



Wildfire Risk Assessment at MCI WEST Marine Corps Camp Pendleton



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Project Tasks

- ✘ Task 1: Fuels Mapping
- ✘ Task 2: Wildfire Risk Assessment
- ✘ Task 3: Fire Danger Rating Calculator
- ✘ Task 4: Final Report
- ✘ Task 5: Annual Briefings



Camp Pendleton Marines Corps Base

Task 1: Fuels Mapping



MARINE CORPS BASE



CAMP PENDLETON

HOME OF I MEF





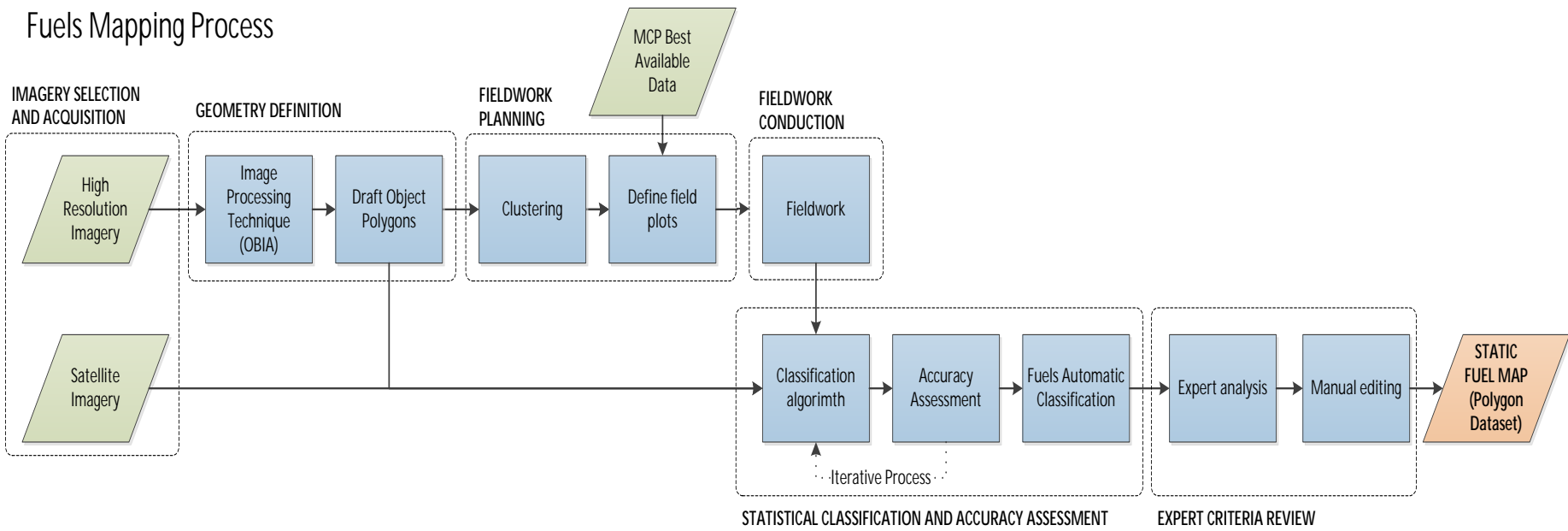
Fuels Mapping Components

- ✧ Evaluation of existing fuels data
- ✧ Image acquisition & image processing
- ✧ Fuels survey field plots
- ✧ Final fuels mapping
- ✧ Phenology analysis
- ✧ Fuels updating process
- ✧ Dynamic fuel moistures analysis

