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Salton Sea Air Quality Mitigation Program

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Salton Sea Air Quality Mitigation Program

Comprehensive, science-based, adaptive program

- Proactively identify and provide options for mitigating dust emissions from the playa

Components

- 1) Annual emissions monitoring and prioritization
- 2) Dust control strategy, planning, and design
- 3) Dust control implementation & monitoring





01 – Annual Emissions Estimates

Objectives:

- Where and when emissions occur?
- How much dust (PM₁₀) is emitted?

Components:

- Map Playa Exposure
- Characterize Playa Surfaces
- Model Wind Conditions
- Estimate Emissions





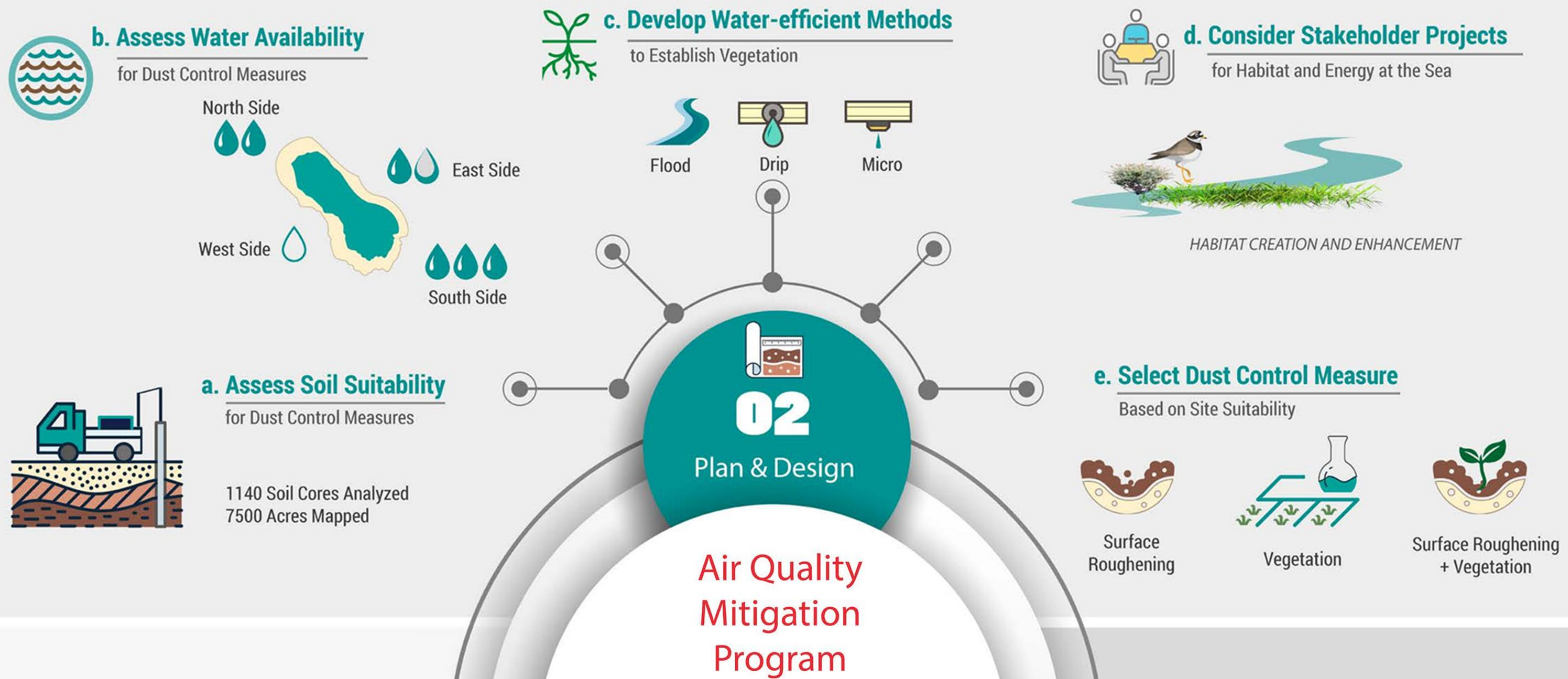
01 – Annual Emissions Estimates

Proactive Dust Control

- Project prioritization
- 80% of the emissions originate from 20% of the playa acreage



