NMDOT
ENVIRONMENTAL
BUREAU

U.S. Department of Transportation
Federal Highway Administration

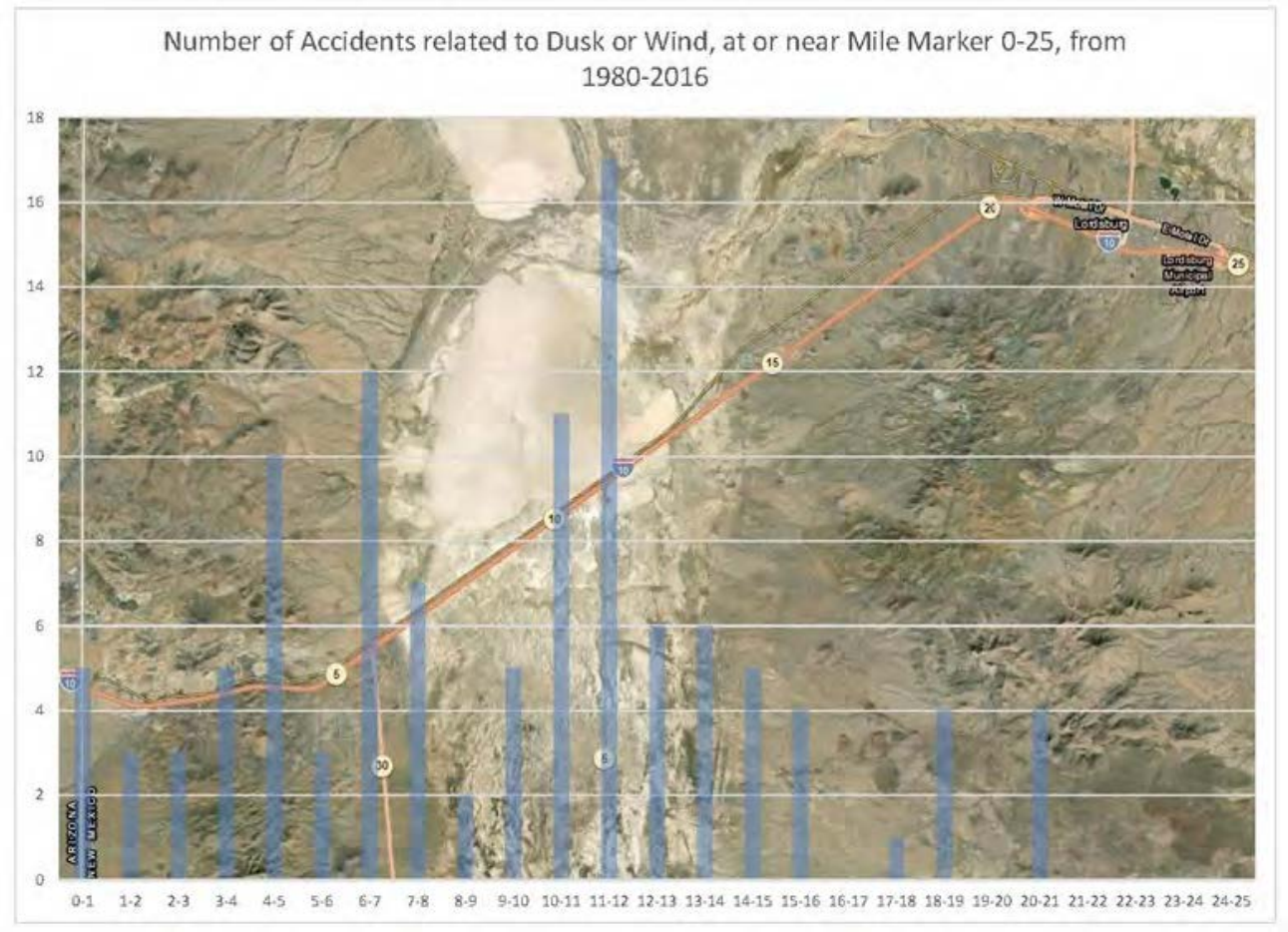
Dust Storm Mitigation Update

Trent Botkin & Bill Hutchinson

Lordsburg Playa Dust Storms

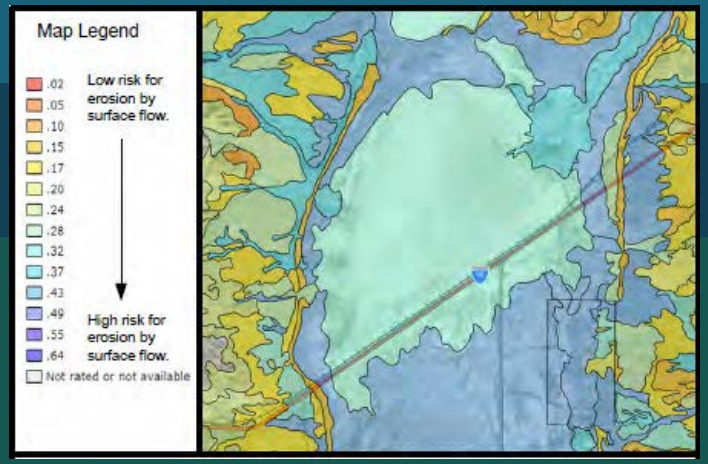
1965–Present: Over 40 Dust -related Highway Deaths

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
18
16
14
12
10
8
6
4
2
0
0-1
1-2
2-3
3-4
4-5
5-6
6-7
7-8
8-9
9-10
10-11
11-12
12-13
13-14
14-15
15-16
16-17
17-18
18-19
19-20
20-21
21-22
22-23
23-24
24-25
ARIZONA
NEW MEXICO
Lordsburg
Lordsburg Municipal Airport