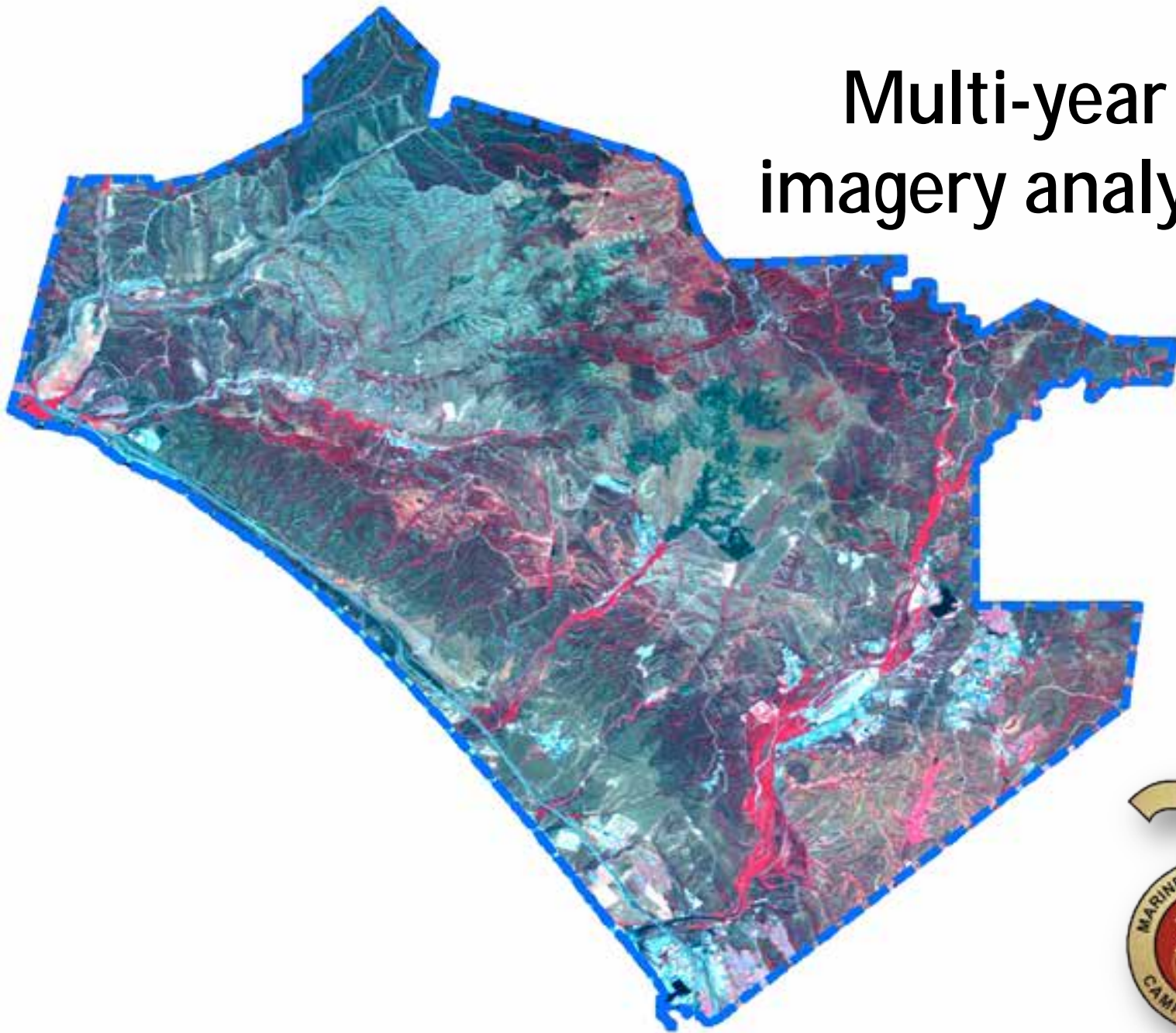


Fuels Mapping Process

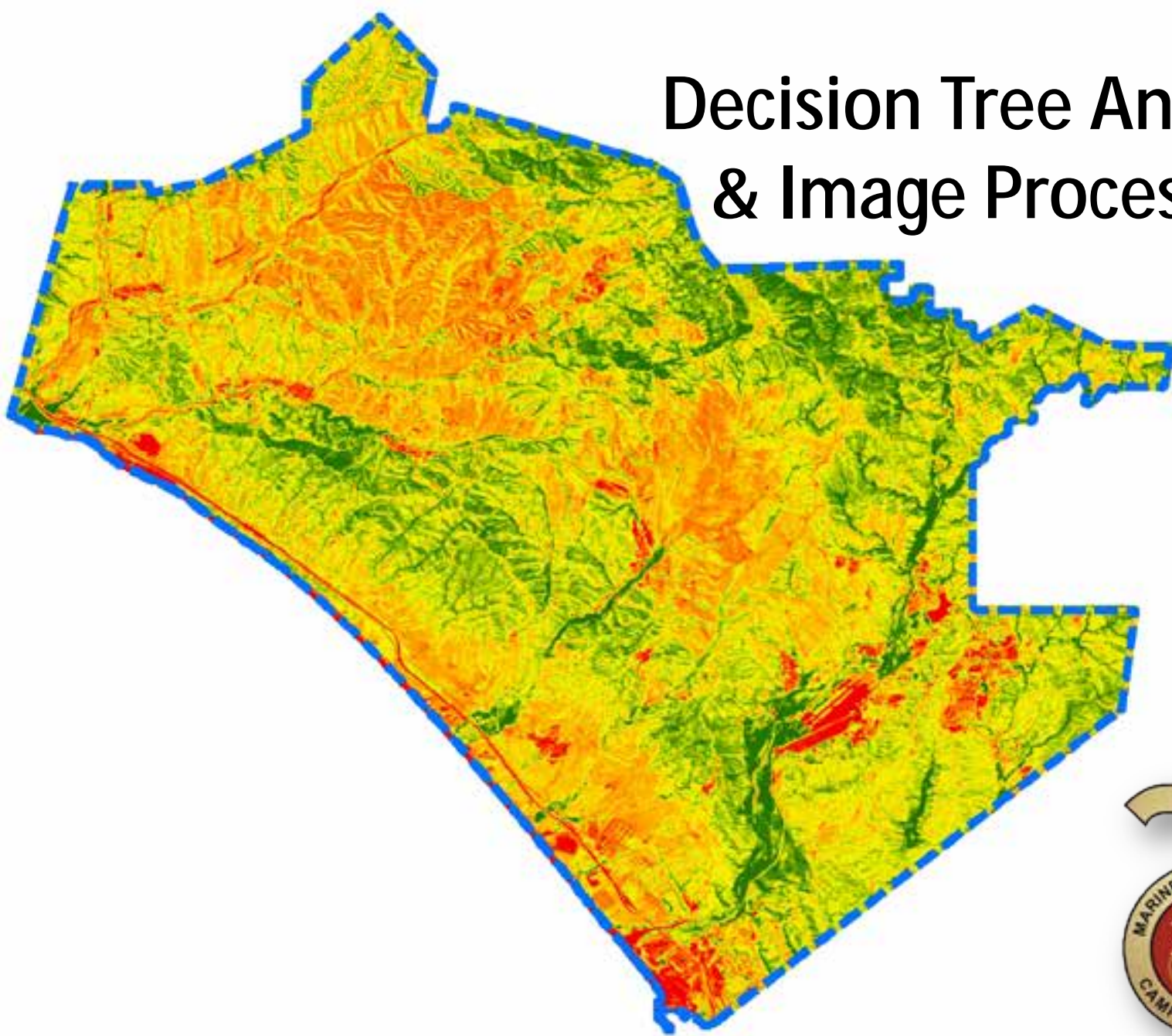
Fuels Mapping Process



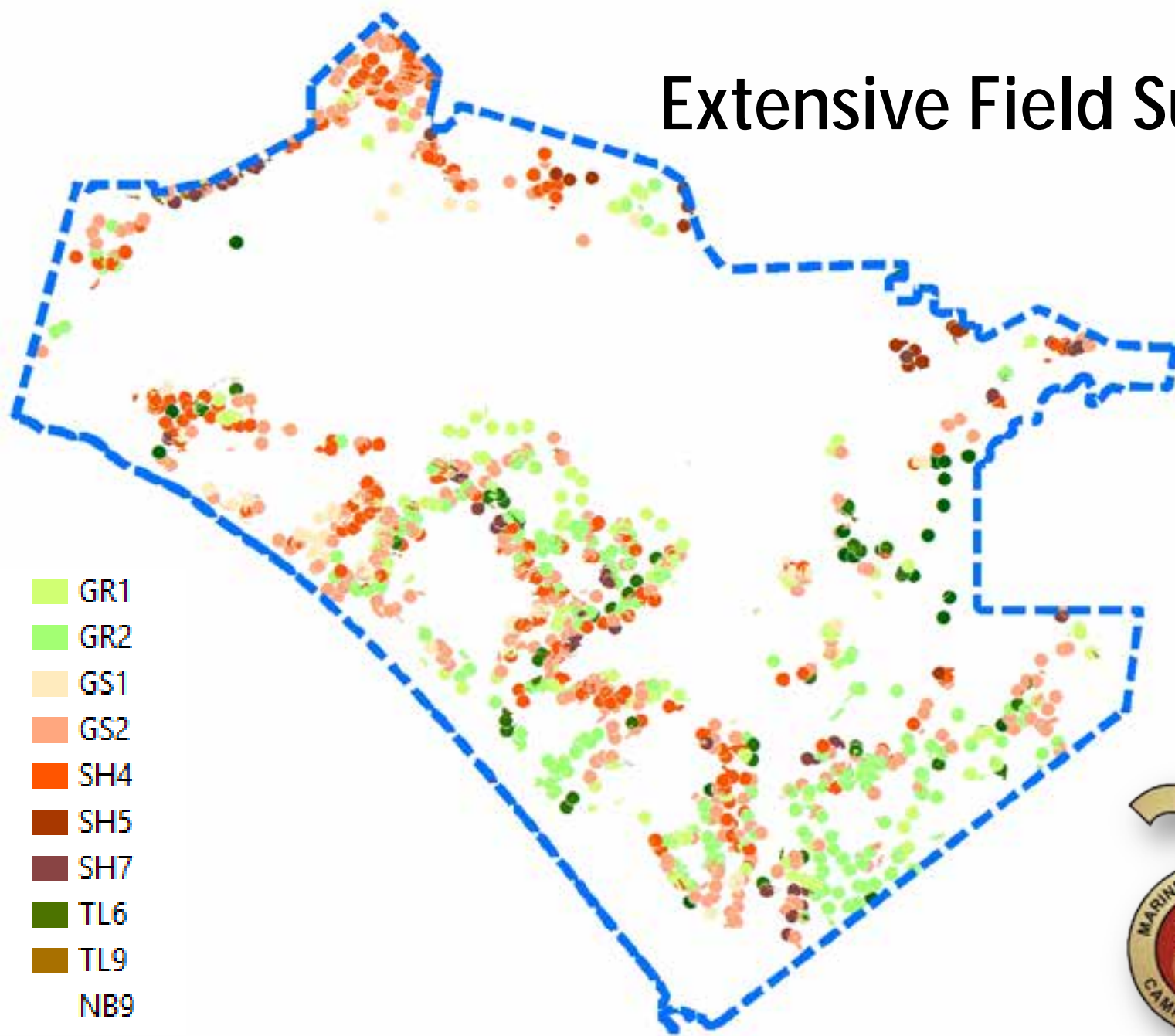
Multi-year imagery analysis



Decision Tree Analysis & Image Processing

