

Raleigh Review of Draft Framework Workshop for Environmental Management Plan

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FROM: CH2M HILL

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Raleigh employees met on December 5th in the North Carolina Department of Transportation (DOT) Board Room to review and discuss the Environmental Management Plan (EMP). The objectives of the meeting were to present the draft framework, obtain feedback from staff, and identify the environmental activities already being performed. The draft EMP framework was reviewed with the entire group and then the attendees split into small groups to discuss each draft framework objective in detail. This memorandum summarizes the group discussions.

Introductions and Meeting Objectives

Ehren Meister opened the meeting, introduced the CH2M HILL team, and provided a general summary of the meeting's objectives. J.D. Solomon with CH2M HILL introduced the CH2M HILL staff members and asked the DOT participants to introduce themselves. J.D. presented the goals for the Environmental Management Plan, noted that the purpose of the meeting is to obtain feedback from staff, and described how staff input will be used to develop the final EMP.

Project Background

J.D. identified the EMP sponsors and the core team at DOT that helped to develop the draft EMP framework. The draft framework is based upon existing DOT documents and additional information from benchmarked agencies that have excellent environmental management systems or programs. A few of the DOT documents were identified and a copy of the Environmental Stewardship Policy was distributed to the meeting attendees. The benchmarking agencies included other State Departments of Transportation, cities, and military facilities.

Mr. Solomon reviewed the main goals for the EMP:

- The EMP should be clear, concise, workable, realistic, and achievable for all levels of the organization.
- The EMP will provide a way to clearly document the cost effectiveness of investments made on environmental initiatives.
- The EMP will incorporate previous environmental initiatives where applicable.
- The EMP will include methods for communicating environmental performance measures to all levels so that employees recognize and understand what the Department is doing.
- Obtain broad acceptance of the EMP from the Board, employees, and the public.

The draft EMP framework was reviewed. The meeting participants were asked to think about the questions that they will be asked to answer in the small group sessions:

- What are you already doing that supports the draft EMP Framework?
- What are you doing that is missing from the draft EMP framework?
- What draft EMP objectives are not applicable to you?

After the objectives were presented J.D., asked the group to identify anything missing and to share their initial thoughts about the draft framework. The group's initial comments included: Focus on some result prior to the NOV. The DOT will not have a perfect record. The DOT is already doing a lot of environmental work, but does not do a good job of tracking and reporting what they do. Consider a bulleted list for reporting, not just quantification of efforts, and less technical reporting of accomplishments in order to appeal to a larger audience. The framework objectives are obvious but not easy to implement and track on a practical level.

Break

Small Group Sessions

After the break the meeting attendees were split into two groups. Each group reviewed the individual draft framework pieces and identified the activities they are doing under each section and any activities that don't fit under the draft framework pieces. The small group discussions were led by CH2M HILL staff. Group comments were recorded on flip charts. After each draft framework piece was reviewed, the groups came back together and CH2M HILL presented the highlights of the small group discussions.

Objective A - Ensure employee compliance with the Environmental Stewardship Policy

- 1) Achieve zero notice of violations (NOV) on projects, facilities, and operations
- 2) Conduct root cause analysis and develop recovery plans for correction of NOV occurrences
- 3) Build upon and enhance internal programs which demonstrate NCDOT's commitment to the natural and human environment

Current Activities:

- Compliance with the Environmental Stewardship Policy is part of some employee's performance evaluations
- Conduct context sensitive solutions (CSS) training, all employees attend one time
- CSS policy training manual
- Utilize CSS frequently
- Each Division has developed a specific policy for addressing NOVs
- The Ferry Division is developing an EMS to include ISO 14000 certification
- Transit is working with local governments and Universities to develop transportation demand management plans. In the last three years the number of plans has increased from 3 to 8 statewide.
- Transit is implementing the statewide transportation demand management plan released in April 2004
- Built upon the 3 R Program by developing a statewide "Swap Shop" program that allows for exchange of items internally before sending to state surplus

Comments/Suggestions:

