



NMDOT

ENVIRONMENTAL
BUREAU



U.S. Department of Transportation
**Federal Highway
Administration**

Dust Storm Mitigation Update

Trent Botkin & Bill Hutchinson

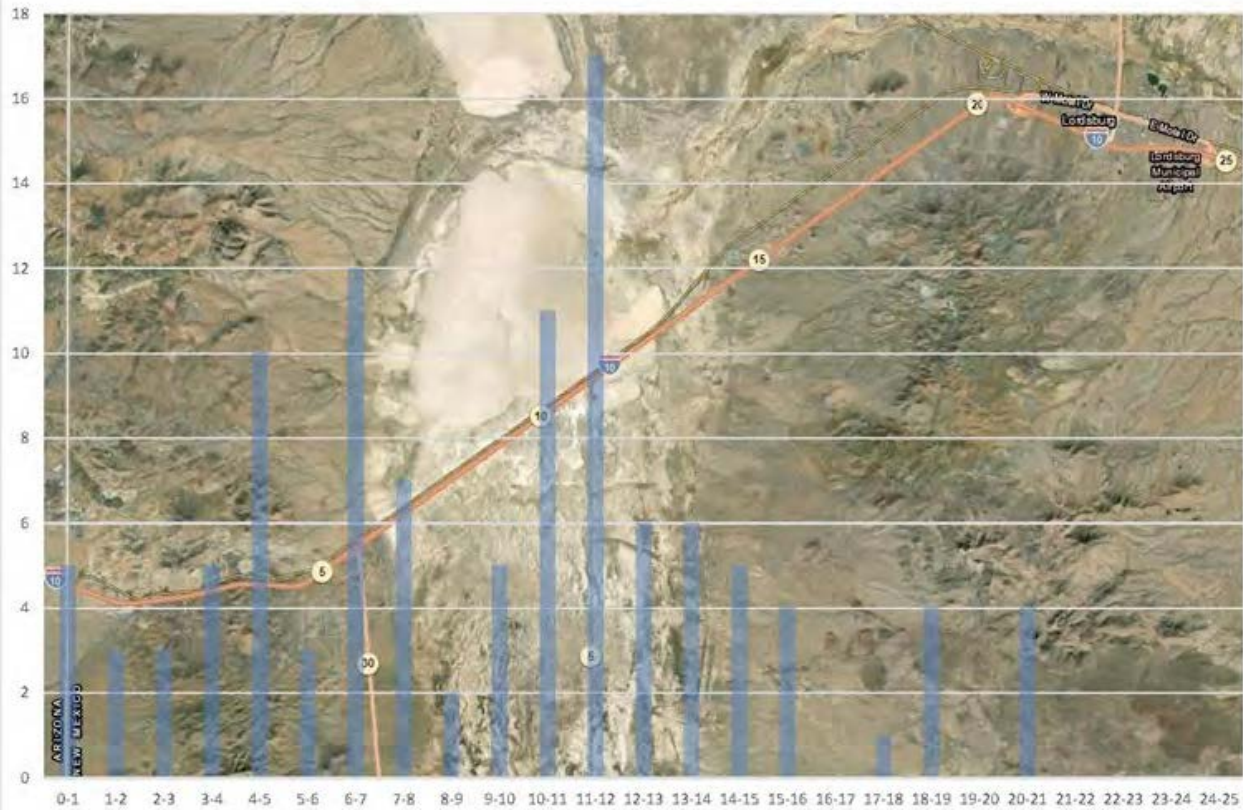
Lordsburg Playa Dust Storms

1965–Present: Over 40 Dust -related Highway Deaths

2012– Present: 13 Deaths
39 Closures of I-10
120 Dust Events



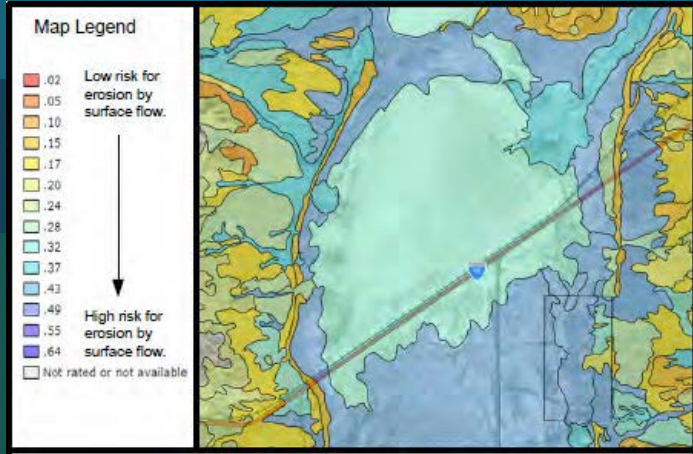
Number of Accidents related to Dusk or Wind, at or near Mile Marker 0-25, from 1980-2016



