

**NEBRASKA’S “THE MATRIX RELOADED!” JOINT REGULATORY COMPLIANCE
AND AGENCY COLLABORATION FOR STREAMLINED TRANSPORTATION
PROJECT DELIVERY AND EFFECTIVE ENVIRONMENTAL RESOURCE
PROTECTION**

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ABSTRACT

After finalizing the Nebraska “Matrix” programmatic process in 2012, the “Matrix” would next undergo a new revolution, a “Matrix Reloaded” effort. Part of the “Matrix Reloaded” effort included a joint agency review to evaluate the effectiveness of the tools and implementation of the previous “Matrix” process. This was done through a random sample assessment of projects over a seven month timeframe. These projects had been assessed under the current Programmatic Agreement (PA) and approved by NDOR with no resource agency review. Based on this joint review, it was determined that the process was working as expected, and some additional tweaks were made to further improve efficiency and effectiveness. In addition to the “Matrix” process successfully being implemented, the agency team identified that procedures were still not in place for demonstrating compliance with other regulations such as the Migratory Bird Treaty Act (MBTA), the Bald and Golden Eagle Protection Act (BGEPA), Fish and Wildlife Coordination Act (FWCA) or the Section 404 of the Clean Water Act. Another active “Matrix Reloaded” effort now includes the development and action plan for completing Appendices that would address other biological considerations such as invasive species, contractor borrow, wetlands, migratory birds, wildlife connectivity, etc. These jointly developed compliance procedures will be amended to the existing agreement (PA) upon their completion. Our work is a good example of how transportation and the resource agencies can work cooperatively in a collaborative manner to achieve conservation of natural resources.

BACKGROUND

On January 2012, the “Matrix” programmatic process in Nebraska was finalized. This effort had been developed and piloted for three years among the Federal Highway Administration (FHWA), Nebraska Department of Roads (NDOR), Nebraska Game and Parks Commission (NGPC), and U.S. Fish and Wildlife Service (USFWS) for complying with both the Endangered Species Act (ESA) and the Nebraska Nongame and Endangered Species Conservation Act (NESCA). The "Matrix" process identified standardized effect determinations based on construction activity type, onsite species records/habitat conditions, and included the development of standardized conservation conditions (measures) for all state and federally-listed species. By implementing this agreement’s programmatic process, the USFWS and NGPC provided their agency concurrences that Nebraska transportation projects would not likely adversely affect federal and state listed endangered and threatened species.

PROGRAM AND PROCESS REVIEW OF THE “MATRIX”

As part of the PA, an annual report outlining the projects assessed by NDOR using the “Matrix” process was provided to the agencies in August of 2012. Under the agreement, NDOR and FHWA have the authority to review and approve certain biological assessments without direct USFWS and NGPC involvement. NDOR reviewed 84 projects as part of the PA from January 2012 to July 2012. Out of the 84 projects, 62 were not submitted to USFWS or NGPC. As another requirement of the PA and in response to the annual report, a Program Review and Meeting were conducted by NDOR, FHWA, USFWS and NGPC. For this meeting, a random sample of projects was selected and then reviewed by multi-agency teams for assurance that the program was properly functioning. Any findings or recommendations that developed as a result of the meeting were documented and an action plan was developed to address any issues.

Methods

From the 62 projects that were not reviewed by the agencies, a random sample was generated with a 90% confidence interval and 10% margin of error. Of this pool of projects, the sample was also stratified to adequately reflect the proportions of both state and local biological assessments processed at a ratio consistent with the representation of these projects overall. A table was then generated that contained 17 Yes/No statements that were based on the questions contained in various “Matrix” forms and stipulations of the PA (See Table 1 for the list of questions). The table and questions helped the team focus on whether deficiencies and/or successes existed between the programs. There were 3 teams with members from transportation and resource agencies represented. Each team had access to electronic project files, county species lists, aerial photos, and Natural Heritage species data. Each team was then assigned a unique set of questions to answer for the projects under review (out of the 17 total questions). Teams kept notes and provided their suggested findings, observations, and verbal recommendations during a group discussion held at the end of the meeting. The teams each recorded their answers electronically and these answers were later merged into a single table, color coded by Team at the end of the meeting.