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

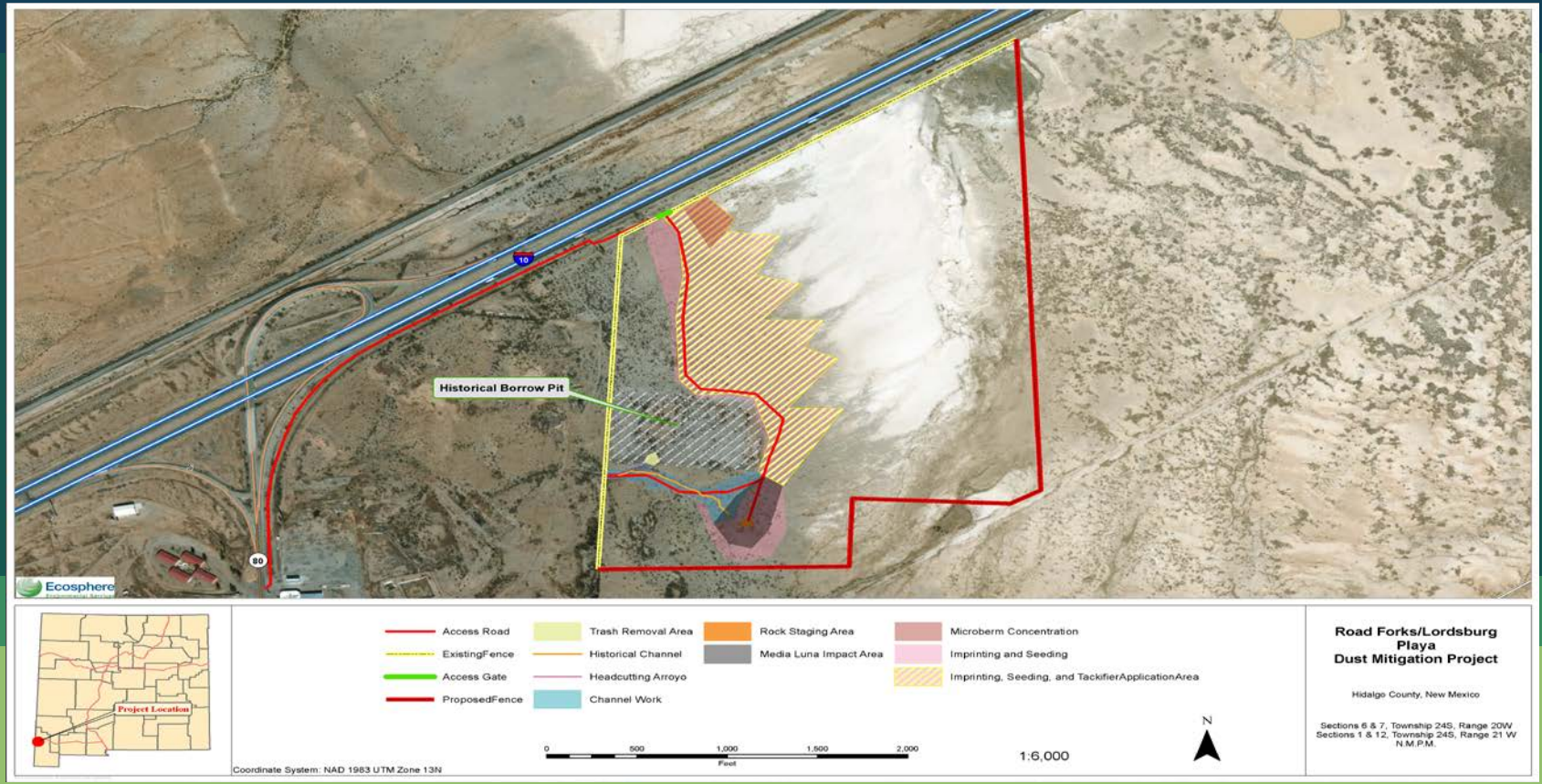
Stream Dynamics

Ecosphere Environmental Services

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



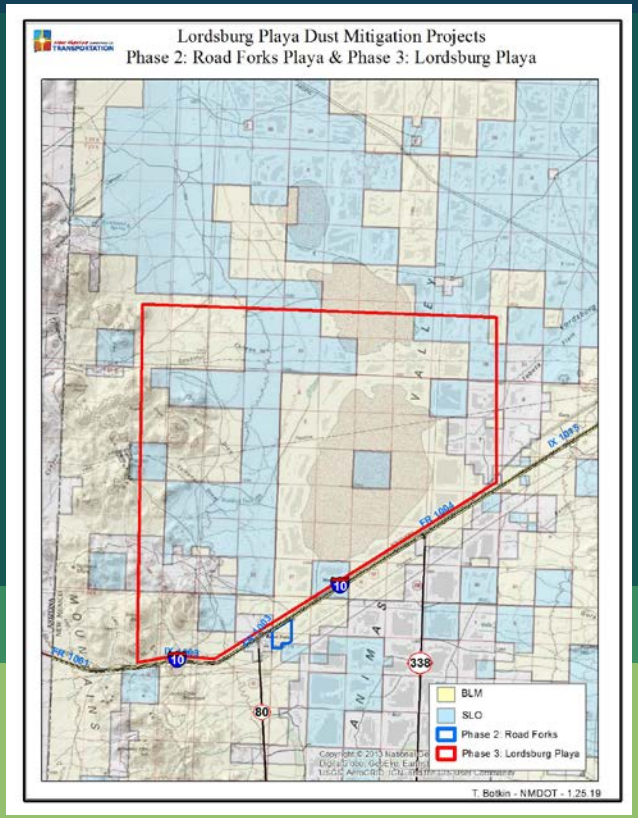
Sept. 2018:Keylining , Imprinting, Tackifier , Fence

