

# EFFECTIVENESS MONITORING WITH REMOTE SENSING

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# Ecological Remote Sensing



# Target Features and Metrics

Herbaceous Wetlands

Large Wood

Vegetation Details

Bar Area

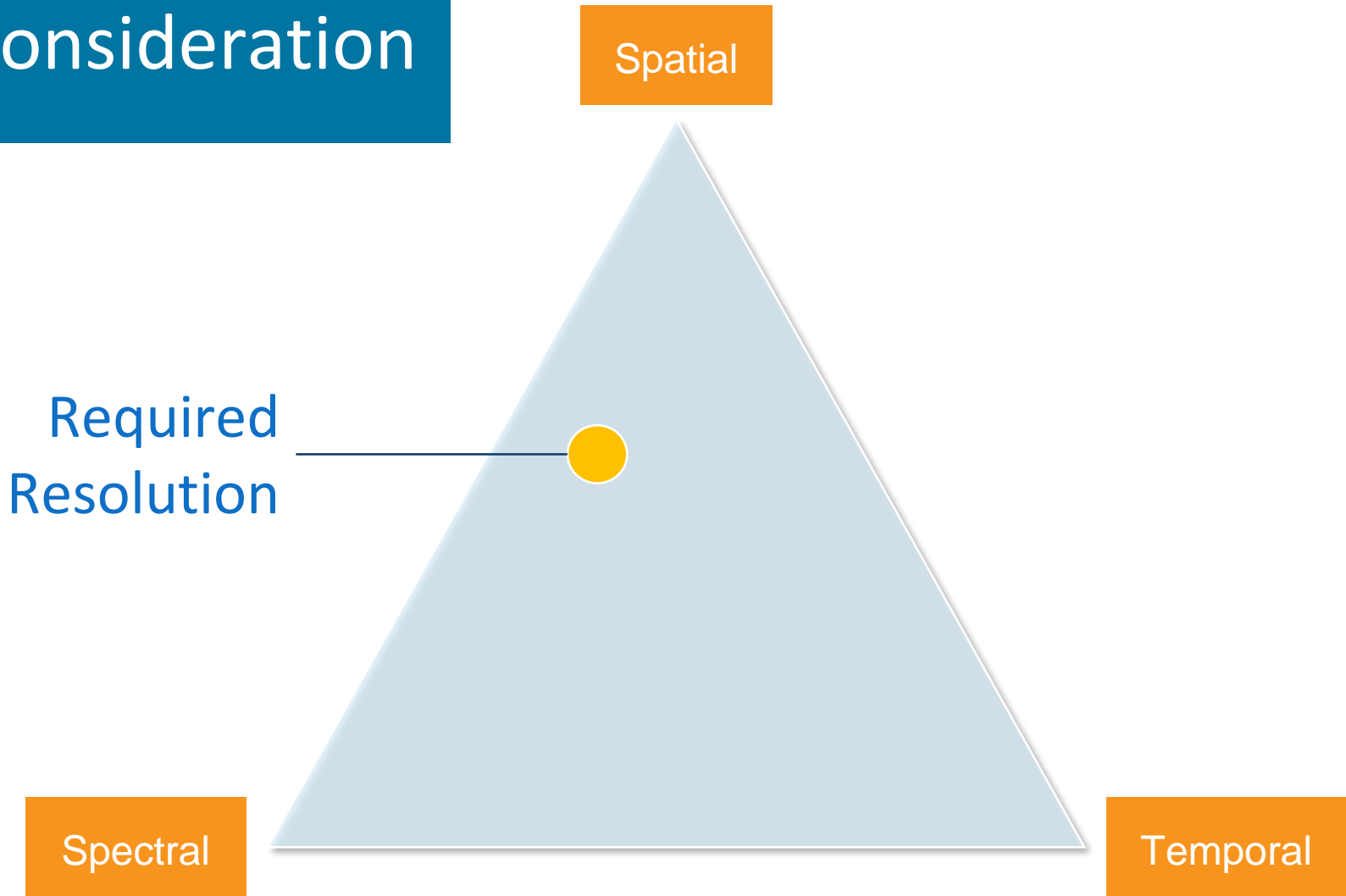
Vegetation Dynamics

Wetted Area & Channel Density

Resolution Considerations  
Timing of Acquisition  
Flight Planning



# Consideration



# Imagery Acquisition

Flight Logistics  