02 - Proactive Dust Control Planning

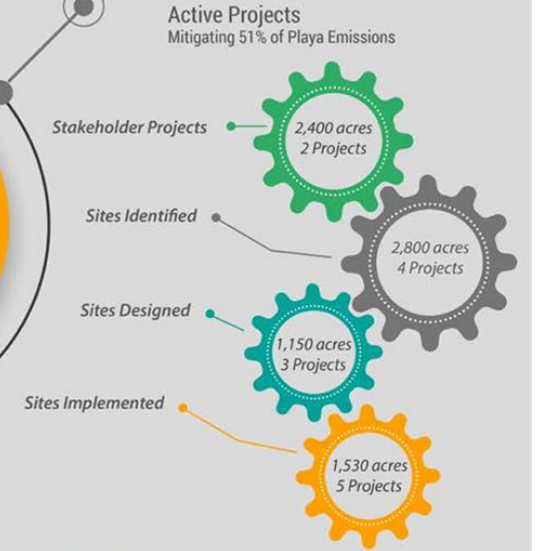


Air Quality Mitigation Program

Salton Sea

03
Implement & Monitor

a. Proactive Mitigation



b. Performance Monitoring



AQMP Implementation Map



This map shows the locations of existing and recommended field study areas. Implementation of the field studies is subject to funding authorized by the Quantification Settlement Agreement Joint Powers Authority.



