

NDOT STORMWATER PROGRAM UPDATE

*Transportation Board
June 11, 2018*



David Gaskin, P.E. Deputy Director

“Promote stormwater stewardship as an essential element of all NDOT operations.”

Environmental Protection Agency

- **NDOT Quarterly Report**
 - ✓ April 26, 2018
- **FINAL - EPA Compliance Meeting**
 - ✓ Las Vegas - May 16, 2018

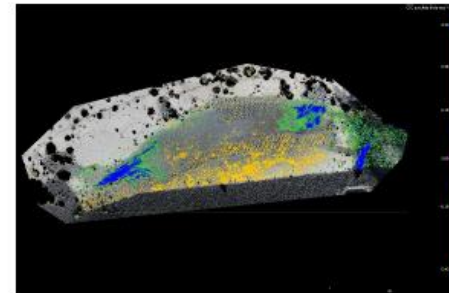


Consent Decree

- June 1, 2018
 - ✓ UAV Monitoring Sites
 - ✓ SEP (Continuous Real-time Monitoring)
- Termination Request - June 2018



Consent Decree Completion Report
UAV Stormwater Basin Inspections

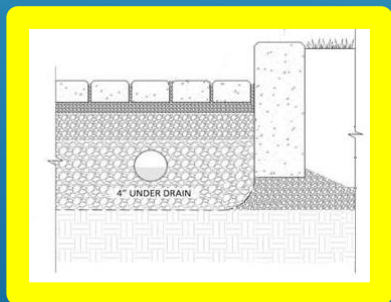




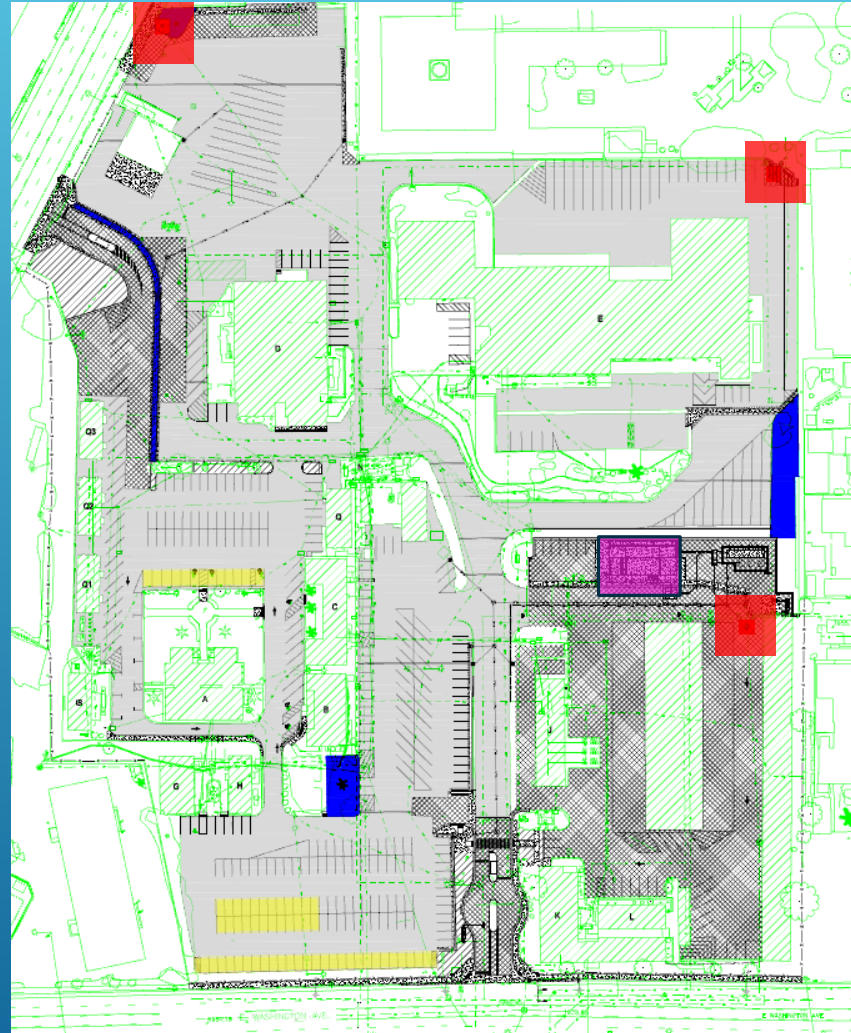
North Las Vegas Maintenance Yard



Vehicle Wash Station



Pervious Pavers

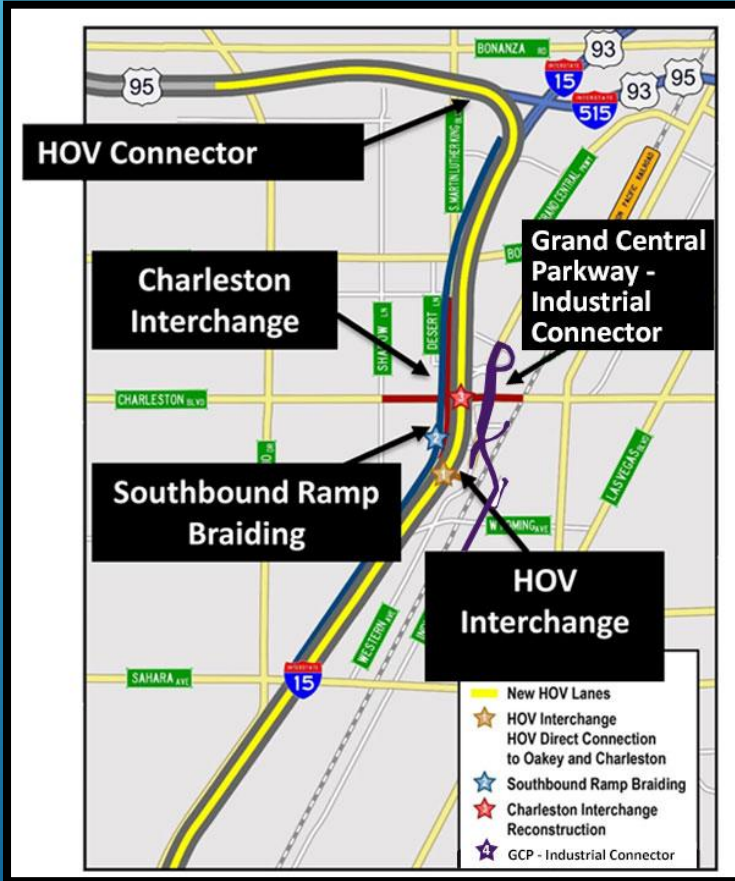


Treatment Vault



Low Impact Development

Project NEON

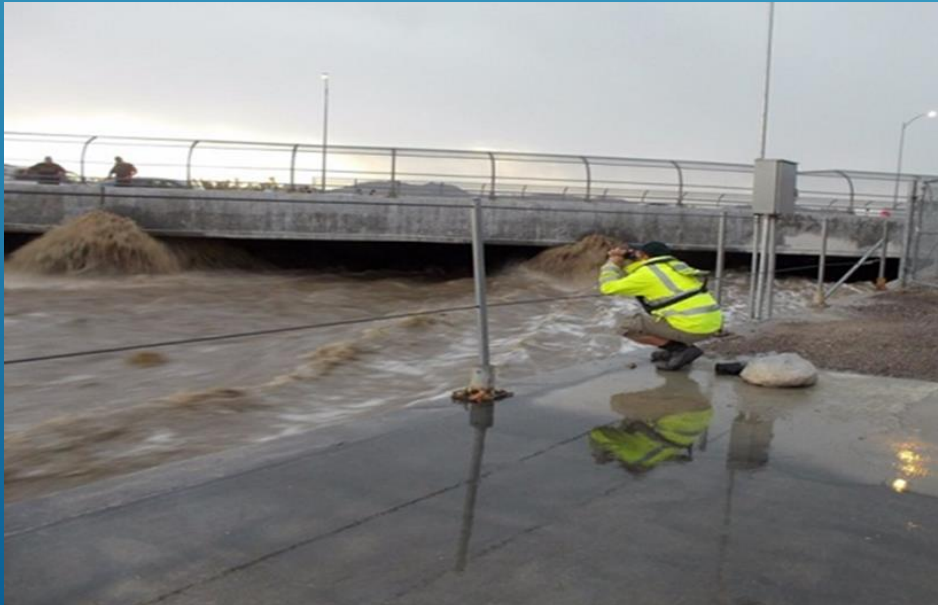


Homeless

NDOT is not alone in addressing these concerns.

➤ Stormwater Impact / Damage

- Reduce capacity
- Tunneling beneath structures
- Improvised shelters, bio-hazards, Trash



Continuous Real Time Monitoring

Benefits