- There is lack of awareness of the environmental stewardship policy within DOT
- The environmental stewardship policy was distributed to everyone with email in 2002, field personnel may not have received a copy
- Need awareness training on the Environmental Stewardship Policy to ensure every employee knows what it is and how it applies to them
- There is too much emphasis on NOVs – need to make the target broad and general like the 3rd bullet
- Objective A doesn't include all of the stewardship policy's goals
- Objective A leaves too many units out. Pre-construction, ROW, and design are not involved with NOVs.
- Field staff would be aware of the no violations part of the policy, but maybe not the rest
- New staff may not be aware of the document
- Re-distribute the environmental stewardship policy to staff and contractors
- Develop business unit specific implementation plans
- Need to include environmental justice and civil aspect
- Need additional emphasis on the cultural and human environment

Objective B - Ensure the compliance of NCDOT and industry partners with state and federal environmental laws, rules and regulations

- 1) Achieve zero NOVs on projects
- 2) Achieve zero contract violations related to or as result of adverse environmental impacts
- 3) Conduct root cause analysis and develop recovery plans for correction of NOV or contract violation occurrences

Current Activities

- Roadside environmental is developing a certification process for contractors that will address erosion control, NPDES requirements and environmental permitting. The training is managed and conducted by North Carolina State University.
- Construction, Contract Services, Roadside, and Operations are developing an environmental pre-qualification process for contractors
- DOT is working with general contractors to refine the environmental training and certification process
- DOT is starting to pass penalty assessments from regulatory agencies on to the contractor
- If an NOV is received DOT looks at why, identifies corrective actions and reviews the process, but there is no formal documentation except the Division NOV response to the issuing agency
- Roadside tracks NOVs
- DOT is working with vendors to improve the environment. For example, DOT has modified their specifications to allow fines in aggregate base course, concrete, and asphalt and allows the fines to be directly applied to roadway shoulders. Previously the quarries would discharge fines into streams.

Comments/Suggestions

- Need standard contract language. There is standard language for DBE/WBE why not environmental?
- DOT should have the authority to cancel contracts and go with someone else if a contractor or supplier is cited for violations (Ex. fuel supplier spills)
- Should have a notification process built into contracts to reveal any environmentally related violations
- Develop a way to support environmentally friendly business practices in the contract process (additional points, etc.)
- Contracts should include a way to monitor waste stream and provide incentives for contractors who take advantage of reuse opportunities when available. This clause should be a consistent practice.

- Include a contract clause requiring 15% of project materials to be reused or recycled. If there is an incentive it is up to the contractor to take advantage of where to be cost-effective.
- Contracts should include financial ramifications for the contractor if an ICA or NOV is issued
- It would be useful to have a reference document that identifies everyone's roles (roadside, maintenance, construction, resident engineer, division engineer and assistant division engineer) and identifies who should conduct the root-cause analysis
- Need a feedback-loop or learning process that shares project experiences across DOT, but don't use the website for this
- The EMP focuses too much on construction and not enough on planning
- The NEPA permit requirements are identified during the project development process
- The 404 merger process has recently been updated and there needs to be training to get everyone up to speed on the new process
- Training may be coming, but they do not know who will receive it. The group suggested that the following staff should receive the 404 merger process training: merger team members, DOT experts (hydrology and roadway design staff), construction managers, and transportation planners
- Share information across Divisions so that mistakes are not repeated
- There may be reluctance from Divisions to share their problems or mistakes
- There will be more accountability if the NOV information is shared
- Suggest that DOT develop a quarterly report that shares Division examples, history, tips, information on why NOV's occurred and how the issues were resolved
- NOV related experiences are shared every two years at construction conference, but this is not frequent enough to be the main information sharing process
- Objective B focuses too much on NOV's and does not include many units such as pre-construction, ROW, and design that are not involved with NOV's

Objective C – Build upon and enhance environmental sustainability practices

- 1) Achieve government recycling mandates to reduce waste and reduce costs
- 2) Determine the technical feasibility and cost effectiveness of waste reduction measures
- 3) Evaluate and track additional reduction, recycling, and reuse efforts to continually improve environmental sustainability
- 4) Implement the Energy Policy

Current Activities

- Utilizing bio-diesel; they are adding more counties all the time
- The TIP program uses recycled products in construction

- Recycled materials used: glass beads used in pavement markings, guardrail off-set blocks, rest area building materials, concrete and asphalt
- Complete the 3R report quarterly
- The human resources payroll system is considering converting to a paper less process. It may be difficult to quantify the benefit from this. The Statewide HR/Payroll system that will be implemented in the next few years will be paper less in that we will no longer get pay stubs. You will be able to look at your information on the employee self service web page.