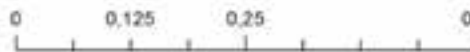


Extensive Field Surveys



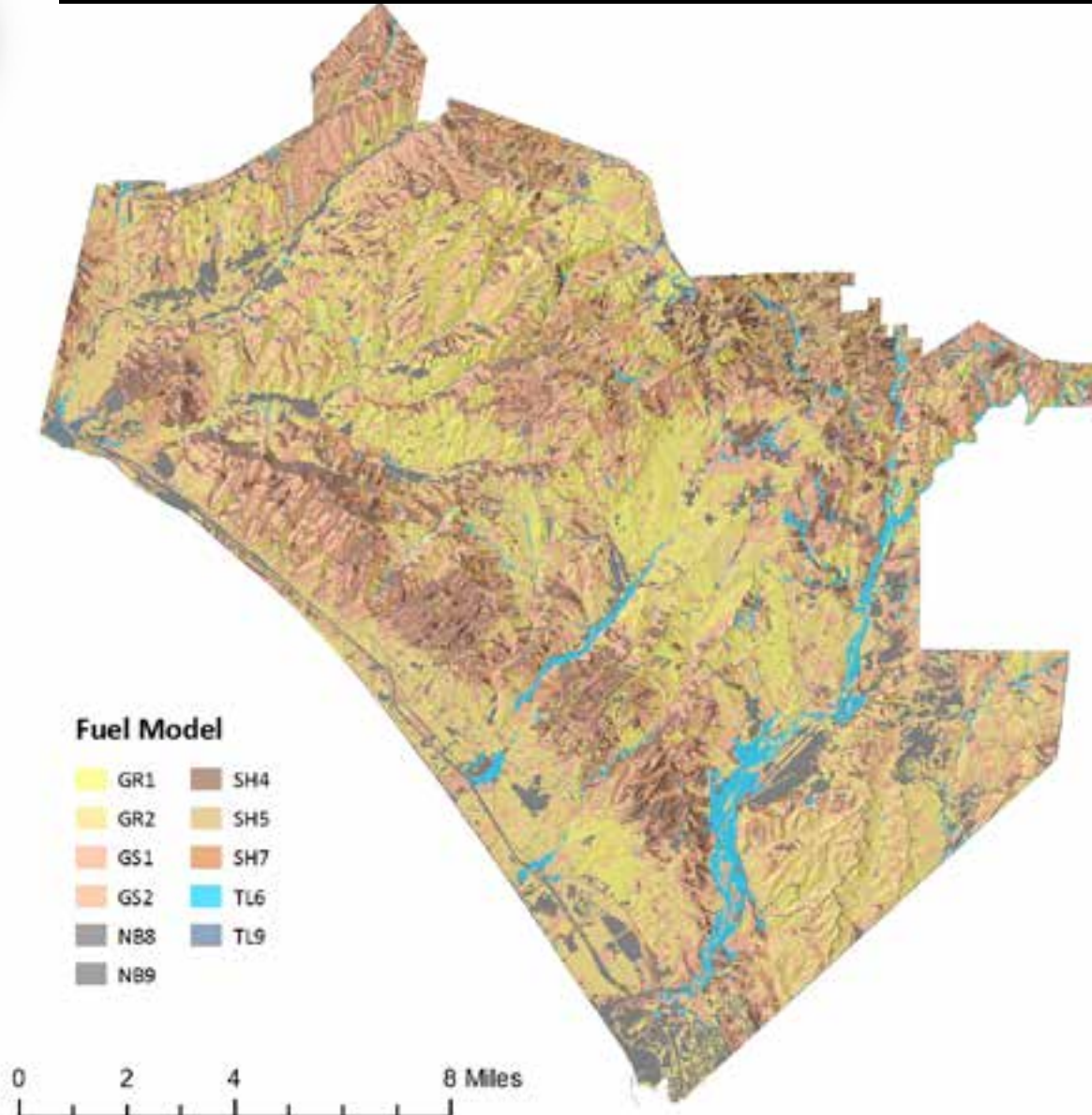


Fuels Mapping Outputs





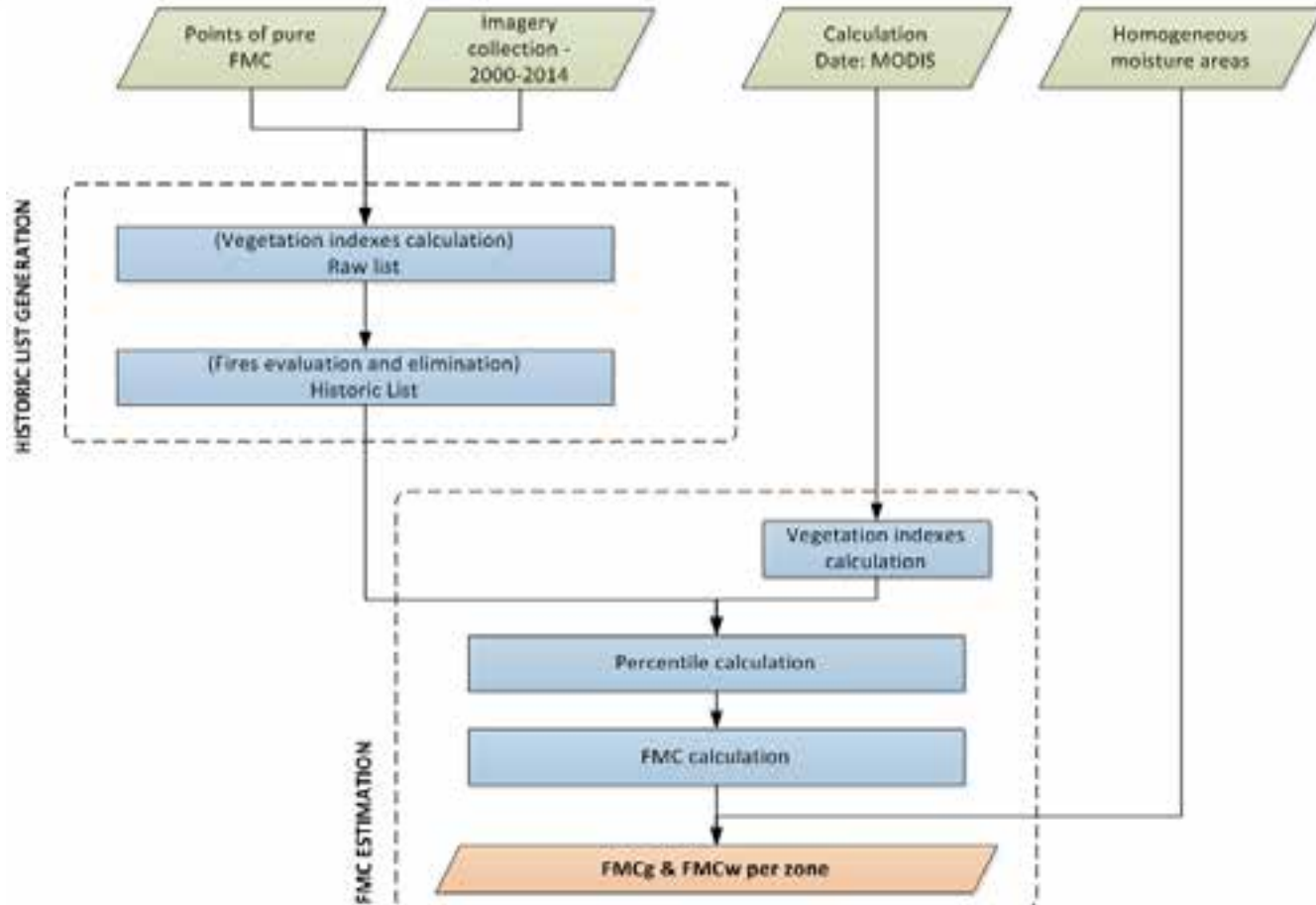
Fuels Mapping Outputs





Fuels Phenology Modeling