- Data collected 24/7/365
- Remote Access
- Notification Alerts
- Partnerships

Challenges

- Vandalism
- Mother Nature



Connected Information

Regional Flood Control District
Clark County, NV

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FloodThreat Recognition System | Rain Gauges | (quick lookup)

Rainfall Summary By Year

Rain Gauge System Overview

The District, in cooperation with the U.S. Geological Survey (USGS) and the National Weather Service (NWS), began implementing a Flood Threat Recognition System (FTRS) throughout the Clark County area in 1987. The system includes a network of strategically located field stations which automatically report data from nearly 350 meteorologic sensors in real-time to computerized base stations operated by each of the cooperating agencies. While more than 75 percent of the FTRS field stations are located in the Las Vegas Valley, other gauges installed in the Laughlin, Searchlight, Jean, Goodsprings, Mesquite, Bunkerville, Moapa Valley and Indian Springs areas allow emergency responders to monitor weather conditions in those areas as well.

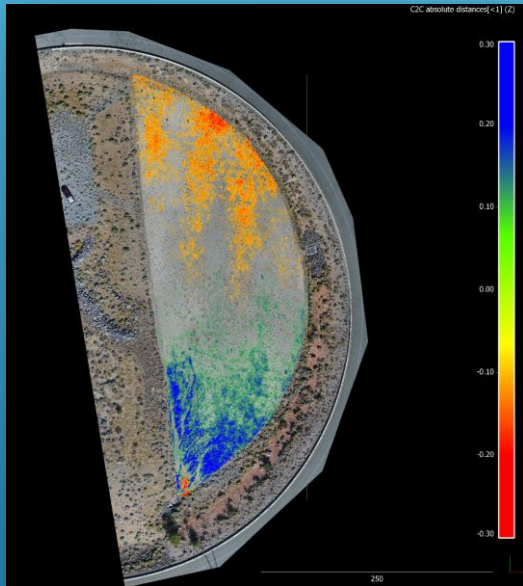
The FTRS provides valuable information on water levels, rainfall, and other meteorologic parameters. Information on wind speed and direction helps the NWS track severe storms in the Clark County area and issue more timely and site-specific weather statements than were previously possible. The District's fully automated base station notifies staff, both in and out of the District's offices, of potentially dangerous situations. Using computer linkups to the base station, staff can assess the potential for flooding and alert public works and other emergency response personnel.

The information provided by this system helps emergency response agencies to more effectively direct their limited resources. The District maintains three modems and a FTP site to provide local governments, the news media, and staff access to the FTRS. The District also provides access to the Flood Threat Recognition System data to the world via the world wide web (www.regionalflood.org). Both historic and current rain and weather data collected from any of the District's field stations can be accessed on the District's website.