Comments/Suggestions

- Bullet #1 is in DOT Business Plan
- “Paperless” is not truly paperless unless there is a system change
- Need to invest in technology more. If inspectors had PDAs or palm pilots they could do the same forms wirelessly for the Highway and Construction Maintenance System (HICAMS) this would save time and staff resources. Currently have to deliver paperwork to be entered and there may be handwriting questions which delay information transfer. If the technology was available it would be faster and more efficient.
- Have had problems getting enough server space to retain files electronically
- Federal agencies require DOT to retain original paper documents for 3 years
- How determine the baseline for assessing expenditure increases, decreases, or efficiency?
- DOT has had no success with utilizing tire rubber in pavements
- Tire use in embankments is not popular with the public, is inefficient and adds difficulty to construction
- Need to have a consistent method for capturing all aspects of 3R. This would allow lots of measurements to be developed.
- Should track waste stream under module in Business System Improvement Process (BSIP). This would provide consistency in terms, tracking, etc.
- Do not utilize grey water because of extra fuel consumption due to long hauling distances and municipalities want to be paid for the water
- Need to create awareness of energy policy and waste management policy
- Need to look at life costing for projects not just initial costs

Objective D – Enhance air quality management

- 1) Identify and measure air quality impacts produced by NCDOT activities
- 2) Complete air quality analyses in non-attainment and maintenance areas on time
- 3) Maximize the use of available congestion mitigation and air quality improvement program (CMAQ) funds each year
- 4) Organize effective regional collaborations with metropolitan and rural planning organizations (MPO’s and RPO’s)

Current Activities

- Regional transportation efforts evaluate air quality impacts
- Air quality impacts are documented for all TIP projects, as required in order to obtain Federal funds
- NEPA process requires specific projects to estimate their air quality impacts
- The framework exists for regional collaboration, communication and relationship development, this process is going well except in one MPO
- Utilize traffic coordination systems to reduce congestion
- ITS unit uses cameras and message boards to share traffic condition information with the public
- When you recycle paper you improve air quality (less trees cut down and less manufacturing emissions)
- Alternative fuel vehicles are being used
- How you phase and conduct construction projects can minimize air quantity impacts
- Transit looks at rider statistics annually and can translate this into the reduction of NOx and vehicle miles traveled (potentially could look at this every quarter)
- The rider statistics must be reported to the Environmental Review Commission – what do other units report to this Commission that could be captured in a holistic report?

Comments/Suggestions

- Air quality is a huge component of DOT requirements and environmental impact statement work
- There is not much Division involvement in air quality planning with MPO's and RPO's
- MPO and RPO board members may de-emphasize project air quality impacts
- Some legislatures and RPO and MPO members may not be aware of environmental requirements, especially in non-attainment areas
- MPOs in non-attainment areas will be aware of environmental requirements
- What are CMAQ funds and does DOT maximize the use of these?
- Need information on how DOT is participating in the remediation air quality through construction projects, signal timing, alternative fuel vehicles, etc.
- Need to perform an evaluation of alternative fuel vehicles, hybrid vehicles, etc. to understand where "biggest bang for buck" is.
- Nothing is in place to encourage the use of alternative fuel vehicles
- Increase funding for additional bicycle routes
- Check status against Senate Bill 953 from 1999 to see where the DOT is related to ambient air quality

Objective E - Enhance water quality management

- 1) Continue to implement enhancements and BMPs related to water quality at facilities and properties

- 2) Track enhancement and BMP implementation efforts at the project level
- 3) Identify and track opportunities to enhance water quality through partnerships
- 4) Cooperate with watershed based approaches where possible

Current Activities

- Planning is coordinating with DWQ on the NEPA 401/404 process to utilize a shoulder section instead of curb and gutter and to reduce fill in causeway areas
- Have reduced turbidity impacts and are now conducting some monitoring upstream and downstream of projects to measure changes
- BMP implementation is occurring at the project level
- Do identify opportunities to improve water quality, but don't do a good job of promoting what DOT does for water quality and all other environmental areas
- The merger participation process often results in projects going above and beyond minimum requirements, but there may be less of this in the future because of the costs associated with this approach
- Conduct external and internal stream and wetland mitigation
- Allowing the use of recycled water during construction when making concrete from onsite erosion and sediment control devices
- Maintenance facilities have stormwater pollution prevention plans

