The SCDOT Mitigation Story

PERMITTING DIVISION MANAGER:
MR. SEAN CONNOLLY
Our Challenge

• South Carolina has tremendous transportation needs ($billions).
• Funding levels are increasing to meet these challenges at the State and Local level.
• SCDOT doesn’t desire to be in the banking business.
• We must have a healthy community of private mitigation bankers to meet this challenge.
Funding available to SC

- SCDOT will have ~ $1.2-1.5 billion budget per year...
  - This includes $612M Federal and $110M State Match.
  - $800M State budget per year 2024

- Translation = over the next 10 years there will be ~ $10+ billion spent in SC at the State and Federal Level

- SCDOT will need permits for approximately 75+ projects per year.
Roads Bill Funding

Where is the Money being Spent?

THE PLAN

- Bridges: $67M
- Interstate Widening: $161M
- Rural Road Safety Program: $50M
- Additional Priorities after Tax Credit Sunsets: $115M
- Resurfacing: $407M
- Today: $100M

Graph showing funding over time with projected increases to $800M by 2027.
10 Year Outlook: What to Expect

Rural Roads

Safety Features Upgraded

Progress made to reverse the 30 years of neglect

465 New Bridges

140 Miles of our Interstates Improved
Number of Banks

- SC = 16
- NC = 21
- VA = 142
- GA = 109
- MS = 25
- FL = 68

Source: RIBITS

Denotes Banks with Credits Available to DOT
Mitigation Bank Credits

<table>
<thead>
<tr>
<th>State</th>
<th>MS</th>
<th>AL</th>
<th>GA</th>
<th>NC</th>
<th>FL</th>
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</thead>
<tbody>
<tr>
<td>Credits</td>
<td>67,081</td>
<td>201,907</td>
<td>1,750,967</td>
<td>410,256</td>
<td>17,880</td>
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<td>Credits Remaining</td>
<td>4,869</td>
<td>771</td>
<td>46,945</td>
<td>1,564</td>
<td>80,334</td>
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Source: RIBITS
Mitigation Credit Ranking

Wetland Credits Remaining

<table>
<thead>
<tr>
<th>State</th>
<th>Credits Remaining</th>
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<tbody>
<tr>
<td>VA</td>
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<td>GA</td>
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<tr>
<td>NC</td>
<td>6000</td>
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<tr>
<td>AL</td>
<td>7000</td>
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Mitigation Credit Ranking

Stream Credit Rankings

<table>
<thead>
<tr>
<th>State</th>
<th>Rank</th>
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<tbody>
<tr>
<td>GA</td>
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<tr>
<td>VA</td>
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<tr>
<td>AL</td>
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<td>MS</td>
<td>5</td>
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<tr>
<td>NC</td>
<td>6</td>
</tr>
<tr>
<td>FL</td>
<td>7</td>
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</table>
Commercial Bank Coverage

Legend

- No Coverage
- Commercial Bank Coverage

*Credit Availability per Bank POC or RIBIT8
**Remaining Credits is the baseline since ledgers are completely accurate from RIBIT8
Wetland Credit Availability
Stream Credit Availability

Legend:
- Green: 60% or More
- Yellow: 40%-50%
- Red: Less than 40%
- White: No Coverage

*Credit Availability per Bank POC or RIBITS
**Remaining Credits is the baseline since ledgers are completely accurate from RIBITS
Doubled Resurfacing

- 465 Bridges Replaced
- 140 Miles of Interstates Improved
- 1000 Miles of Safety Features Added to Rural Roads
10 Year Plan at Risk - Wetland

Projects without Wetland Credit Coverage:

150 Bridges
120 Miles of Rural Safety
10 Miles of Interstate Widening

Projects at Risk from Low Wetland Credit Availability:

150 Bridges
400 Miles of Rural Safety
95 Miles of Interstate Widening
10 Year Plan at Risk - Stream

Projects without Stream Credit Coverage:

- 115 Bridges
- 400 Miles of Rural Safety
- 45 Miles of Interstate Widening

Projects at Risk from Low Stream Credit Availability:

- 175 Bridges
- 300 Miles of Rural Safety
- 70 Miles of Interstate Widening
SCDOT MITIGATION PROBLEM

- **Wetland Risk**
  - 300 Bridges
  - 520 Miles of Rural Safety
  - 105 Miles of Interstate Widening

- **Stream Risk**
  - 290 Bridges
  - 700 Miles of Rural Safety
  - 105 Miles of Interstate Widening

- **Tidal Risk**
  - 10 Bridges
  - 50 Miles of Rural Safety
  - 25 Miles of Interstate Widening
Why Do We Need To Plan And Be Prepared For Compensatory Mitigation?

- **To improve project delivery** outcomes by having appropriate mitigation already in place when needed.
- **To improve environmental outcomes** by consolidating potential compensatory mitigation needs from multiple projects in a given area and investing them strategically to address conservation priorities.
- **To improve mitigation outcomes** by having better planned and delivered mitigation projects that are successful and compliant.
SCDOT Mitigation lead to delays in project schedule.

- Few Mitigation Banks
- Little to No Coastal Stream Mitigation Banks
- Concern due to limited credits available even within approved banks
- Permittee-Responsible Mitigation is not economical for smaller projects
- Project delays and complexities
- Volume of Projects
SCDOT is not in the Mitigation Banking Business.