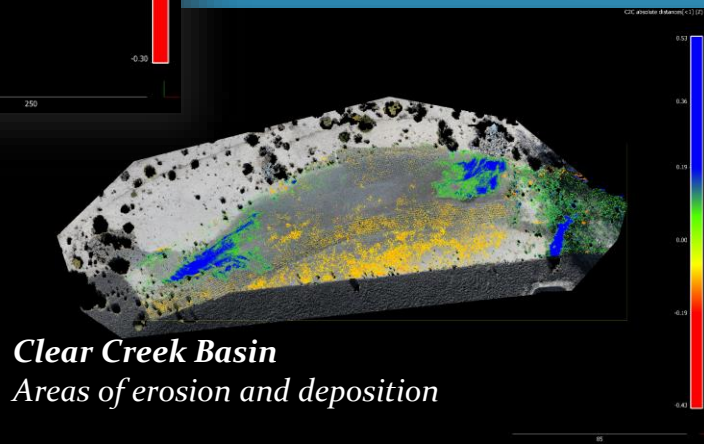
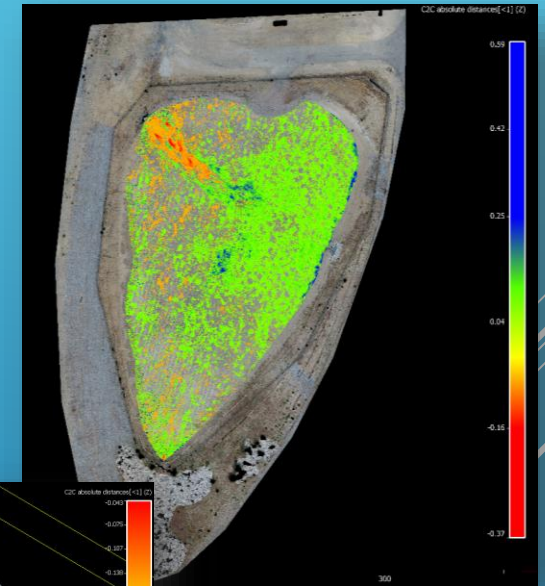


UAV & Stormwater Basins

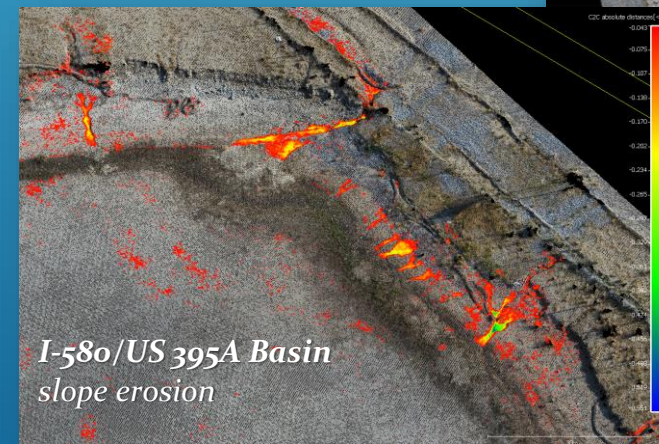
I-580/SR431 Basin
Areas of erosion and deposition



I-580/US 395A Basin
Areas of erosion and deposition

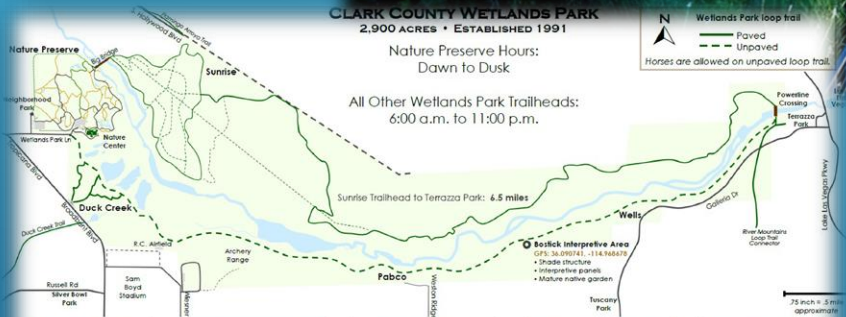


Clear Creek Basin
Areas of erosion and deposition



I-580/US 395A Basin
slope erosion

Clark County Wetlands Park



Nature Preserve
Location:
7050 Wetlands Park Lane,
1.0 mile from the
intersection of Tropicana
Blvd. and Boulder Hwy.
GPS: 36.101163, -115.023068

Features:
• 210 acres of trails
• Nature Center
• Restrooms with plumbing
No dogs or horses, please.