UAS Platform  
Appropriate Sensor



Credit: DJI



WHYCHUS CREEK  
MONITORING  
SISTERS, OR



# Study Area

Sisters, OR

Study Reach



# Why Remote Sensing?





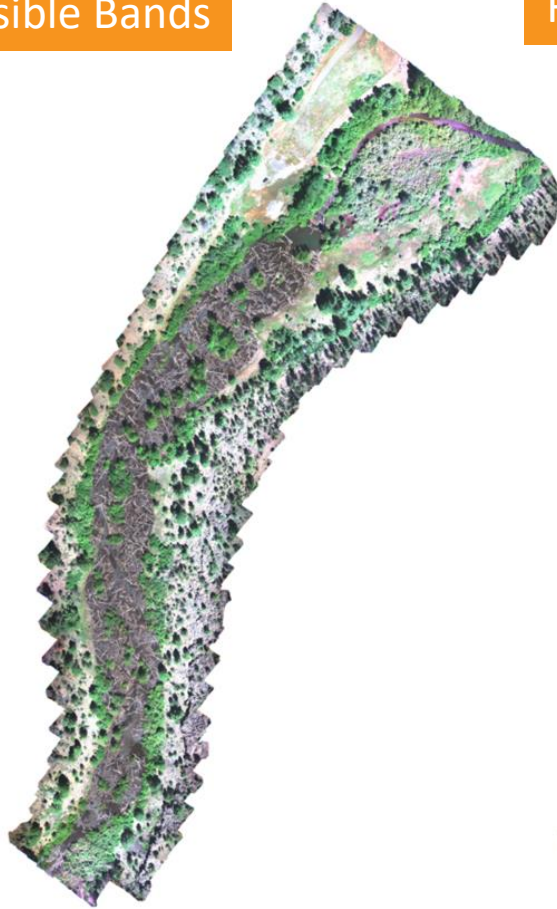