The problems for SCDOT to be in the mitigation banking business are that these banks were not meeting the desired schedule for SCDOT work and the responsibility and/or liability for the success of the mitigation banks and maintenance were too great of a risk for SCDOT to undertake.
Mitigation Banks Reducing Risk to SCDOT

CWA BANK CREDITS VS. PERMITTEE RESPONSIBLE MITIGATION

~ 45 days
Purchase credits from a bank

- Streamlined/accelerated planning process
- Predictable permitting costs, timing
- No on-going performance risk
- Immediate transfer of mitigation liability

6 – 18 Months
Select mitigation solution
Initiate design for mitigation project
Agency review and approval process
Construct, monitor, maintain & manage

- Significant delays for project
- Increased costs for clients
- Permanent long-term performance liability
- Unknown and unknowable outcome

5 – 10+ Years

Limitless liability
Three Areas of RISK per Bankers

- LOCATION
  - Optimizing the bank’s service area to reach largest demand

- Funding Availability
  - Funds available for large credit purchases

- Regulatory
  - Did you choose an adequate site?
  - Does it meet their SOP?
Partners in the Mitigation Community

- Mitigation Bankers – Quarterly Meeting
- NGO’s – Yearly Meeting
- Sister Agencies (DNR, DHEC) – AMP
  - Land Trusts - Yearly
- COG’s and MPO’s - Yearly
  - FHWA -AMP
- US Army Corps. of Engineers - AMP
South Carolina must have a healthy communication with the private mitigation community to meet the challenges of delivering our Transportation Program.

SCDOT Mitigation Solutions:
Solution: Impact Forecast

• Using a Geospatial Wetland Impact Model, ESO analyzed projects from SCDOT's 10 Year Plan to rank watersheds in South Carolina based on the projected impacts to wetland and streams.
Strategy Goals: Goals and Objectives

● Create a scientifically sound methodology that is based on state’s resource needs.

● Continue collaboration and information sharing between state and federal agencies.

● Produce a functioning web-based tool that identifies enhancement, restoration and preservation opportunities.

● Create solutions that benefit the state of South Carolina.
  ○ Good for resources, agencies and general public.
USC Forecast Model 101

- Step 1 – Projects in the 10 Year Plan to be digitized – *SCDOT completed March 2017*
- Step 2 - USC to apply buffer along project corridor and jurisdictional impacts to be estimated
  - Looking at other tools to determine how to project JD areas
  - Buffers are being accurately calculated on project types
- Step 3 - Demonstrate Need & Develop Priority Watersheds/Ecoregions based on Forecasted Impacts.
Wetlands Likelihood for Impact Assessment

NWI
GAP/NLCD
Soils
Historical maps & aerial photos
Lidar

MODEL

Wetland Confidence Layer (WCL)

Very likely
Likely
Possibly

Submodel
Submodel
Modeling Future Road Project Impacts

Where are the future road projects?

Where are the wetlands and streams?

Where are the available credits?

Ok, specifically where will the surface/shoulders be?

What is the quality of wetlands?

Impacts: Wetland acres Stream feet

NWI
NHD
Wetlands/Stream Impact Tool

New Road

INPUT: STIP new road centerline, Wetland Likelihood

Creation of buffer for new road width

Clip by NEW ROAD tool

OUTPUT: areal or lineal impact

Widening Road

INPUT: Existing road, Wetland Likelihood

Creation of buffer for new road width

Creation of enlargement polygons

Clip by WIDENING ROAD tool

OUTPUT: areal or lineal impact
Proactive vs. Reactive

- 2016 AMP Kickoff – 6 months
  - Long Term Impact Planning
  - Incentivizes Commercial participation for Banking
  - Risk Transferred to Community
  - Develop A Mitigation Strategy for SCDOT
  - Stakeholders (State & Federal)

- Pre-AMP
  - Project by Project Mitigation Planning
  - Owner of Mitigation Banks in South Carolina
  - Risk of Mitigation Success
SCDOT Mitigation Options and Funding Source

1. Solicitation: advance purchase from banks
   - State Funding
2. Use of approved SCDOT mitigation banks
3. Solicitation for credits to attract banks
   - State Funding
4. PRM through on-call contract
   - Federal/State Funding
5. Advance SCDOT-owned banks
Where are we now? and Who Benefits

SCDOT Started April 2016 with Workshop

FY 2018: Mitigation Strategy Approved and Initiated
Looks at Short Term (PRM) and Long term (Banks)

1. Mitigation Bankers – Money/ Location
2. NGOs – PRM Coordination
3. SCDNR – Assistance in LTM
4. SCDHEC – Evaluation of 303(d) Streams
Wetland Watersheds of Concern

Short Term (2018-2021) Estimated Wetland Impacts

Legend

Estimated Impacts
- Green: Low Estimated Impact
- Yellow: Some Estimated Impact
- Red: High Estimated Impact
Stream Watersheds of Concern

Short Term (2018-2021) Estimated Stream Impacts

Legend

Estimated Impacts
- Low Estimated Impact
- Some Estimated Impact
- High Estimated Impact
Looking Forward

Securing Mitigation Availability Within Highest Priority Watersheds

<table>
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<tr>
<th>Year</th>
<th>Highest Priority Watersheds</th>
<th>Mitigation Strategy Activity</th>
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<tbody>
<tr>
<td>2018</td>
<td>1</td>
<td>$2M</td>
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<tr>
<td>2019</td>
<td>6</td>
<td>$14M</td>
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<td>2020</td>
<td>8</td>
<td>$14M</td>
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<tr>
<td>2021</td>
<td>10</td>
<td>$10.7M</td>
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How do we Continue Success?

- Routine meetings and coordination with the banking community to track development of new banks and credit releases at existing banks (e.g. meet with SCMA).
- Routine meetings with State and Federal Agencies.
- Meet with NGOs
- Developing a strategy for each watershed
Lessons Learned

- Communication is key
  - Partnerships will be required
- Look for the Big Picture
  - Why are we Mitigating?
  - Identify the Problem
- Understand the risks on the Mitigation Community
  - Location, Funding, Regulatory
- Estimates are only as good as the Data
  - Know your process
Questions?

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