TABLE 1 List of Questions Asked for Matrix Evaluation Process

Is the biology document in the file signed and complete?
Does the scope of work in the biology document match the scope of work in NEPA document?
Does the written scope of work match the activities checked for the project?
Does the scope of work and identified mitigation in the biology document match the NEPA document and green sheet? (Green sheets track all environmental commitments that pertain to a project)
If there were any change orders, is there documentation that the document was re-evaluated?
Is the date of the biology document before the date of the NEPA document?
Compare the project area to a land use map. If the project occurred within or adjacent to fed/tribal lands, was there coordination?
Compare the county species list to the species checked for the county in the biology document. Are they the same?
Based on the data from the Natural Heritage Program, are the boxes in Step 1 correctly checked?
If Natural Heritage indicated a species occurrence within 1 mile of the project area, was the indirect and cumulative effects box completed?
Have the habitat evaluation questions been checked for each species identified in Step 1 of the form?
Comparing the habitat questions to aeriels and other source data, is it reasonable to assume the question was answered correctly?
Comparing the activities checklist to the matrix, have the proper effect determinations and CCs been recorded?
Based on the effect determinations and agreements, was it appropriate for NDOR or NDOR/FHWA to approve without agency reviews?
Based upon review of this project, did the process lead to the appropriate effect determination?
Based upon review of this project, did the process lead to the appropriate conservation conditions?
Were the terms of the PA properly implemented for this project?

Findings

From the random sample review, there were 6 findings identified. Finding 1 involved a discrepancy between the written scope of work in the biology document and that described in the NEPA document. Other discrepancies occurred as some NEPA documents were batched while the biology document evaluations kept projects separated. NDOR has already taken corrective measures for these issues by training design staff, developing a NEPA annual batching plan, and more QC/QA on NEPA scope changes as well. Findings 2, 3, 4, and 5 all involved identifying necessary changes needed to actual “Matrix” forms and evaluation parameters. This included confusion on when agencies need to review specific documents, broad species habitat evaluation questions, construction activity definition confusion, and unclear species conservation conditions. All of these findings have had corrective actions taken to either change forms or have had further discussion to make the “Matrix” more efficient and more accurate. Finding 6 identified that according to the PA, there was an agreement to create appendices to the “Matrix” process to cover compliance with the MBTA, BGEPA, FWCA, and developing a contractor process for borrow needs and potential Platte River depletions. This is the “Matrix Reloaded” work that is actively occurring.

Action Plans for “Matrix” Appendices

MBTA and BGEPA

Concurrently with the development of the “Matrix” process, meetings and coordination had taken place with the same Team of agencies to discuss ways for transportation projects to comply with MBTA and BGEPA. As part of Nebraska’s transportation program, NDOR and FHWA jointly developed and finalized with the USFWS and NGPC, an Avian Protection Plan (APP) for federal aid projects to reduce impacts to migratory birds protected under both laws (in February 2012). APPs are voluntary measures and a good example of how a transportation agency and the resource agencies can work cooperatively in a collaborative manner to achieve conservation of natural resources. The APP also includes protocol for migratory birds that are also species protected under ESA and BGEPA. The APP is now added to the “Matrix” process as a stand-alone Appendix. We finalized bald eagle survey protocol in 2008 and are finalizing golden eagle survey protocols. An Appendix for BGEPA compliance procedures is expected to be finalized very soon. Now, as part of the biology document, a cover sheet references the use of these appropriate avian survey protocols and documents avoidance and minimization efforts taken to comply with both MBTA and BGEPA.

Contractor Borrow

NDOR has developed a contractor coordination process for reviewing material source sites that also includes coordination with the resource agencies. However, there have been agency concerns with the timing of when borrow evaluations take place (after the “Matrix” evaluation). Furthermore, when there is Platte River water depletion, there can be a several month delay to the start of construction while the contractor works through the compliance process. At this time, NDOR and the agencies do have some basic guidance within the “Matrix” that notifies the NDOR designer and contractor that they are working in the Platte River Watershed. The next step the Team plans to take is to work towards providing more species habitat information to the contractor with the assistance of NDOR’s Construction Division. This way a project construction contractor knows ahead of time that appropriate species surveys and work with the agencies may be necessary prior to use of the site, and they are better prepared for any potential delays.