Future Conditions

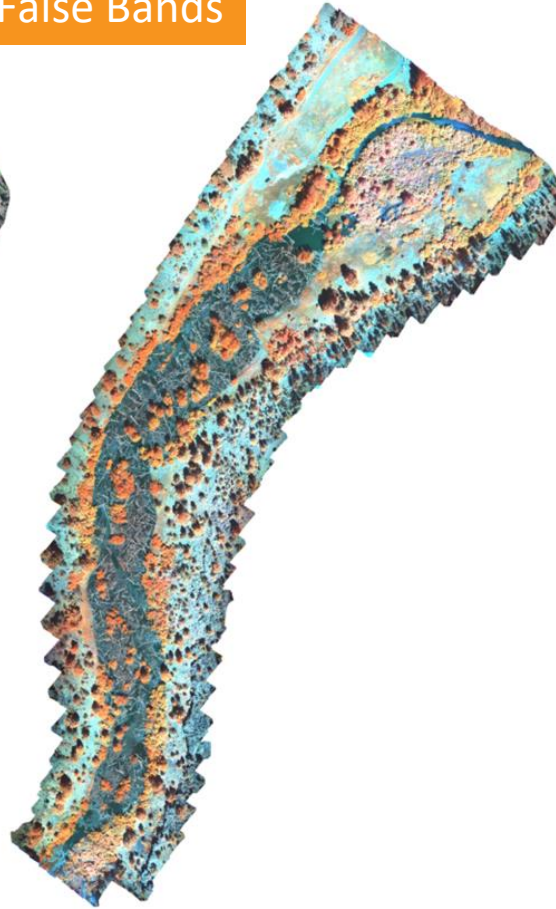


# Visualization & Interpretation

Visible Bands



False Bands



NDWI

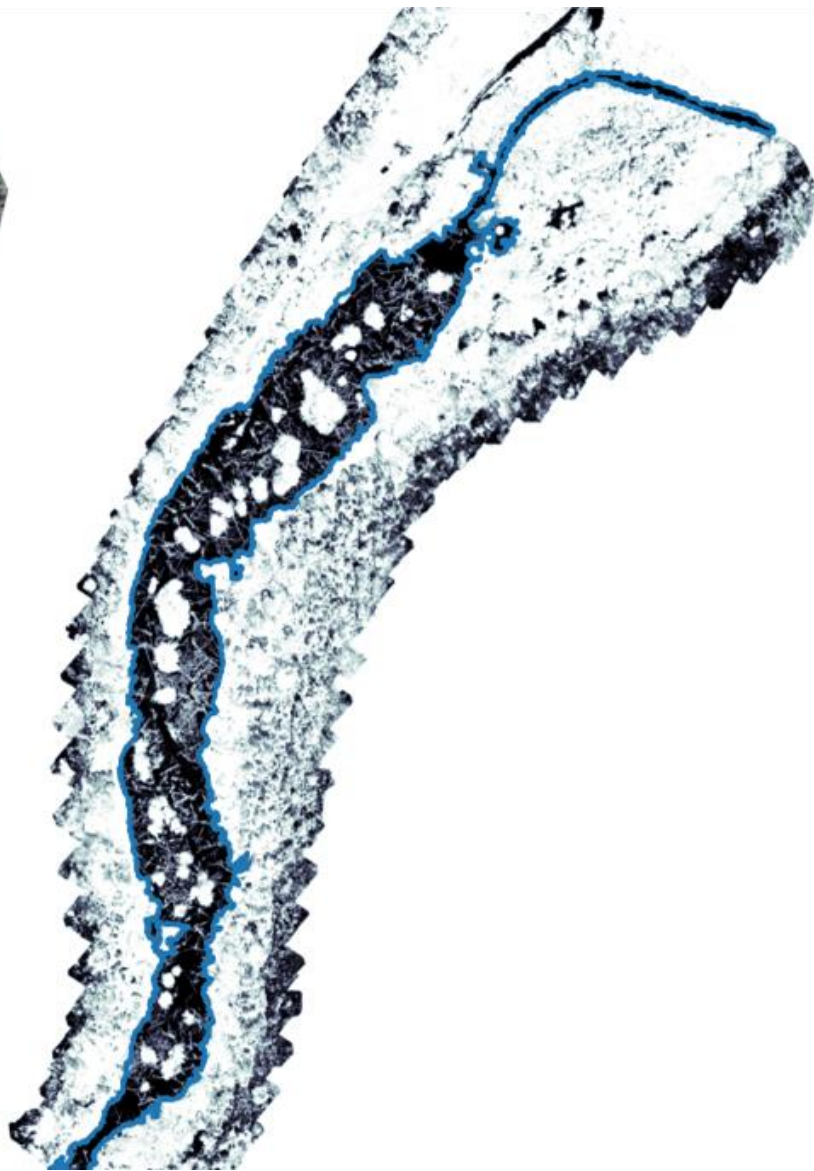
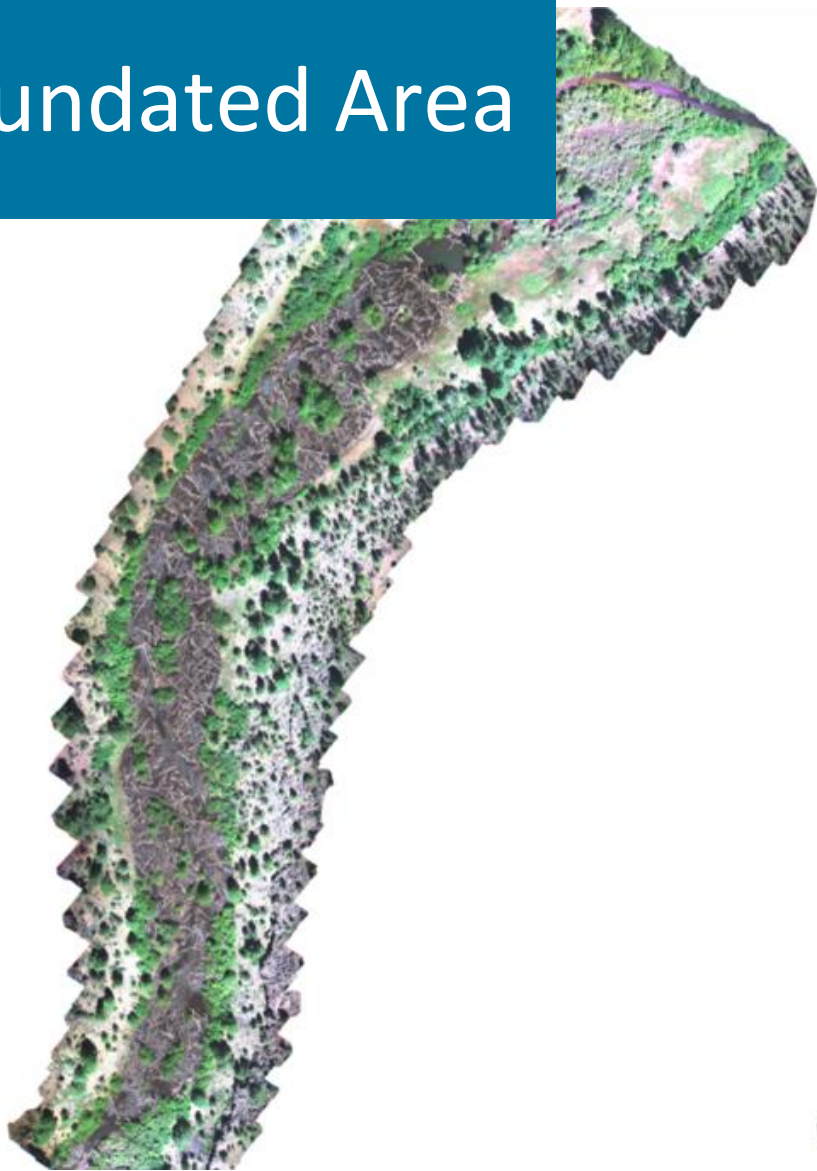




