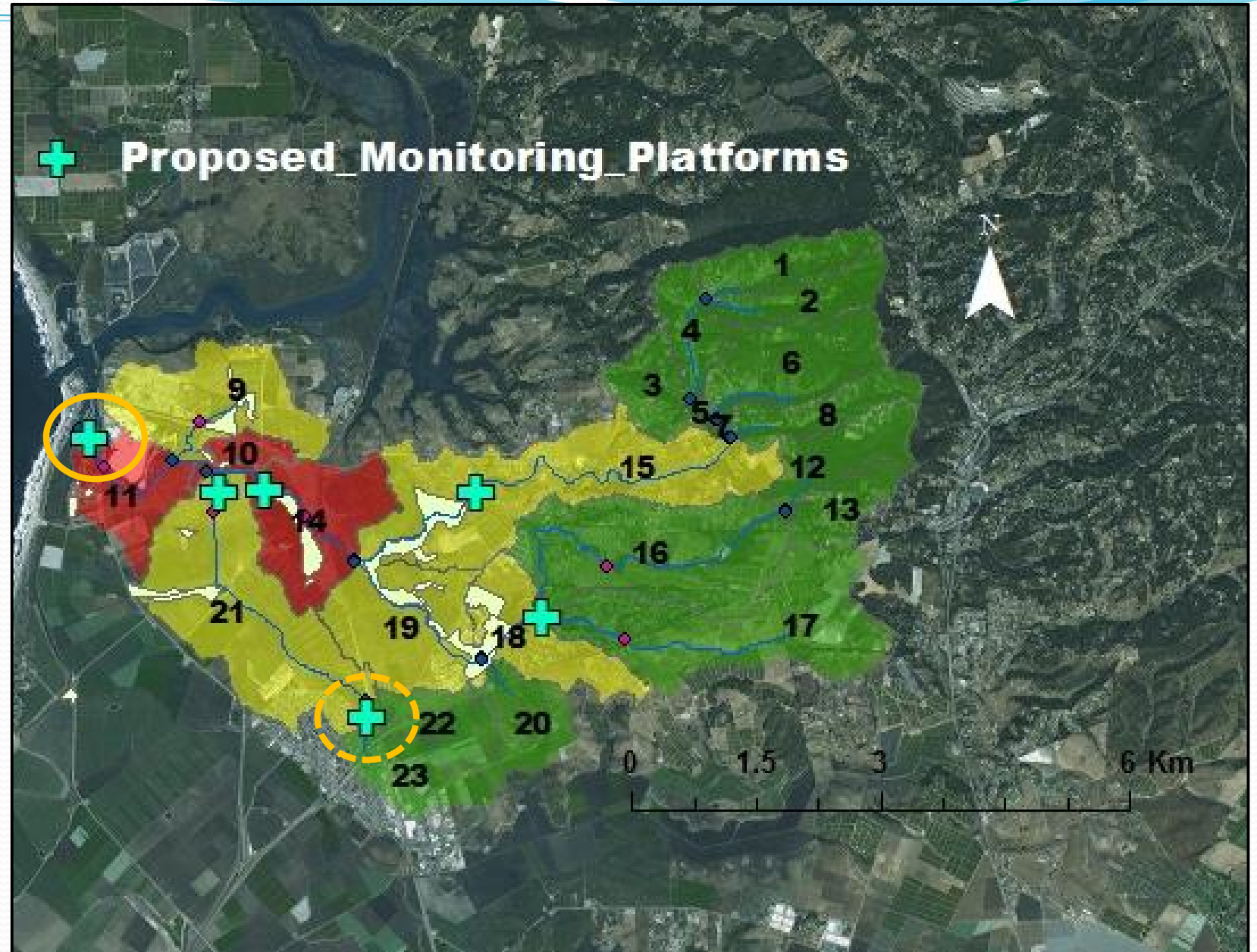
- Soil and Water Assessment (SWAT)
- Simulate water and nutrient cycling to assess the efficiency of best management practices in agricultural watersheds



Future Work: Monitoring

Implement Monitoring Platforms:

- Grab samples
- Osmosamplers
- YSI EXO sonde
(downstream site)
- Flow – Acoustic
Doppler Current
Profiler (ADCP)



Future work: Modeling

- Model calibration and validation
- Model application
- Model multiple scenarios

What happens if we change crops?!

What happens if we add wetlands?!

What if we change irrigation practices?!



Questions?