

SUSITNA-WATANA HYDROELECTRIC PROJECT

Formal ILP Proposed Study Plan Review

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Prepared by Alaska Energy Authority



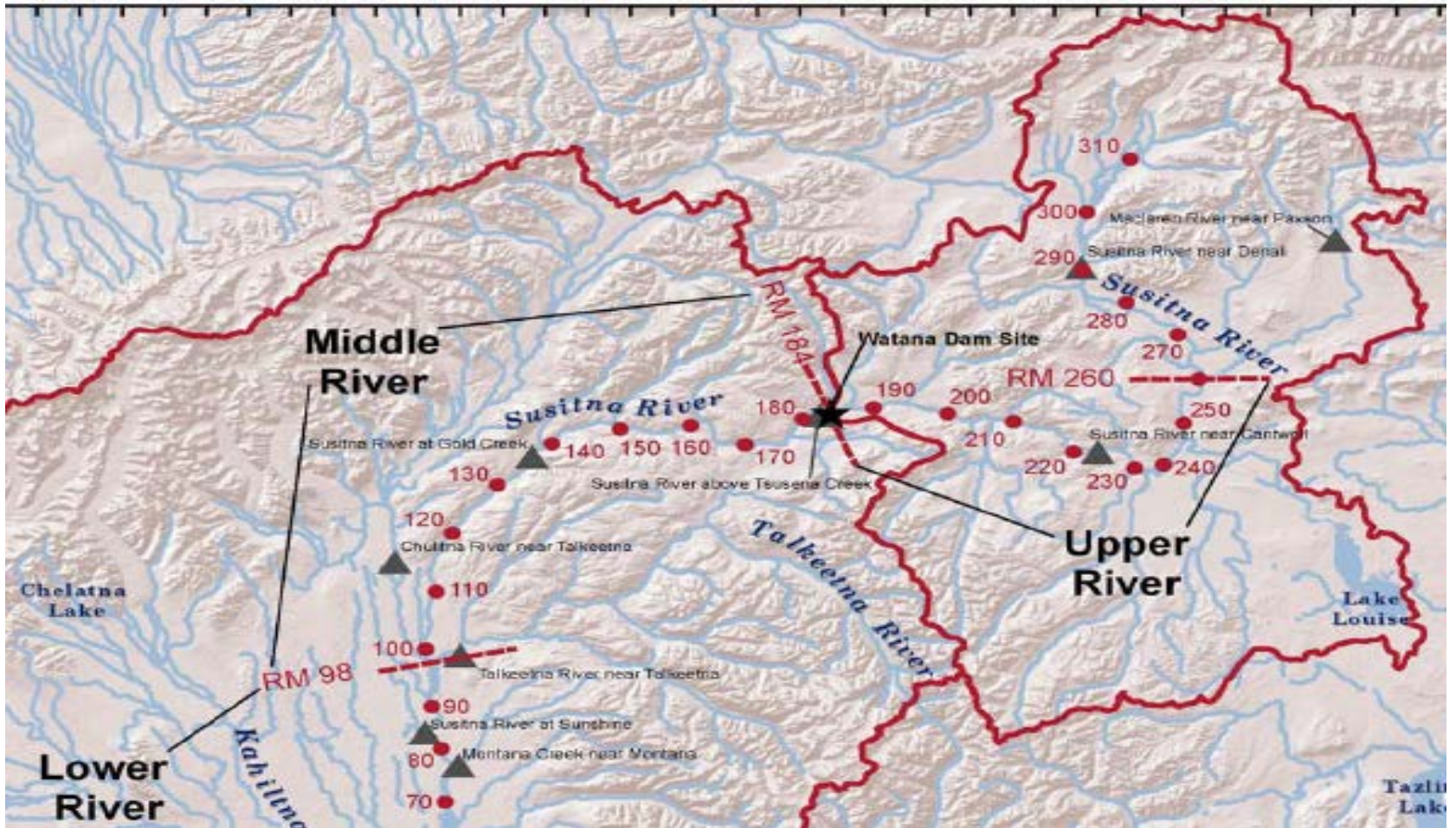
Proposed Studies

- Probable Maximum Flood
- Site specific Seismic Hazards Evaluation

Probable Maximum Flood Goals and Objectives

- Develop site-specific Probable Maximum Precipitation (PMP)
- Model runoff to produce Probable Maximum Flood (PMF)
- Route PMF through Watana Reservoir to determine proper spillway sizing, maximum water levels, and peak reservoir outflow.
- Use Board of Consultants for review

Probable Maximum Flood Study Area



Probable Maximum Flood Methods

- PMF methods follow FERC Engineering Guidelines
- Development of Site-Specific Probable Maximum Precipitation
- Met data acquisition
- Historical Data Analysis
- Flood Hydrology Model selection
- Flood hydrology model calibration and verification
- Reporting



Probable Maximum Flood Summary of 2012 Activities

- Review of existing information
- Meteorologist site visit
- Development of Probable Maximum Precipitation (PMP)

Site Specific Seismic Hazards Evaluation Goals and Objectives

- Identify seismic sources including the potential for reservoir-triggered seismicity
- Assemble historical and instrument data for region
- Estimate the earthquake ground motions at the site
- Propose seismic design criteria
- Prepare supporting design report
- Use BOC for independent technical review



Site Specific Seismic Hazard Evaluation Methods

- Update geologic and seismic-tectonic setting for site area
- Identify & characterize the seismic source
- Perform deterministic and probabilistic seismic hazard assessment to define ground motions
- Evaluate the potential for Reservoir Triggered Seismicity
- Assess risks to project structures
- Select appropriate seismic design criteria



Site Specific Seismic Hazard Evaluation Summary of 2012 Activities

- Review of historical information
- Installation of microseismic stations to record small earth movements