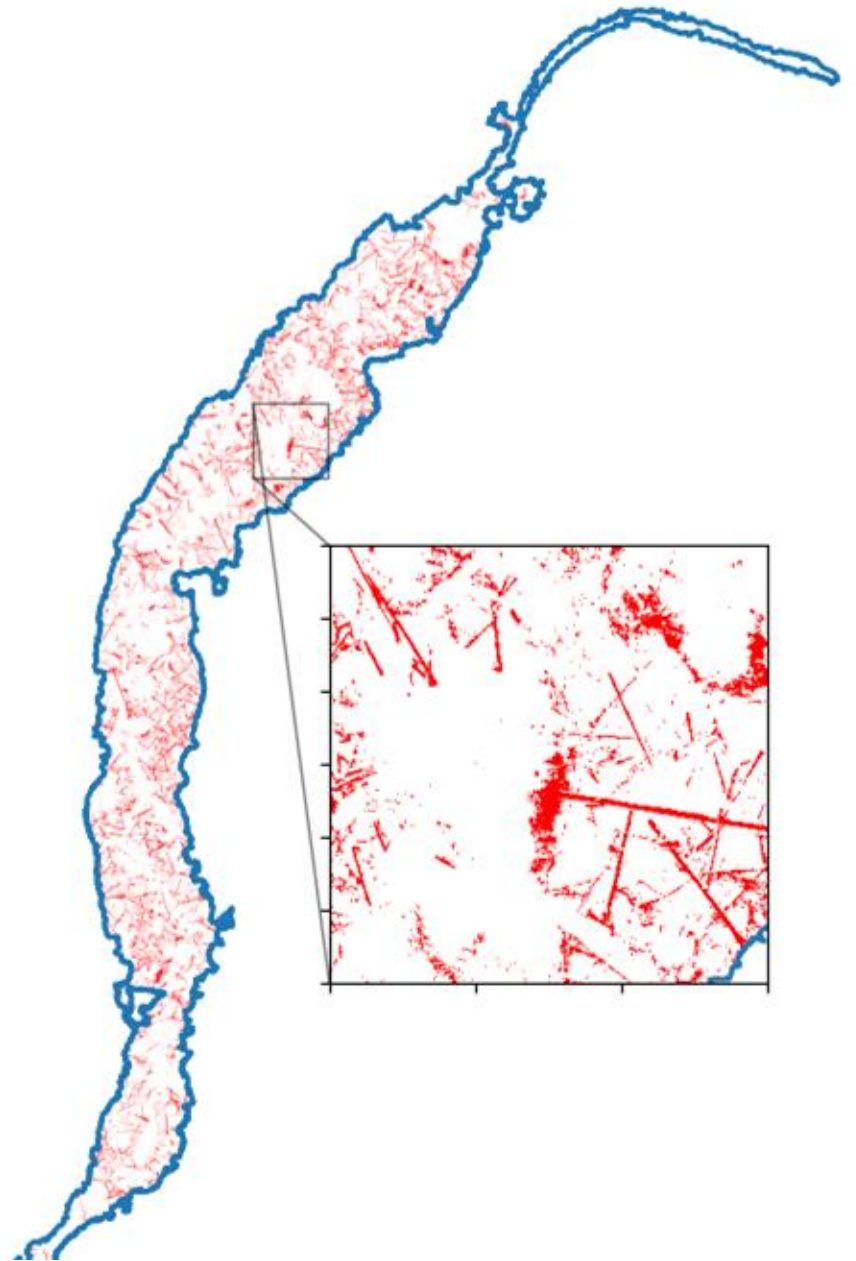
# CLASSIFIED IMAGERY



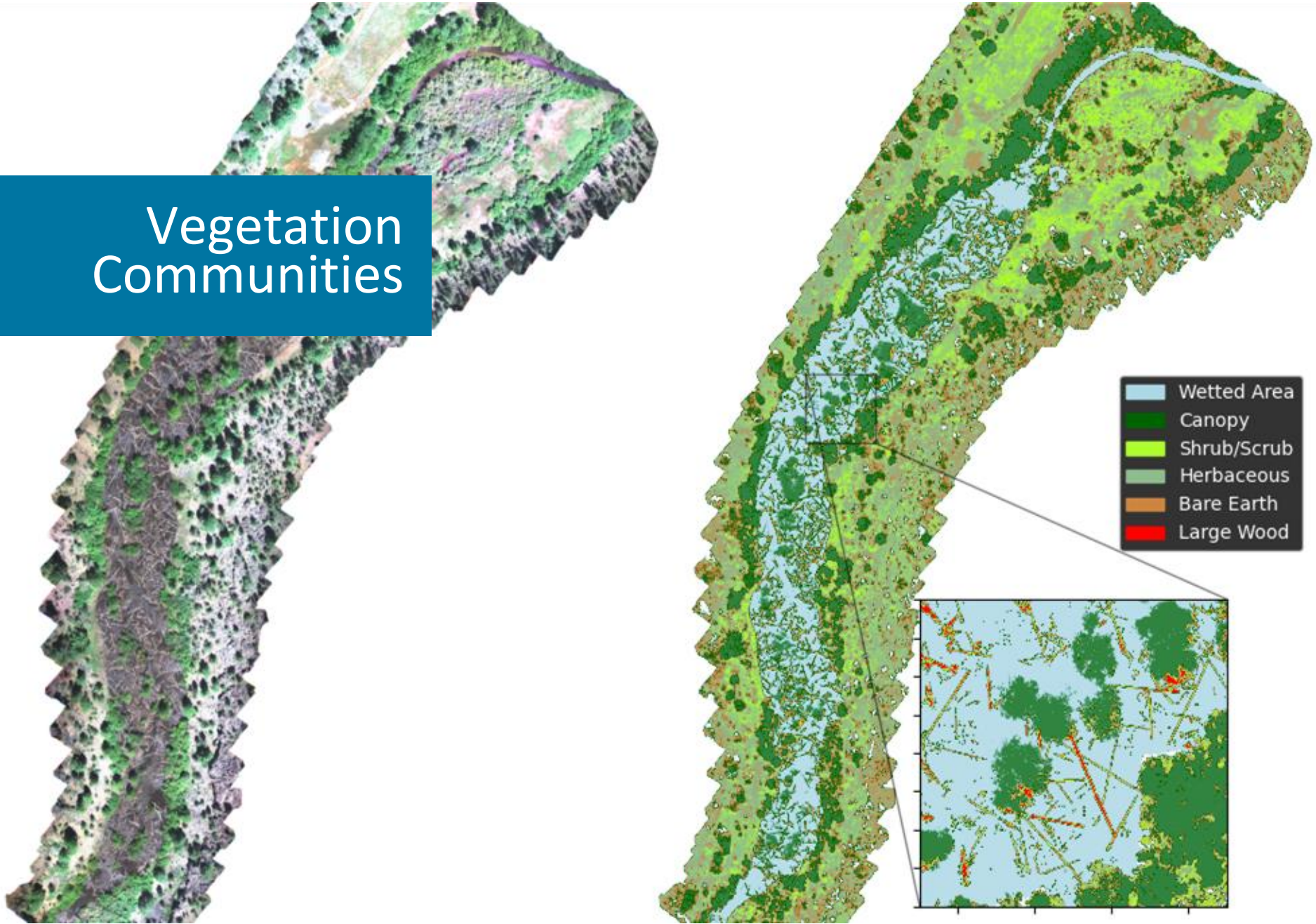
# Inundated Area



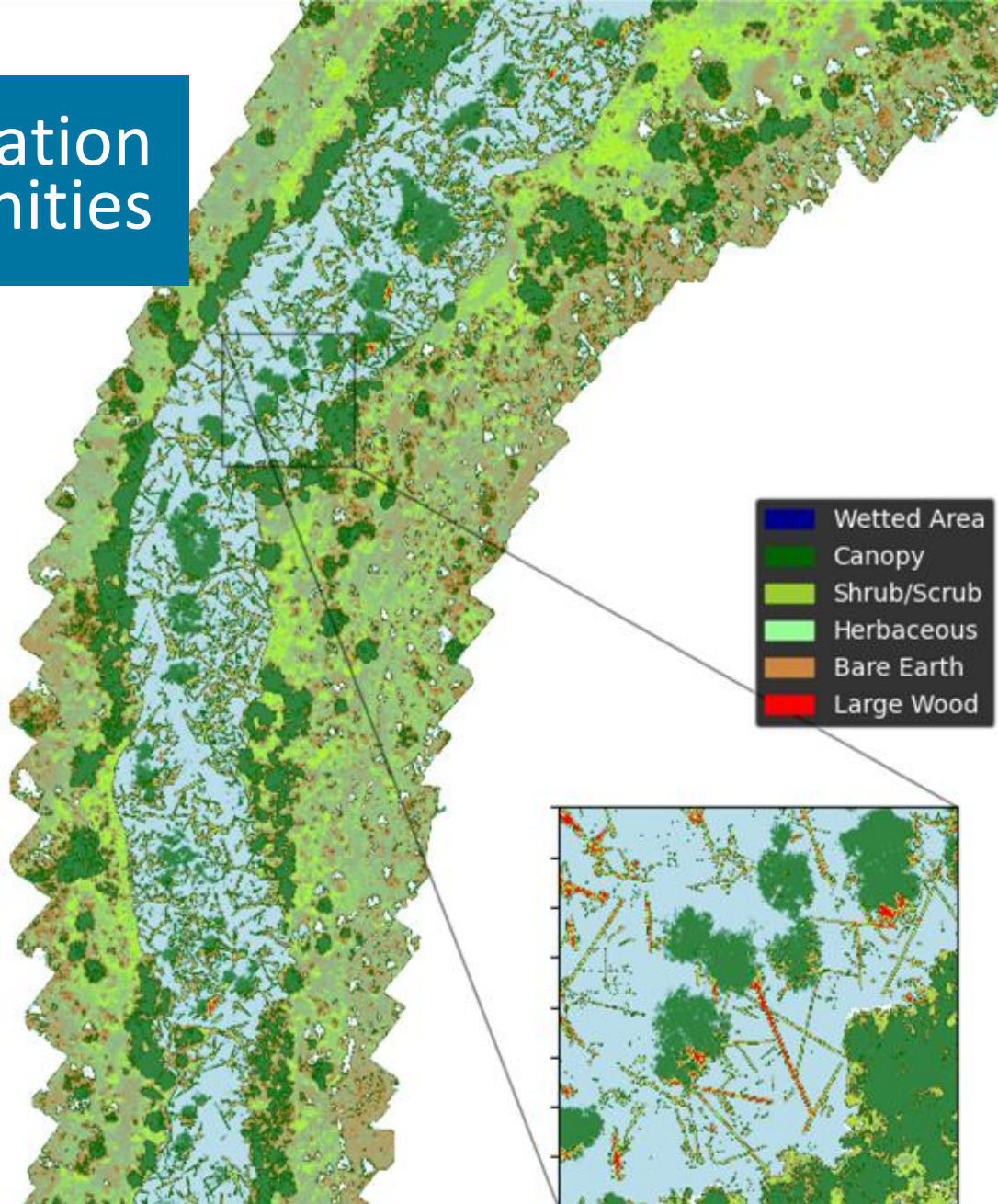
# Large Wood



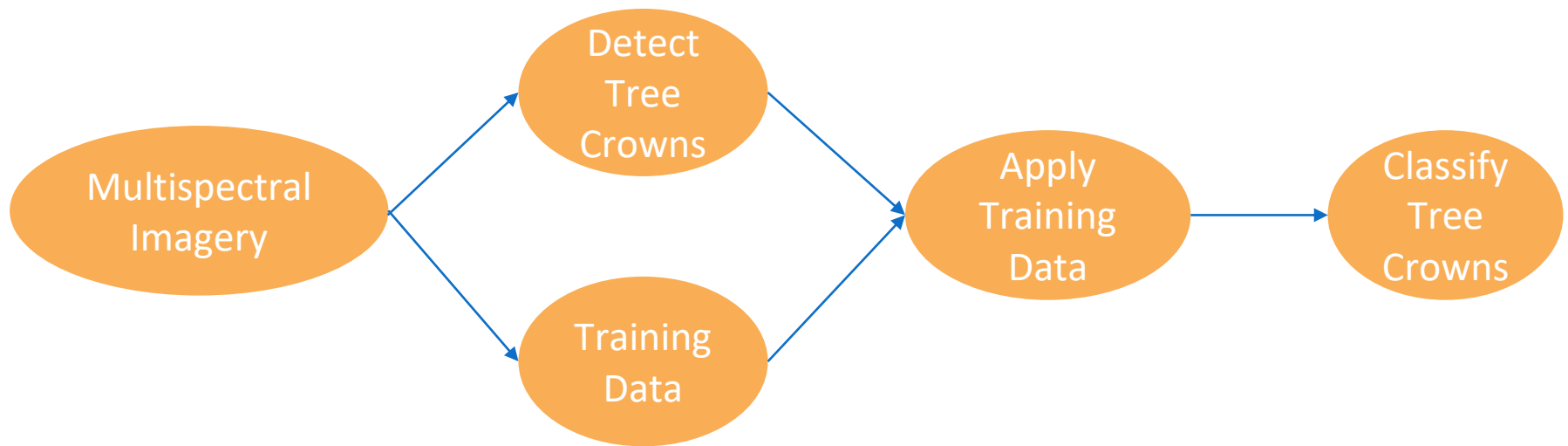
# Vegetation Communities



# Vegetation