Implementation Progress To-Date



Seeding an Irrigated Furrow

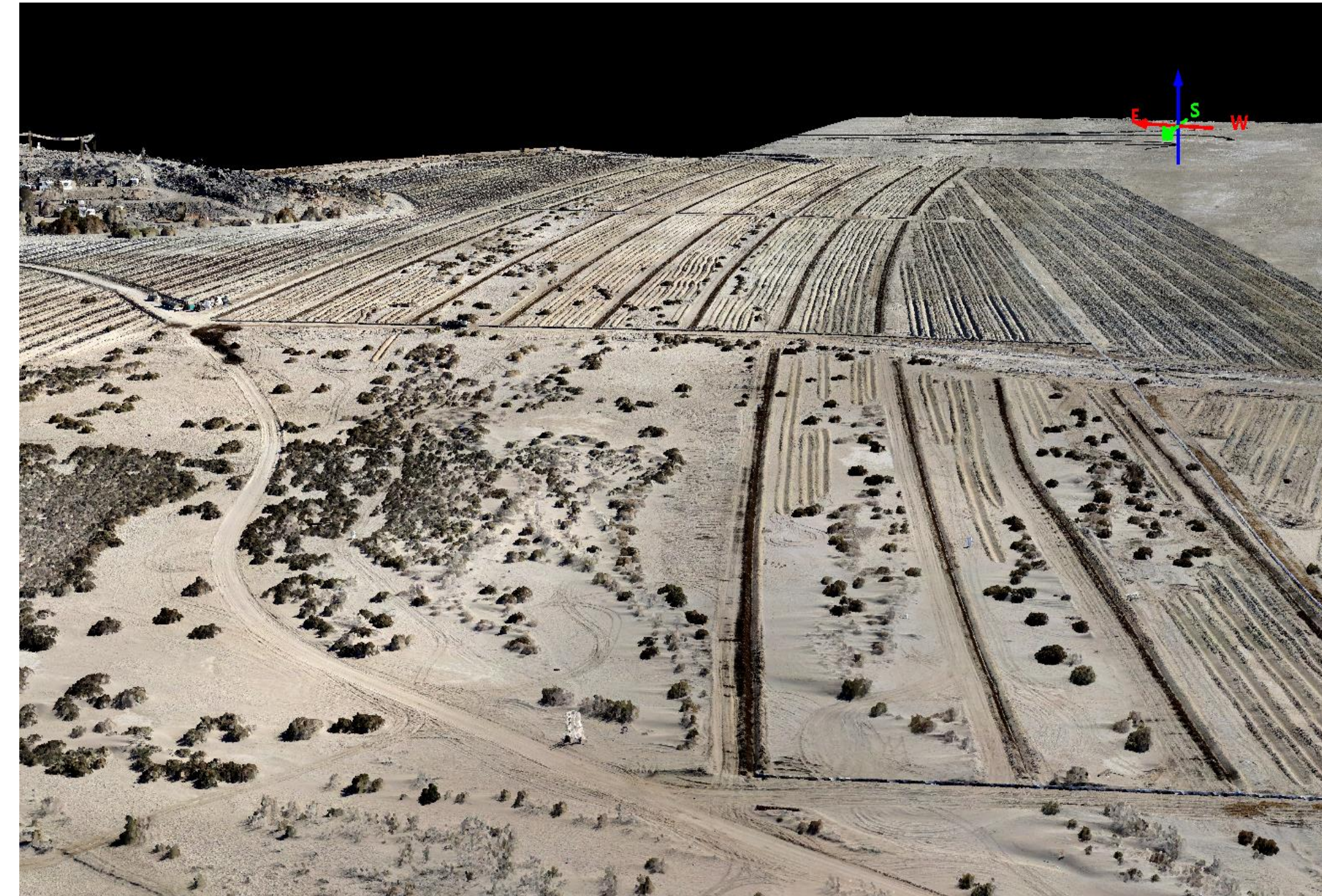
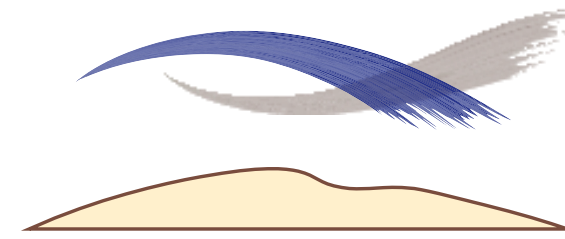
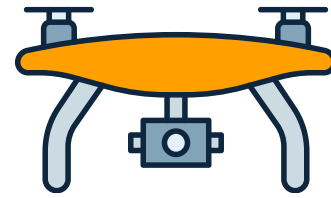
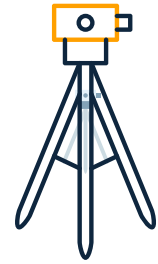


Vegetation Established in Furrows





Dust Control Performance Monitoring



- Ground Based Sensor Network
- Roundshot Camera Network
- LiDAR Roughness Monitoring
- Sand Flux Modeling
- PM10 and Sand Flux Monitoring