FWCA and 404 Permitting

Streams and wetlands are vital for sustaining populations of fish and wildlife, including state and federally listed species and other trust resources in Nebraska. Another “Matrix Reloaded” effort has included developing streamlined joint procedures for NDOR’s 404 permitting process and FWCA. This procedure will involve collaboration with the U.S. Army Corps of Engineers (COE), the Nebraska Department of Environmental Quality (NDEQ), as well as USFWS, FHWA, NDOR, and NGPC. Currently, NDOR has been working to develop standard operating procedures for their 404 program as well as working with USFWS and NGPC to develop standard bioengineering practices into bridge and culvert projects. A work plan and schedule for completing this Appendix is to be developed in August 2013 after an initial meeting takes place with all parties.

TABLE 2 Conclusion from the Random sample review of the “Matrix”

Projects reviewed where the application of the " Matrix" process led to the correct effect determination	100.0%
Projects reviewed where the correct conservation conditions were implemented	100.0%
Projects reviewed that adhered to the stipulations of the PA	97.7%
Projects reviewed that it was appropriate for NDOR or FHWA/NDOR to approve without agency reviews	100.0%
Projects reviewed where it was reasonable to assume the habitat questions were answered correctly	100.0%

CONCLUSION

The annual audit of the PA and “Matrix” added a high level of confidence to NDOR/FHWA project reviews as well increased trust among the Team. As shown by the percentages in Table 2, the agency Team members who jointly developed the “Matrix” found that the “Matrix” and the PA are working as planned by the agency audit. Minor adjustments have been made to improve project evaluations, documents and the overall efficiency and effectiveness of the “Matrix.” With the implementation and use of the “Matrix” process it has been observed to save 5 weeks in all projects specific delivery schedules. The “Matrix” has also contributed to improved communication and coordination since all agencies now have a common language with standardized approaches to begin work together towards finding a way to protect resources and balance transportation needs for those projects that we need to focus our efforts. This increased level of coordination and communication has also led to new uses of the Matrix tools for streamlining additional types of project evaluations (i.e. Emergency Response, Anti-Icing systems, wildlife connectivity, species/transportation research needs, etc.). Furthermore, with the action plans developed for the future “Matrix” Appendices (BGEPA, FWCA/404 permitting, etc.), further protection of trust resources in Nebraska will be put in place so that the “Matrix” demonstrates compliance with not only species consultations but for other regulations. The “Matrix” has become the one stop shop where environmental standard operating procedures have continued to be developed to further streamline project delivery. Each agency Team member also knows that every year, we will continue to evaluate and make necessary changes that benefit both resources and project delivery. The “Matrix” is dynamic---a work in progress.

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Biographical Sketches:

Melissa Marinovich has been NDOR's highway environmental biologist and the point of contact regarding endangered and threatened species consultations for the past 3 years. Melissa has also worked as an environmental specialist with HDR Consulting in Nebraska and completed a biology internship with NDOR prior to graduating from the University of Nebraska. Melissa has extensive knowledge about environmental compliance, agency coordination, managed and participated in the development of NEPA documents (i.e., conducted species/habitat surveys, wetland delineations, and other studies needed for project approvals).

Brooke Stansberry is currently a fish and wildlife biologist with the U.S. Fish & Wildlife Service (USFWS) in the Nebraska field office. Brooke's position is also SAFETEA-LU funded, serving as transportation liaison between the USFWS and NDOR/FHWA under an interagency agreement for the past 8 years. Brooke has primary responsibilities that include assisting NDOR/FHWA with ESA section 7 consultations and compliance with other USFWS authorities (i.e. BGEPA, MBTA and FWCA).

Melissa Maiefski is currently the program delivery team leader at the Federal Highway Administration Nebraska Division Office (FHWA). Melissa came to FHWA-NE in 2009, from the Arizona Department of Transportation's Environmental Program. Melissa has extensive knowledge about environmental compliance, collaborative approaches to regulatory streamlining, environmental planning, and wildlife linkage assessments (Arizona's Wildlife Linkages Assessment).

Jason Jurgens is currently the highway environmental section program manager at the Nebraska Department of Roads (NDOR). Jason previously served as the environmental unit permits manager at NDOR and has also worked as an environmental scientist with HWS Consulting. Jason has extensive knowledge about Nebraska wetlands, wetland mitigation banking, and CWA 404 permit requirements.