I-10 MP 6– Road Forks Playa

- Site of Multiple Crash Fatalities
- Sediment Accumulation Caused by I-10 “damming” a drainage swale
- Managed by BLM
- Already monitored by NMSU climatologist for dust activity
- Opportunity to reduce the amount of available dust near the roadway





Research & Design



NEPA Coordination with the BLM & FHWA

- Assessment of current BLM land management plans
- Interagency meetings
- Public Meetings
- BLM Plan of Development
- Environmental Assessment
- Categorical Exclusion

Final Design



- | | | | |
|----------------|--------------------|---|-------------------------|
| Access Road | Trash Removal Area | Rock Staging Area | Microborm Concentration |
| Existing Fence | Historical Channel | Media Luna Impact Area | Imprinting and Seeding |
| Access Gate | Headcutting Arroyo | Imprinting, Seeding, and Tackifier Application Area | |
| Proposed Fence | Channel Work | | |



1:6,000



Road Forks/Lordsburg Playa Dust Mitigation Project

Hidalgo County, New Mexico

Sections 6 & 7, Township 24S, Range 20W
Sections 1 & 12, Township 24S, Range 21 W
N.M.P.M.

Coordinate System: NAD 1983 UTM Zone 13N

Sept. 2018: Keylining , Imprinting, Tackifier , Fence



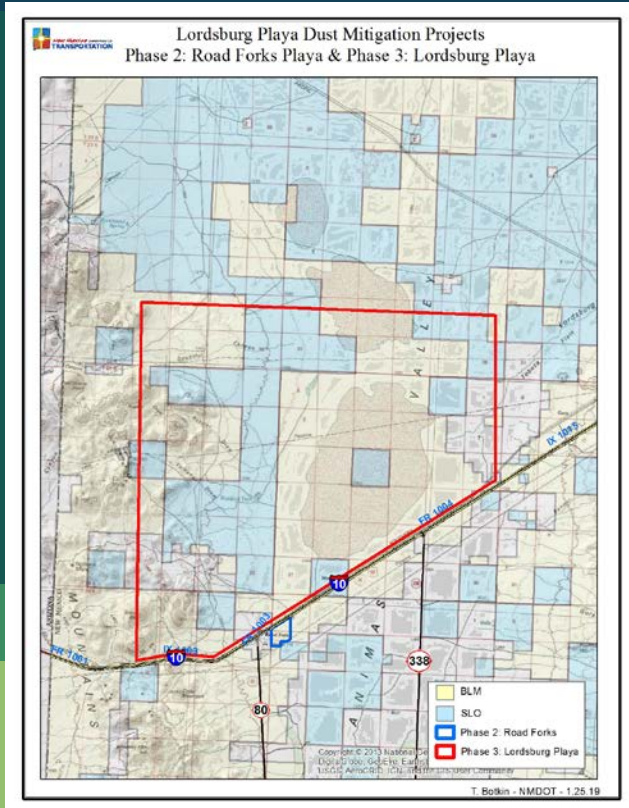
Native and Non -native Growth within Imprinting Area



Road Forks Playa Management Plan

- NMSU Climatologist monitoring air quality with multiple methods
- Restoration contractor & BLM Botanists monitoring revegetation
- Under FHWA/NMDOT management, the area will remain ungrazed to preserve the soil crust (~200 acres)

Phase 3: Lordsburg Playa



- Over 16 Square Miles of Playa Floor
- Eroding playa surface & watershed from modern and historic ranching and mining
- Surface disturbance analysis (NMDOT) & corroborating NRCS soil data
- Land managed by BLM & SLO