Communities



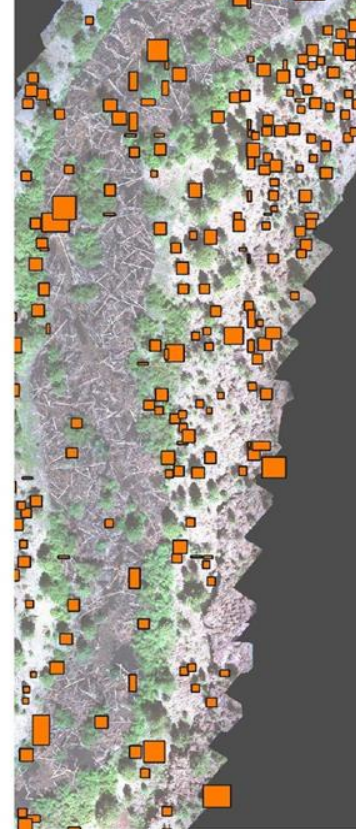
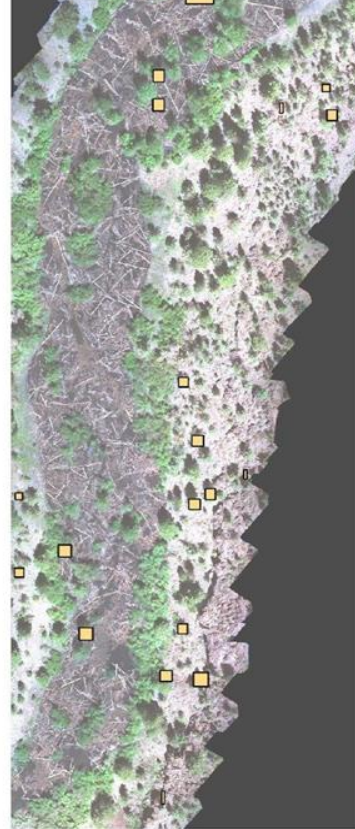
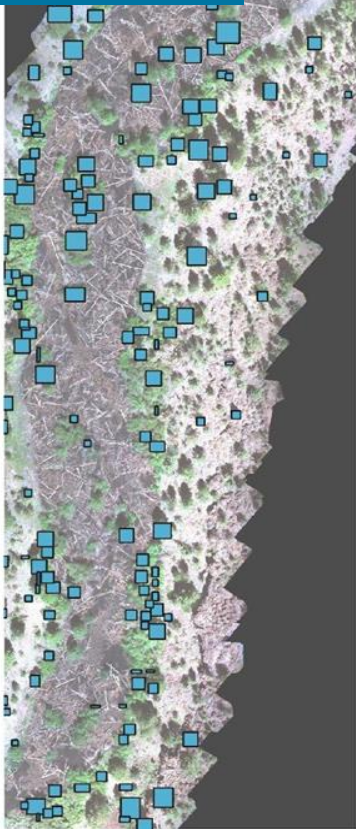
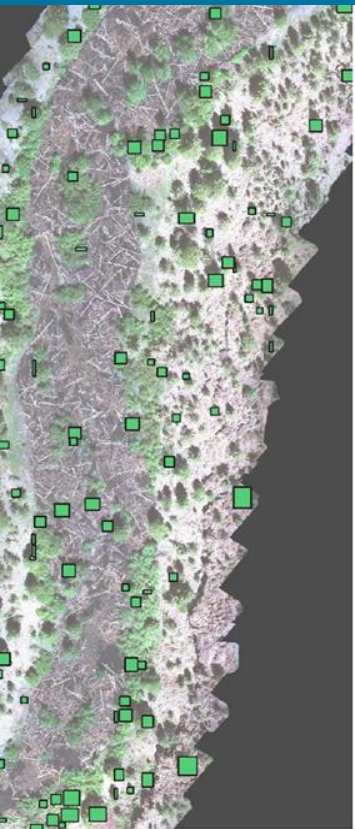
# Tree Species - Analysis Workflow






Alder Cottonwood Juniper Ponderosa pine Willow

# Vegetation Species



# Next Steps

An aerial photograph of a river with a large amount of driftwood. Three people are standing in the water. One person on the left is wearing a hat and holding a coil of orange rope. The person in the middle has their arms raised. The person on the right is wearing a blue jacket and a hat. The river is filled with logs and branches, and the water is dark and turbulent.

- Repeat Analysis on Other Imagery Years
- Incorporate Elevation Data
- Collect More Validation Data
- Refine Training Data