Duck Creek Trailhead
Location:
Broadbent Blvd., 1.25 miles
from the intersection of
Tropicana Blvd. and
Boulder Hwy.
GPS: 36.093482, -115.024098

Features:
• Shaded picnic tables
• Dog waste stations
• Water fountains
• Restrooms with plumbing

Sunrise Trailhead
Location:
Hollywood Blvd., 2.5 miles
from the intersection of
Hollywood Blvd. and
E. Vegas Valley Dr.
GPS: 36.109476, -115.011213

Features:
• Shaded picnic tables
• Waterless restroom
• Equestrian trailer parking
• Equestrian pen (no water)

Pabco Trailhead
Location:
Weston Ridge St., 1.2 miles from
the intersection of Weston
Ridge St. and Galleria Dr.
GPS: 36.086367, -114.984947

Features:
• Shaded picnic tables
• Shaded amphitheater
• Waterless restroom
• Equestrian trailer parking

Wells Trailhead
Location:
Galleria Dr., 1.0 mile from City
of Henderson's Terraza Park
or 6 miles from Henderson's
Tuscany Park.
GPS: 36.09343, -114.955369

Features:
• Shaded picnic tables
• Waterless restroom
• Trail to hilltop view

Wetlands Park loop trail The entire loop is 13 miles, and connects to the Henderson, River Mountains, and Las Vegas bicycle trail systems.

- **North of the Las Vegas Wash:** The north trail is paved from the Big Bridge and Sunrise Trailhead to Powerline Crossing near the City of Henderson's Terraza Park, 2 miles from Lake Las Vegas.
- **South of the Las Vegas Wash:** The south trail is currently unpaved. Due to ongoing weir construction and the Galleria Drive project, sections of the south trail may be impassable.

Clark County Board of Commissioners
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LARRY BROWN III, Vice-Chair
SUSAN BRACER, TOM COLLINS, CHRIS GLINCHWILM,
MARY BETH SCOW, LAWRENCE WEEKLY,
DON BURNETTE, County Manager
JANE FINE, Director of Parks & Recreation
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Nevada Water Innovation Campus Partnering for Impact Forum – April 3, 2018

- Governor Brian Sandoval Selected as the **2018 Public Official Award of the Year** by the Nevada Water Environment Association
 - 1) His role in the establishment of a Stormwater Division in the Nevada Department of Transportation, protecting the water resources of Nevada
 - 2) His leadership role with the Western Governors Association and his exemplary contributions to the water environment in ensuring clean water for Nevada, and the tackling the challenges of prolonged drought until 2017



3) His work beyond US borders led several trade delegations to Poland, Peru, Panama, Chile, Australia, and other countries to collaborate and showcase Nevada's developments in water sector

- **National Award submitted for consideration to the Water Environment Federation**






2018 Nevada Transportation Conference

May 8 & 9, 2018
Texas Station Hotel/Casino
Las Vegas, Nevada



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APWA - SPRING CONFERENCE 2018

