Methods to Maximize Budgets & Minimize Maintenance on Unpaved Roads

Presented by Soilworks®

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Exclusively Prepared for the Western Region County Engineers Symposium
Overview

- Current Challenges
- Dust Control vs. Soil Stabilization
- Traditional Solution Examples
- Prime Engineered Synthetic Polymers
- Introduction to Soiltac®
- City of Scottsdale Success Example
- Why Partner with Soilworks®

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Current Challenges

- **Budgetary Constraints**
  - Limited resources

- **On-Going Maintenance**
  - Scheduling & availability
  - Grading & compacting
  - Aggregate importing

- **Regulatory Compliance**
  - Air quality
  - Road safety

- **Public Perception**
  - Nuisance
  - Public funding ROI
  - Health risks
Dust Control vs. Soil Stabilization

**Dust Control**
Reduce or prevent particulates from becoming airborne.

*Topically* applied to create a protective “wetted” surface or a surface crust

**Soil Stabilization**
Increasing the load bearing strength of soils & aggregates through solidification.

*Mixed* into the base or subgrade to adhere and solidify soils and aggregates
Traditional Solution Examples

**Dust Control**
- Water
- Bitumen
- Chlorides
- Surfactants
- Tall Oil Pitch
- Petroleum Oils
- Lignosulfonates

**Soil Stabilization**
- Lime
- Fly Ash
- Cement
- Asphalt
- Enzymes
Prime Engineered Synthetic Copolymers

- Proprietary Formulation
  - Repeatable/consistent results
  - Lab to field direct correlation
  - R&D sustainable innovation

- Environmentally Friendly

- Customizable Rates
  - Budget flexibility
  - Longevity
What is Soiltac®?
Synthetic Vinyl Copolymer Dispersion or Powder

Unique Advantages
- Dries transparent, flexible & odorless
- Ecologically and environmentally safe
- Non-corrosive & Non-hazardous
- PM10 & PM2.5 air quality compliant
- Cumulative effect with maintenance
- Non-dissipating & Non-leaching
- Self mixes with water for diluting
- Reduces soil permeability
- UV resistant
Soiltac Primary Uses

- Unpaved Roads
- Road Shoulders
- Parking Lots
- Heavy Haul Roads
- Road Base
- Road Sub-Base
- Airports
- Helipads
- Construction Sites
City Of Scottsdale Goals

- Optimize Maintenance Budget
  - Unpaved Roads, Parking lots & Alleys
  - Unimproved Road Shoulders
- Increase # of Treated Assets
- Air Quality Compliance
- Public Safety
- Positive Public Perception
  - Environmental Solutions
  - Public Funds Benefiting the Public
  - Aesthetics
- ROI & Savings
City Of Scottsdale Success

 ✓ Utilized MCDOT Contract Serial 08132-C
 ✓ Identified Assets in Need of Maintenance
 ✓ Developed an Annual Budget Program
 ✓ Designed Maintenance Cycle Program
 ✓ Created Public Informational Packets
 ✓ Customized Application Rates through In-House Geo-Lab Testing
 ✓ Implemented 3rd Party QC Product Testing
 ✓ Minimized Road Closures & Delays
 ✓ Improved Treatment Efficiency (miles/day)
 ✓ Reduced &/or Eliminated Road Grading
City Of Scottsdale
Savings Example

✓ >35% Reduction in 2010 Annual Maintenance Budget

✓ >35% Increase in Opportunity to Treat Additional Assets

✓ Savings over Traditional Methods:

Example – Via Donna Road (per mile)

$145,000 Asphalt Pavement
$ 10,000 Soiltac Treatment
$135,000 Savings (93% savings)
Why Partner with Soilworks®?

Our Brand Promise: “Soilworks® combines your business goals with our knowledge, state of the art soil technology and environmental best practices to meet your objectives.”

- Provides Best Return on Investment
- Formulated “Prime” Products
  - Verifiable & Repeatable Performance
- Scalable Large Volume Production
- Chandler, AZ Based HQ & Production

- Innovation through R&D
  - In-House Geotechnical Lab
- Dept. of Defense Approved
- Product Quality Guarantee
- Turn Key Application Services