Dynamic/Phenologic analysis: FMC based on relative values (percentiles)





Task 2: Risk Assessment

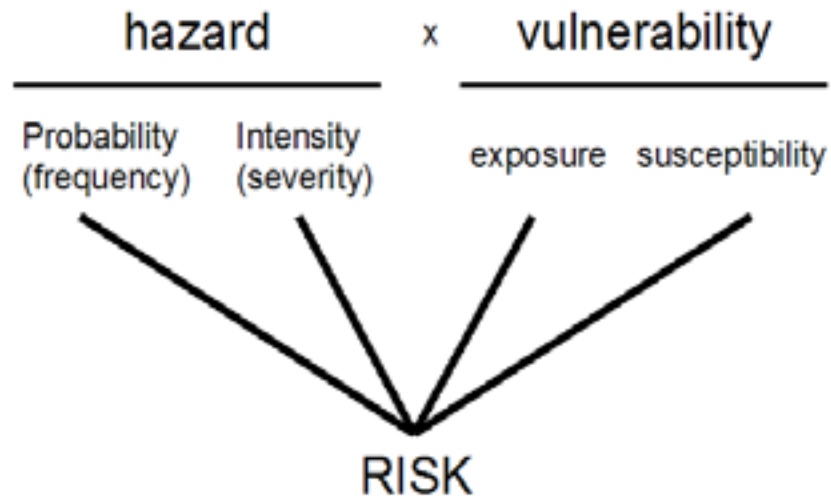


Figure provided by Joe Scott, Pyrologix



Risk Assessment Components

- ✧ Fire Behavior Analysis
- ✧ Primary Risk Metrics
- ✧ HVRA - Values-at-Risk Analysis
- ✧ Utility Wildfire Containment Conflict Model
- ✧ Infrastructure Threat Model
- ✧ Fire Risk Management Analysis Model



Next Steps

- ✧ Risk assessment model design
- ✧ Risk assessment model development
- ✧ Risk assessment implementation
- ✧ Fire Danger Rating software module
- ✧ Final methods report
- ✧ Final presentations



More Information

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