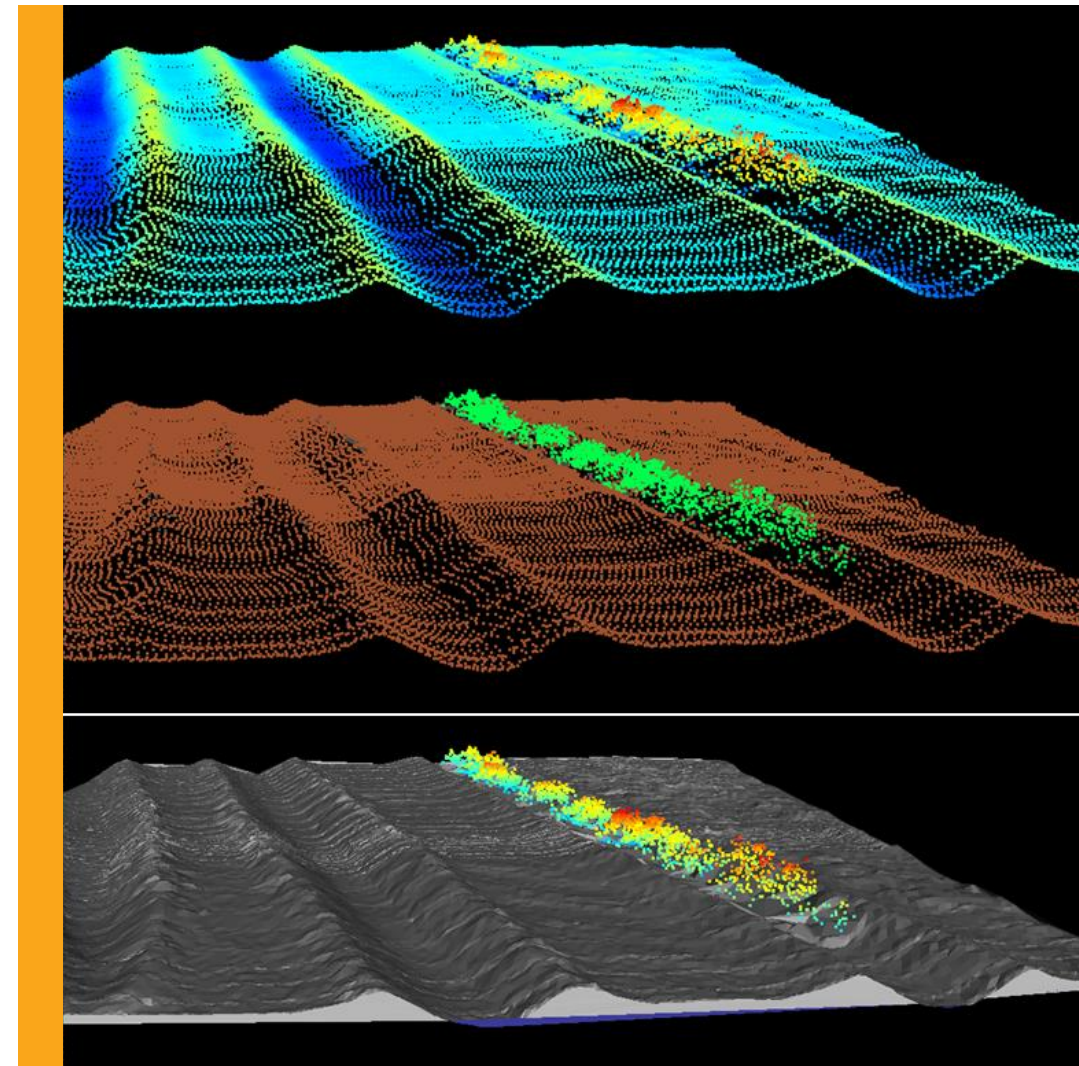
360 Degree Video Monitoring – High Wind Events