Comments/Suggestions

- Add NOVs here since this is where DOT receives the NOVs
- Move F3 to objective E
- Include water conservation within DOT (rest stops, reduction of irrigation)
- Add facility reuse of BMP water
- Consider lower water demand plants when designing planting plans

Objective F – Enhance land resource management

- 1) Integrate local land use plans into the comprehensive transportation planning process to meet mobility, economic and environmental goals
- 2) Continue to manage facilities and property to enhance environmental stewardship and economical land management practices
- 3) Continue delegation of the erosion and sedimentation control and buffer programs

Current Activities

- Work with local developers and communities to identify access management needs, but need better planning and coordination

- Utilize conservation donations to agencies, and should publicize this more
- DOT manages “green space”, but not actively
- Utilize green products at facilities
- A green rest stop is under design
- Utilize stormwater BMPs at facilities and pollution prevention at maintenance yards

Comments/Suggestions

- DOT has not been in the land management business in the past
- DOT should not manage land
- A complete inventory of DOT lands should be performed. (Note: NCDOT is required by the State Auditor to perform an annual land and building inventory)
- Mitigation tracts should be turned over to the Nature Conservancy
- Access management works best when the Division works well with local municipalities
- Local land use planning is the responsibility of the community
- DOT reacts to land use pressures and issues
- Increased DOT involvement would infringe on property rights or municipal planning efforts, this is a touchy issue
- Businesses push for development
- DOT should develop a policy or funding criteria that must be met related to local land use plans (multi-modal, pedestrian friendly)
- Develop minimum DOT criteria for transportation related facilities (ex. schools). Projects must meet criteria in order to receive DOT funds.
- Land use planning should move from the state level to the local level and DOT should encourage good land use policies
- Too often how people will get around in a community is an after thought, this should be part of the design process instead of a reactive process
- Land management takes money
- Have other agencies manage specific properties
- There is currently no forestry involvement
- Could improve intersection quadrants for wildlife, but don't want deer or turkeys there.
- Timber management is a touchy issue with the public, tree cutting is a bad public relations issue
- Maybe DOT should manage properties
- Rephrase F3

Objective G - Accelerate/streamline the environmental component of the project delivery process

- 1) Zero project delays due to permitting
- 2) Identify impacts, fund, and monitor the expense allocation to the EEP and other mitigation efforts

- 3) Identify appropriate mitigation funding sources and allocation of funds in TIP
- 4) Identify and track opportunities to partner with local governments and agencies to enhance the project delivery process
- 5) Explore delegation of environmental programs

Current Activities

- 401/404 program is a partnership with DWQ and ACOE
- Making the contractor and the design team responsible for permitting (Washington Bypass example) did speed up the project timeline
- The incentive for DOT to minimize permitting requirements has led to reduced project footprints, reduced mitigation needs and lower costs
- The increase in staff involved with permitting (in project development and environmental analysis) has helped (even though DOT only received ½ of the staff people that they requested)

Comments/Suggestions

- Clarify objective G – rewrite to show doing more with less
- Seems to be a conflict - is the goal environmental protection or the project timeline? difficult to have both as the same goal
- Improve communication between DOT and Resource Agency
- Accelerate process through the use of incentives
- Zero project delays are not realistic
- Not sure yet if the merger process is working, there is a long time between project conception and permitting
- Want programmatic control of the Section 106 process, especially for small projects
- Currently the historic resources review is delaying projects because they do not have enough staff to get the work done in a timely way
- Under the merger process permitting may go more quickly, but this requires more planning work, DOT staff utilize twice as much effort as in the past
- The current method is to start the project clock at right of way acquisition, then apply for the permit, suggest getting agency sign off on the project much earlier
- Start project development earlier, increase planning
- The DEOs are responsible for permitting projects according to state minimum criteria under SEPA
- The “letting list” meetings have been a good educational experience (used to identify hydrology plan changes, not just using PDEA)

Objective H – Implement and maintain the initiatives, programs and process improvements

- 1) Implement the Environmental Management Plan

- 2) Develop a comprehensive shared GIS database
- 3) Continue to enhance training and awareness of the environmental ethics of the Department
- 4) Develop a risk management plan