 **APRIL 16-19 2018**
AUSTIN, TEXAS

INTERNATIONAL USERS CONFERENCE

DRIVING USER VALUE

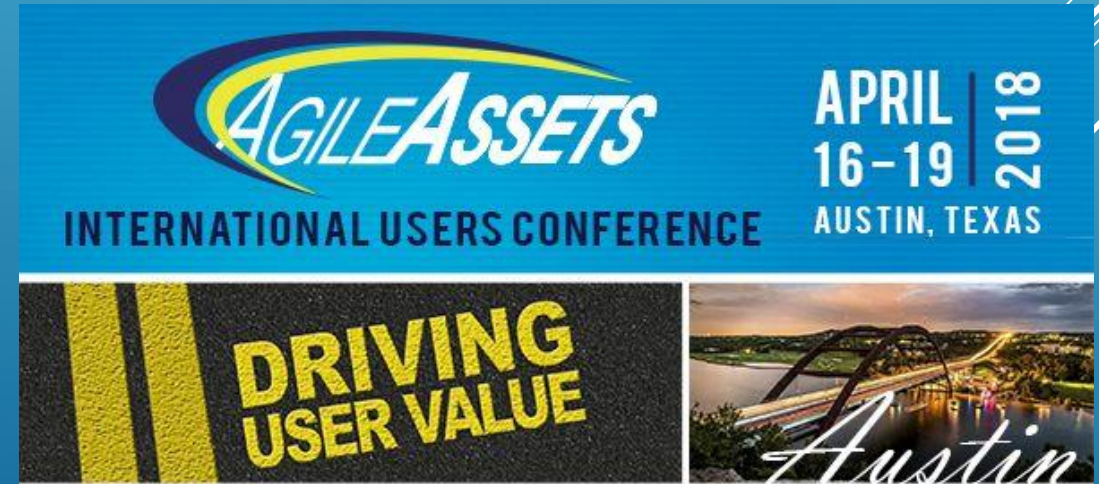
Austin





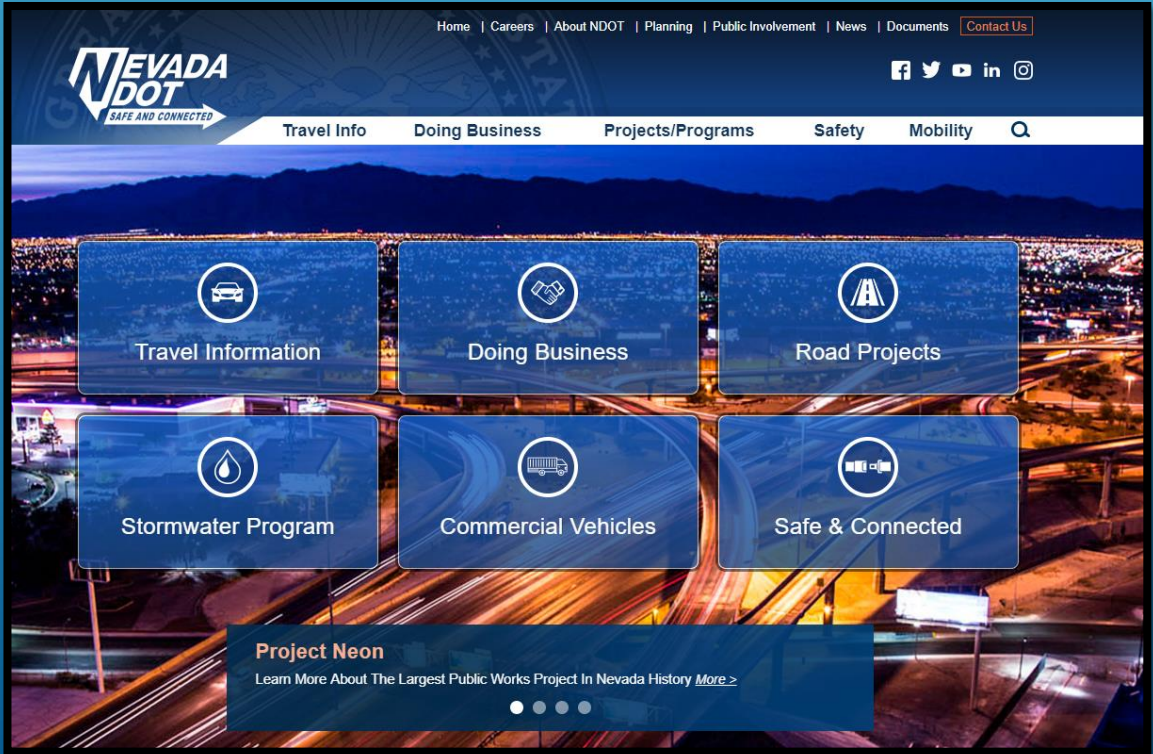
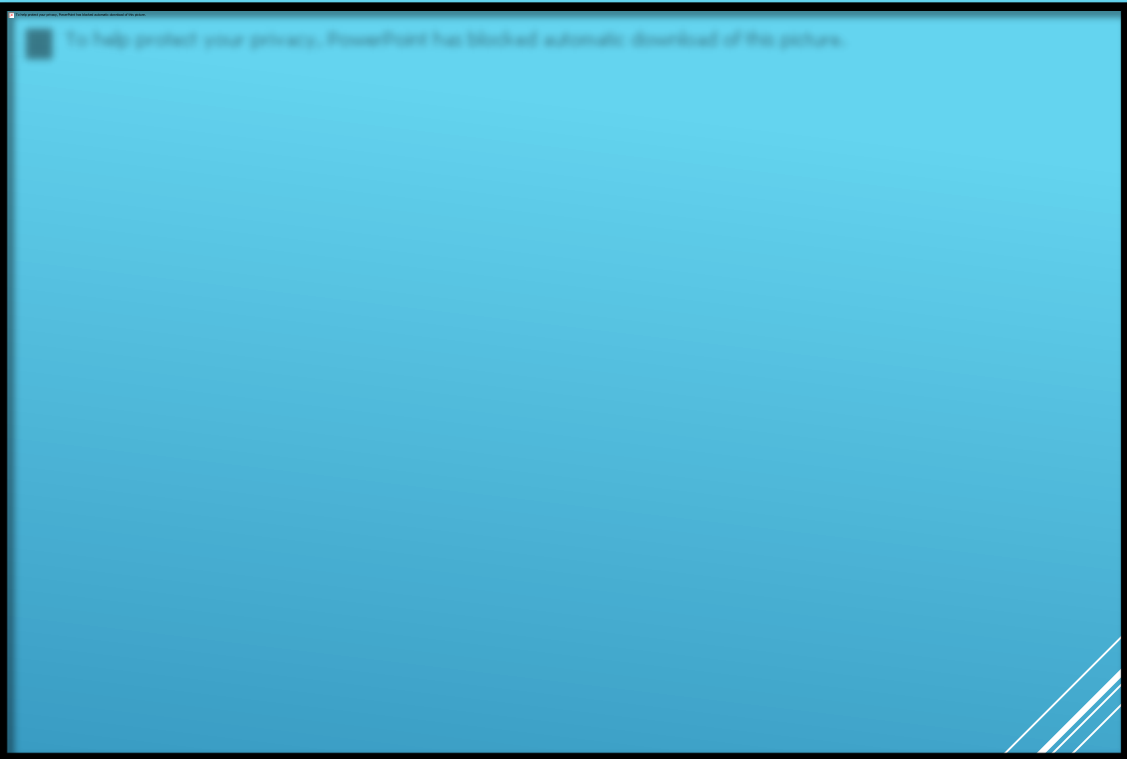

- Provide an integrated solution for the replacement of several NDOT core systems including:
 - Stormwater Management System (SWS)
 - Maintenance Management System (MMS)
 - Pavement Management System (PMS)
 - Bridge Management System (BMS)

- Systems are integrated & compatible
- Deterioration Models
 - Prioritization
 - Maintenance Status Tracking
 - Resource Allocation





Clean Water for Future Generations



Thank You

David Gaskin, P.E.
Deputy Director

Cliff Lawson, P.E.
Stormwater Division Chief