Irrigation and Veg Establishment



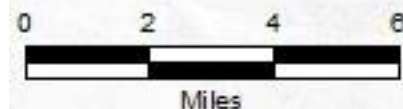
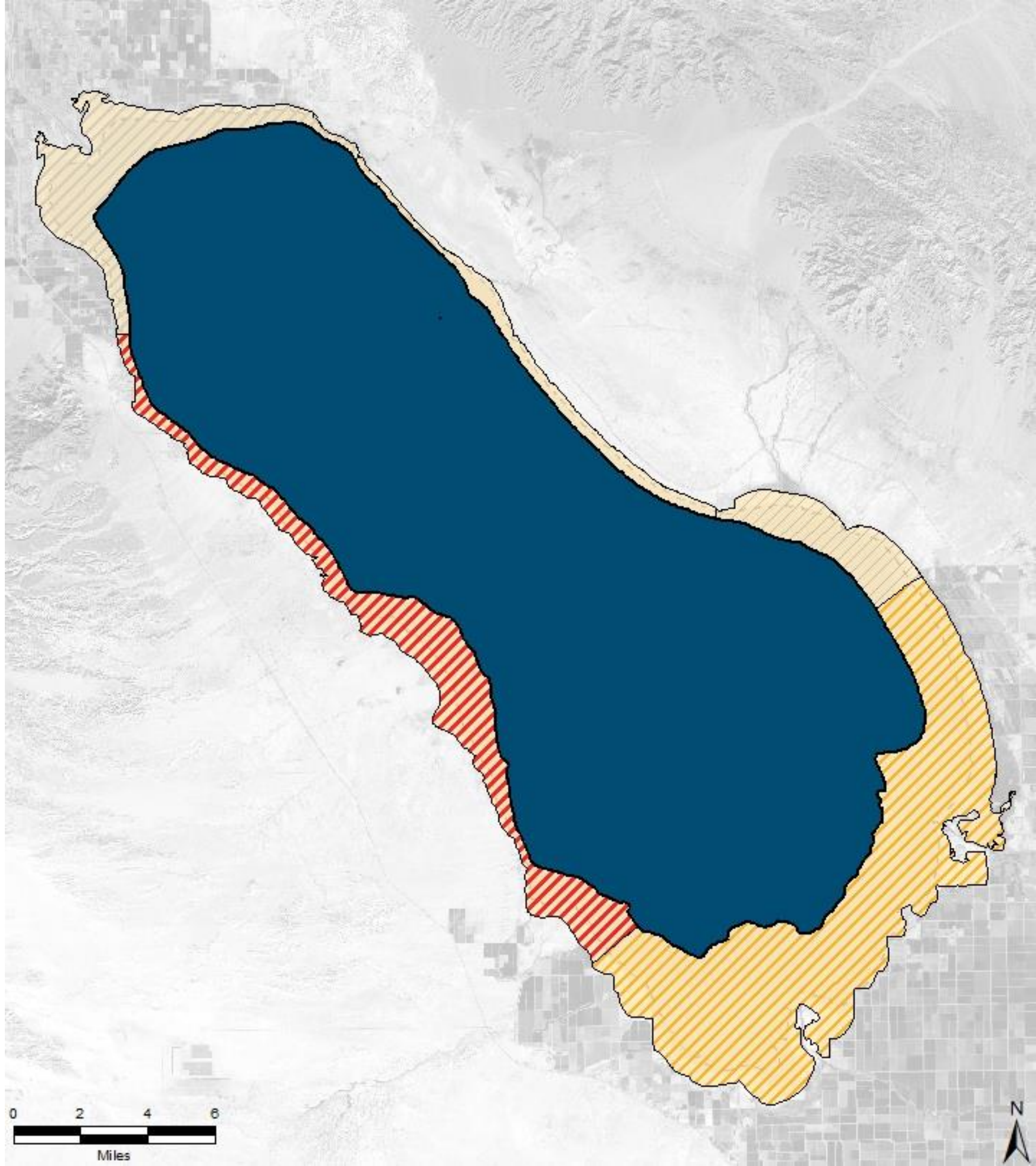