Watershed Land Use -Related Erosion



Grazing Disturbance



Corral in center of playa

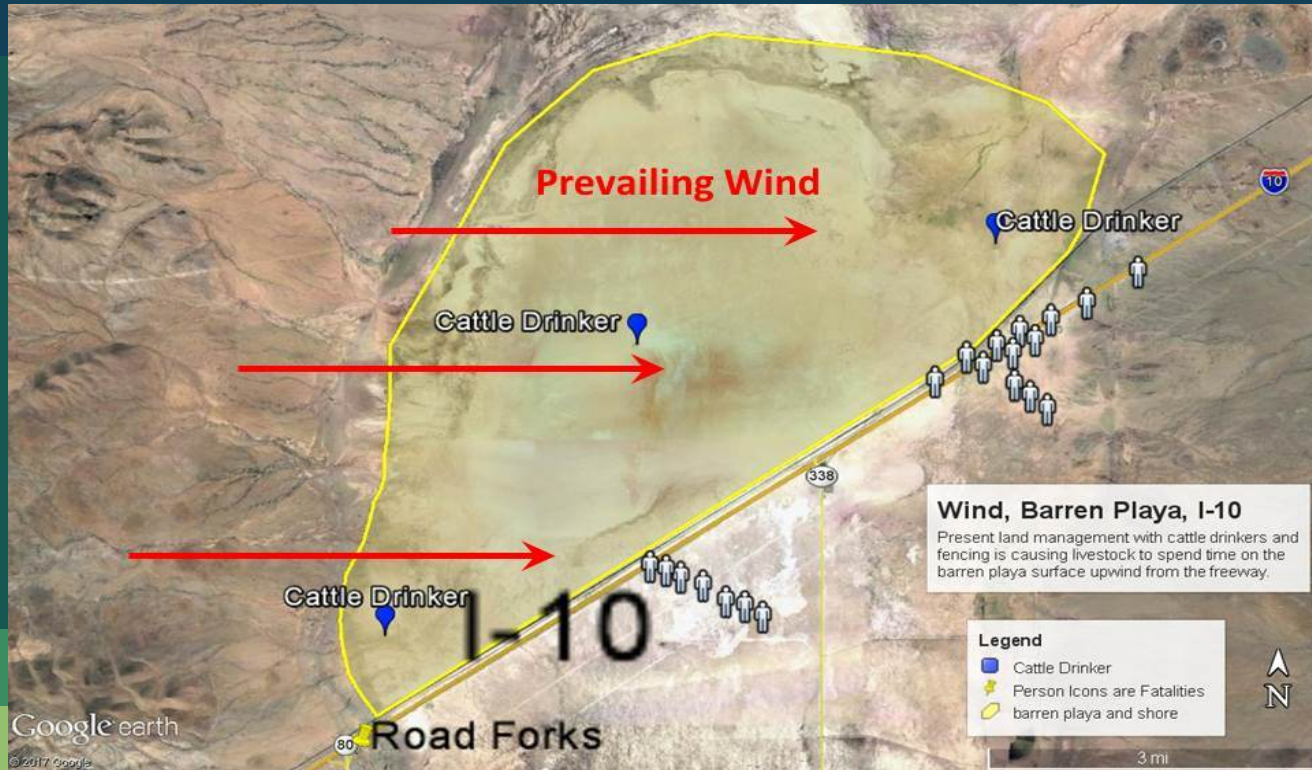


Highly erodible playa surface (cattle footprints)

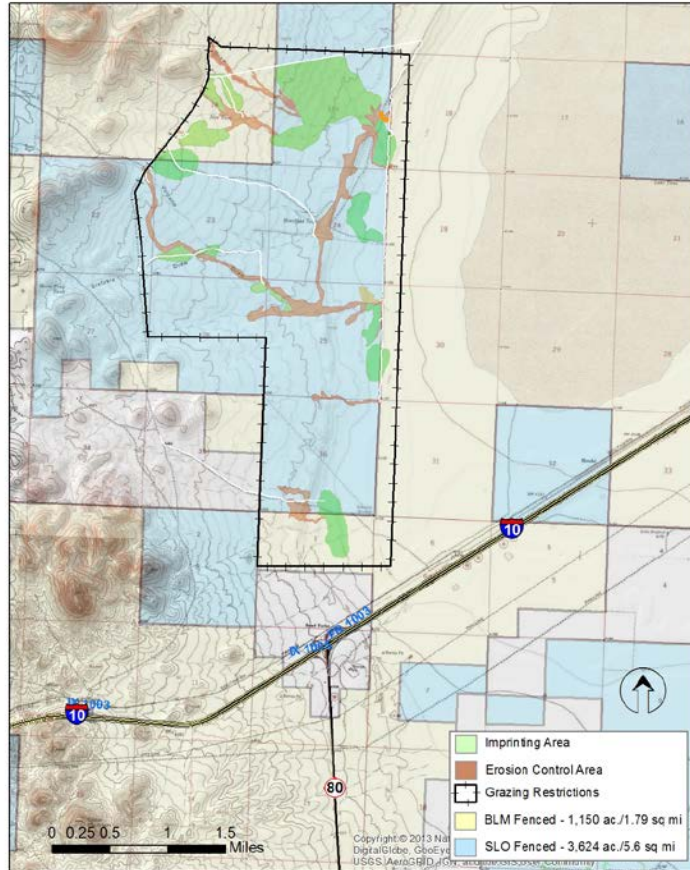


Cattle trail through playa steppe

Disturbance Impact in Relation to Dust -Caused Fatalities



Phase 3 Proposed Dust Mitigation Actions



Grazing Restrictions

- Highly controversial for BLM
- Primarily affecting two grazing lessees
- Recommendation for long - term restrictions



Project Collaborators

NRCS: Completing intensive soil mapping project 2019

NMSU: State Climatologist Dr. Dubois conducting intensive dust storm analysis using NMDOT Research Bureau funding

USDA-Jornada Experimental Range: Establishing a research station on the playa as part of the National Wind Erosion Research Network

BLM: Stakeholder and contributor in completing Environmental Assessments

NM DPS: Provide first -hand experience and crash data

Landowners/Lessees: Provide long - term knowledge of range conditions

Consultants: Stream Dynamics, Site Southwest, Ecosphere

NMDOT: District 1 (Deming), Research Bureau, and Management Support

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