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

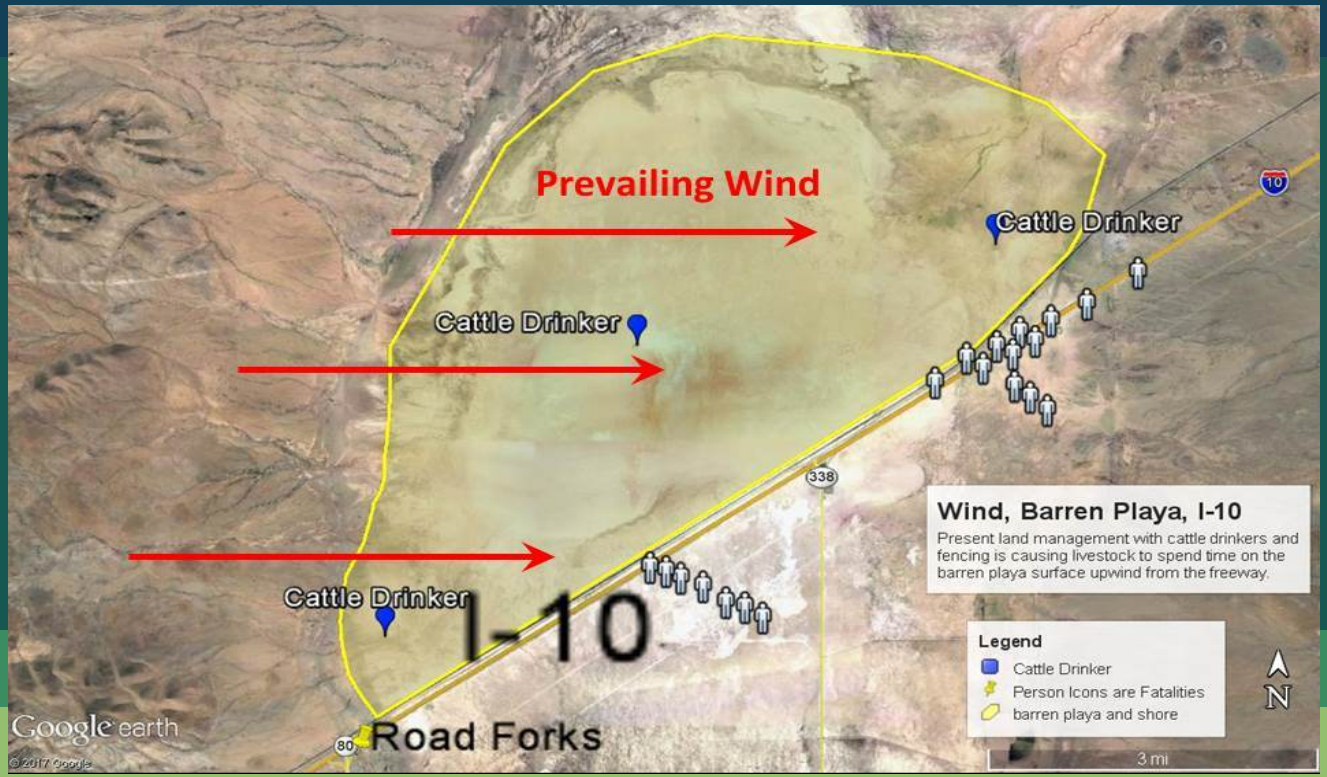
Grazing Disturbance

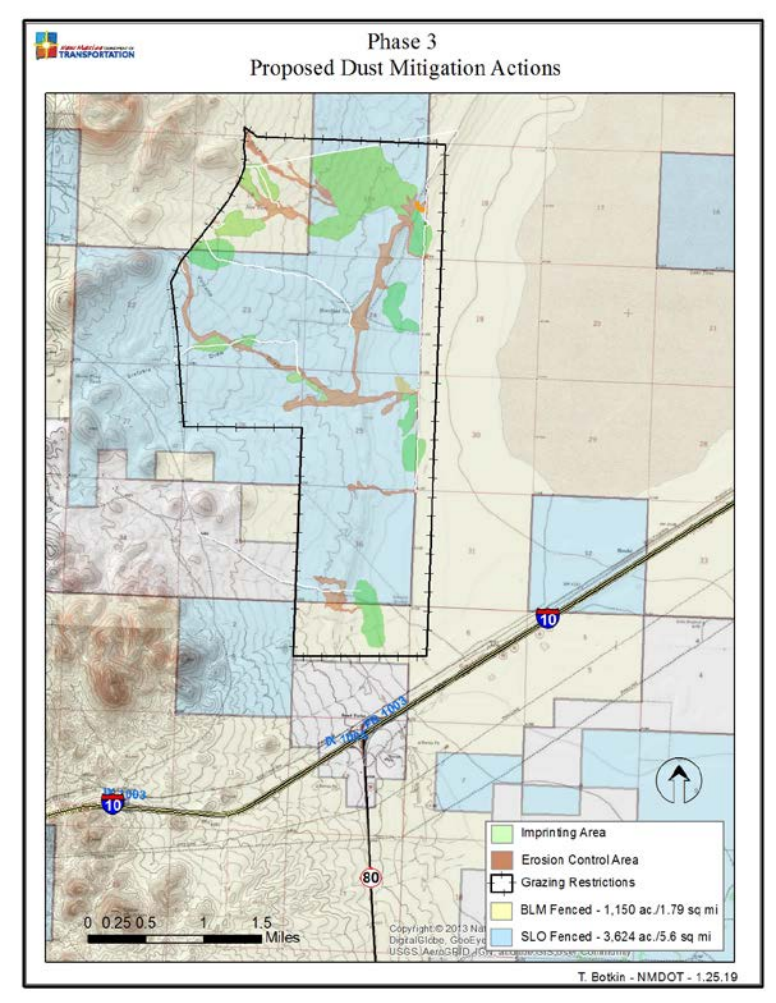
Corral in center of playa

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
10
80
Imprinting Area
Erosion Control Area
Grazing Restrictions
BLM Fenced - 1,150 ac./1.79 sq mi
SLO Fenced - 3,624 ac./5.6 sq mi
0 0.25 0.5 1 1.5
Miles
T. Botkin - NMDOT - 1.25.19

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

NMDOT ENVIRONMENTAL BUREAU

Trent Botkin 505-469-015
Trent.Botkin@state.nm.us

Bill Hutchinson 505-795-1275
William.Hutchinson@state.nm.us