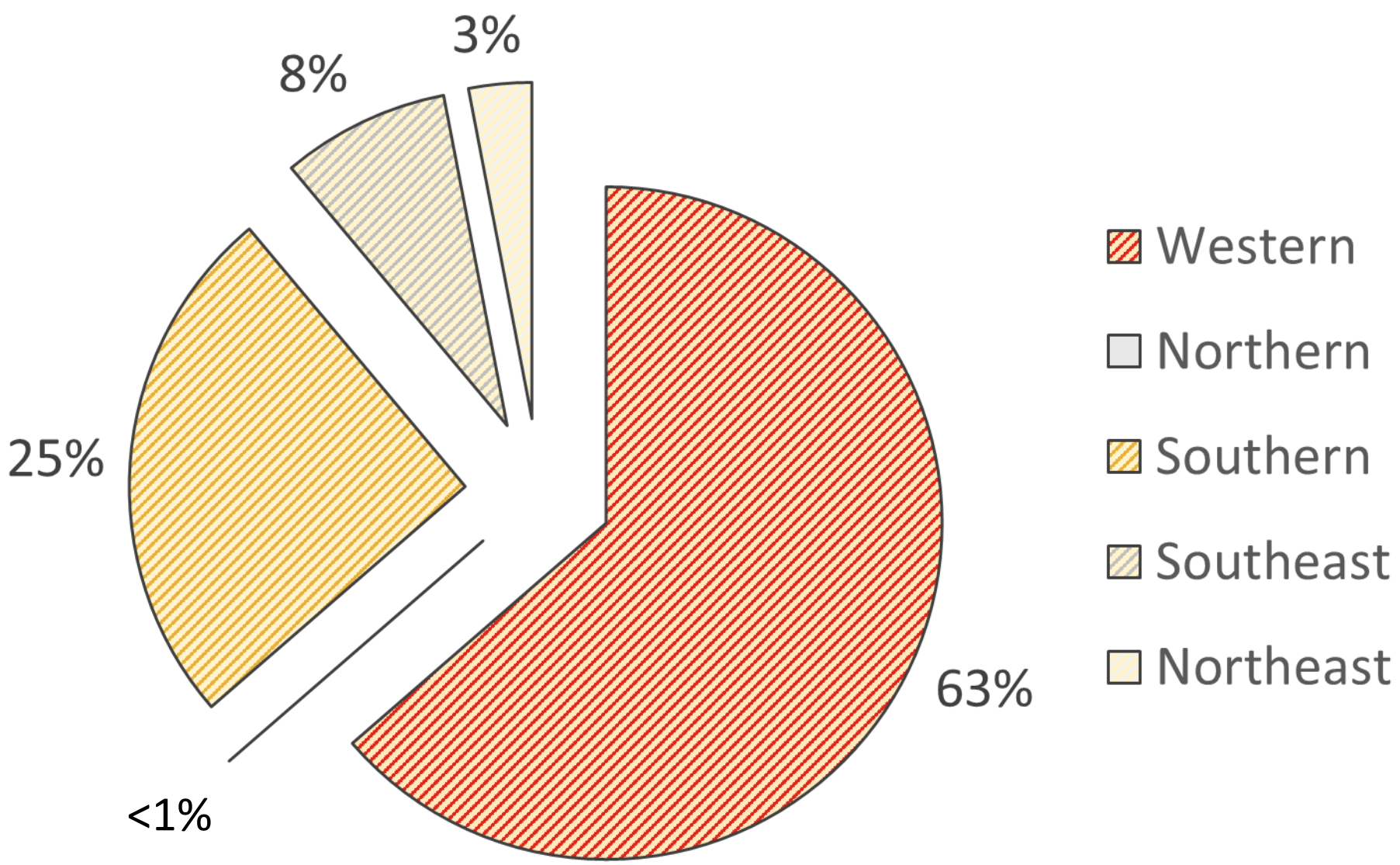
Roughness Monitoring (Veg and Soil)