Current Activities

- Lots of training already occurs (tired of training), but information sharing needs to be improved

Comments/Suggestions

- Not enough training related to the environment
- How identify the cost/benefit of training?
- How do you define what the benefits are and measure them?
- The quantification of benefits is very subjective. Need measurable gains. Is it less impervious surface? Less stormwater runoff? Who says spending millions on the preservation of red-cockaded woodpeckers is worth X dollars?
- If you take money out of the picture what are the benefits and how do you quantify them?
- DOT should measure life cycle costs not just initial project costs
- Need a better method to consistently measure DOT's waste stream
- Should measure whether or how initiatives in pre-permitting save permitting time (measure time and cost)
- Define environmental goals and define how they are tracked and measured, then convey this to the responsible people
- Need to define what goals are at a high level. Explain and make broad enough to apply to everyone (not everyone deals with NOVs)
- Too broad a plan will be too fuzzy
- Need branch specific implementation goals and guidelines or steps and procedures
- DOT needs proactive policies
- DOT needs to empower employees to be proactive. Encourage employees through incentives.
- Need to be more focused on the environment during design. For example, recycling container placement is often an afterthought. Recycling areas should be included in building designs.
- Identify the steps needed to achieve each goal
- Document the increased costs associated with environmental work (for example installing bridges instead of culverts in high quality waters, or the installation of wildlife passages)
- Identify the costs and publicize the expenditures
- Utilize an evaluation of the cost versus the additional benefit provided to determine whether to implement specific measures

- Many of DOT's project expenses are related to environmental issues, but we are not aware of these
- Include environmental project expenses in a risk plan
- DOT is not currently developing risk plans
- Noise is becoming a bigger issue
- Risk management should investigate how DOT can make pavement quieter, or how DOT can reduce project noise (construction and post-construction)
- Safety impacts from removing rumble strips in response to noise complaints
- In order to address future noise issues, the DOT could use a procedure similar to the identification of all potential wetland impacts over an x period of years for developing TIP projects mitigation costs estimates, in order to make noise abatement estimates
- The connectivity of projects needs improvement
- Implement tailored training
- Training on environmental issues should be a part of orientation, explain how it relates to every employee
- Every unit is involved with the environment
- Manuals and computer training are not effective
- Provide all employees with a ½ day overview of the EMP and identify champions within DOT that are pushing the EMP
- Emphasize that the EMP is part of DOT's business
- Provide specific training for individual business groups (identify goals and specific measures)

Summary and Conclusions based on Small Groups

The DOT is doing a tremendous amount of good environmental work already but doesn't do a good job of measuring what they are already doing. The DOT needs to track and report items more often, this could include a bulleted list of good things the DOT is doing. The DOT should also measure time savings, cost savings and what DOT is achieving. Advertise the good things the DOT is doing for the environment. There needs to be a department wide change in environmental thinking.

Share information on what all branches are doing for the environment. Increase information sharing in general. Document each year's new achievements. Document annually the changes that are being implemented within DOT. The DOT needs to track and report current efforts and then set performance goals. Highlight the good things; don't just focus on the bad things (NOVs). Report the environmental work and progress being done to external and internal customers.

The DOT should begin developing risk management plans. The DOT should consider developing a detailed analysis of future air quality, vehicle miles traveled, and quality life issues at the regional or community specific level. The DOT could become more proactive planners. A future goal for DOT might be to have an environmental threshold drive projects, not just dollars. DOT should implement project limits based on environmental considerations.

Individual employees will need to understand the EMP and that will be difficult with something so global. Focus EMP implementation at the individual branch or unit level. Specific information will be needed to implement the EMP. They predict that DOT will struggle with identifying performance measures. DOT needs to start by identifying goals. The human environment was not emphasized enough in the EMP.

Traffic engineering, board members, and project engineers need to undergo a process change and begin focusing on the environmental component; have ribbon cutting events for safety corridors, not for new project implementation.

Next Steps

Further comments can be provided to Ehren Meister with DOT or to J.D. Solomon with CH2M HILL. Employees interested in keeping track of the EMP development process can go to the DOT internet site: <http://www.ncdot.org/environment/development/management/>. After the Division workshops are completed, the input from staff will be incorporated into the framework and EMP implementation strategies.