Sand Flux Monitoring

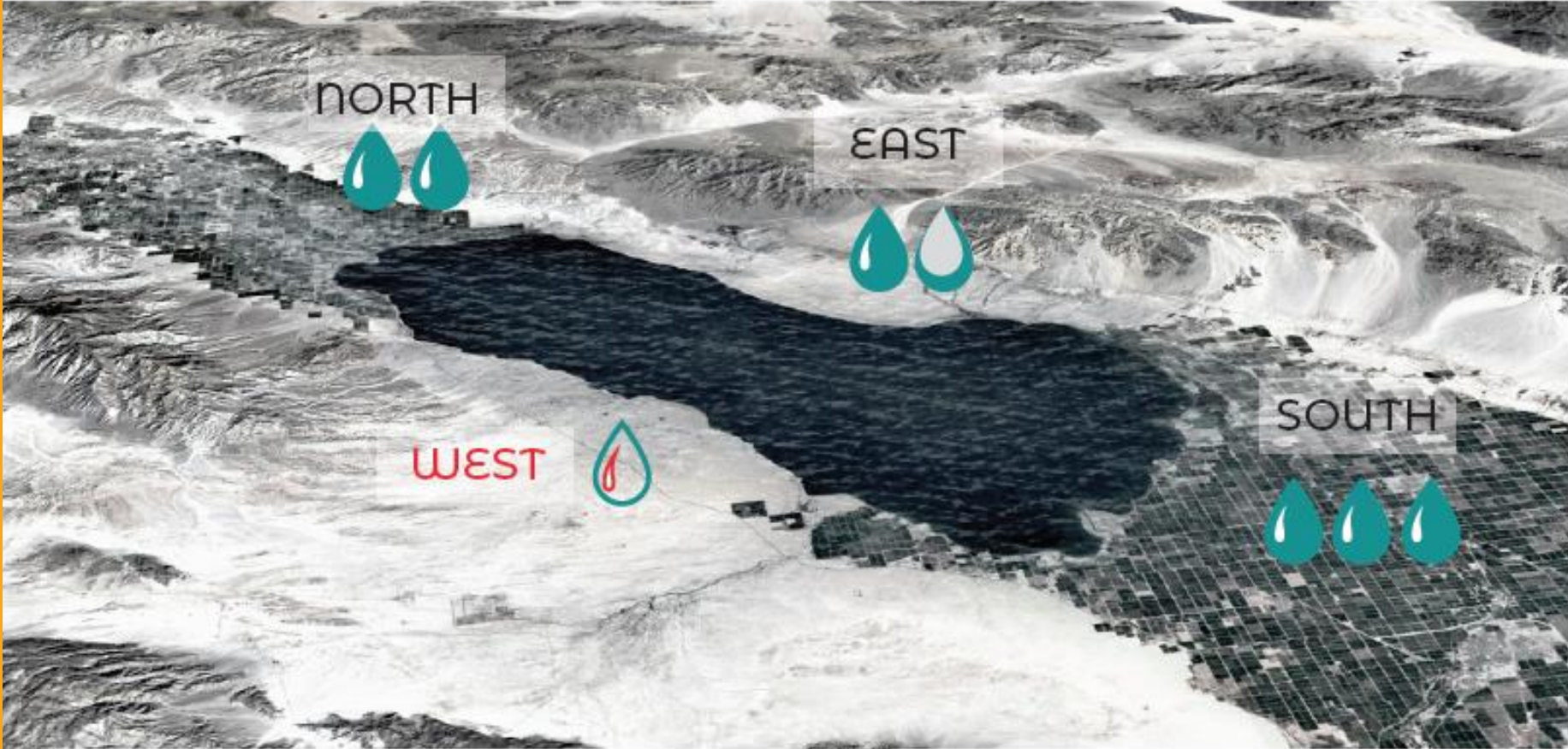


Future Challenges



Future Challenges

Limited Water For Vegetation Based Dust Control



Ephemeral washes are not a reliable water source



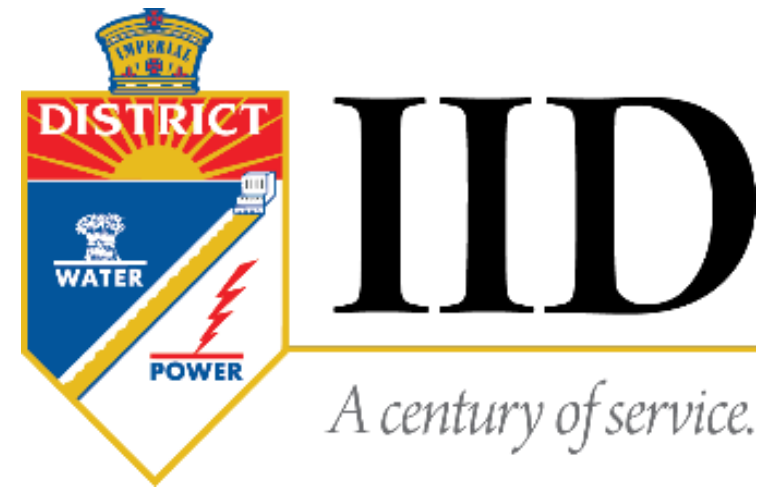
Agricultural drains and rivers provide water source

Upwind Desert Emissions



Upwind Sand Encroachment Onto The Playa





Thank You
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