



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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August 6, 2012

VIA CERTIFIED MAIL HANDDELIVERY

Ms. Laura Hilden
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

Dear Ms. Hilden:

Re: Section 401 Water Quality Certification
Project: I-69 Section 4
IDEM No.: 2011-508-28-JWR-A
COE No.: LRL-2011-0041-A-djd
INDOT Des. No. 0500446-450,
1006073-1006076 & 1173067
County: Greene & Monroe

The Office of Water Quality has reviewed your application for Section 401 Water Quality Certification dated and received September 22, 2011. According to the application, you propose to construct Section 4 of Interstate 69 which is a 4-lane interstate facility between US 231 in Greene County and SR 37 in Monroe County. The project will require the discharge of clean earthen fill material into 4.90 acres of emergent wetland, 0.19 acre of scrub shrub wetland, 2.36 acres of forested wetland, 1.97 acres of open water ponds, and 88,262 linear feet of stream channel. Of the 88,262 linear feet of stream impact, perennial streams account for 3,509 linear feet of impacts, intermittent streams account for 19,246 linear feet of impacts, and ephemeral streams account for 65,507 linear feet of impacts. Due to limited right of way, you also propose to install sediment traps for erosion control in headwater streams that have a Headwater Habitat Evaluation Index (HHEI) of 45 or less and other streams with an HHEI score >45 with the Indiana Department of Environmental Management and Army Corps of Engineers approval. It is also proposed to install temporary stream pump around measures for culvert installations and temporary crossings for site access.

Compensatory mitigation for the proposed impacts will be on-site at several locations and off-site at 17 different sites within the Lower White (05120202) and Lower East Fork White (051202208) 8-digit watersheds. The total stream mitigation proposed for I-69 Section 4 is 139,840 linear feet of stream enhancement, creation and restoration. The total wetland mitigation proposed for I-69 Section 4 is 98.8 acres of wetland creation and restoration.

On-site compensatory stream mitigation will consist of natural channel stream design on Plummer Creek, Black Ankle Creek, unnamed tributary to Mitchell Branch, and unnamed tributary to Clear Creek for a total of 2,904 linear feet of stream mitigation. You will also provide onsite compensatory mitigation in the form of step pools and the placement of natural substrate in streams relocated into the road side ditches for a total of 8,166 linear feet of mitigation. Off-site compensatory stream mitigation will consist of the creation, restoration, and enhancement of 98,370 linear feet of stream. An additional, 30,400 linear feet of stream mitigation is proposed as out of kind contingency mitigation in the form of wetland mitigation at a ratio of 1 acre of wetland to 1,000 linear feet of stream mitigation. In summary, a total of 139,840 linear feet of stream mitigation will be constructed for the required 88,262 linear feet of stream impacts, leaving a total of 51,578 linear feet of contingency stream mitigation.

As compensatory mitigation for wetland impacts you will create approximately 98.8 acres of wetlands off-site. The 98.8 acres of wetland mitigation consists of the required 19.62 acres of mitigation, 30.4 acres of stream contingency wetland, and 48.78 acres of wetland contingency mitigation. The 19.62 acres of required mitigation will consist of 7.25 acres of forested wetland to compensate for the 2.36 acre of forested wetland impacts, 2.0 acres of forested wetland to compensate for the 1.97 acres of open water impacts, 0.57 acre of scrub shrub wetland to compensate for the 0.19 acre scrub shrub wetland impacts, and 9.8 acres of emergent wetland to compensate for the 4.90 acres of emergent wetland impacts. The 30.4 acres of stream contingency wetland will consist of 15.4 acres of forested wetland, 10 acres of scrub shrub wetland, and 5 acres of emergent wetland.

Based on available information, it is the judgment of this office that the proposed project will comply with the applicable provisions of 327 IAC 2 and Sections 301, 302, 303, 306, and 307 of the Clean Water Act if you comply with the conditions set forth below. Therefore, subject to the following conditions, the Indiana Department of Environmental Management (IDEM) hereby grants Section 401 Water Quality Certification for the project described in your application received September 22, 2011, and modifications received December 27, 2011 (INDOT letter from Elliot Sturgeon), March 12, 2012, (INDOT letter from Laura Hilden and Supplemental Information Package dated March 5, 2012), and electronic mail correspondence from Jeremy Kieffner dated May 15, 2012, (Section 4 Mitigation Plan Revision), and May 16, 2012, (Mitigation Seed Mixes). Any changes in project design or scope not detailed in the application described above or modified by the conditions below are not authorized by this certification.

CONDITIONS OF THE SECTION 401 WATER QUALITY CERTIFICATION:

You shall:

- 1) Deposit any dredged material in a contained upland disposal area to prevent sediment runoff to any waterbody.
- 2) Allow the commissioner or an authorized representative of the commissioner (including

an authorized contractor), upon the presentation of credentials:

- a) to enter your property, including impact and mitigation site(s);
 - b) to have access to and copy at reasonable times any records that must be kept under the conditions of this certification;
 - c) to inspect, at reasonable times, any monitoring or operational equipment or method; collection, treatment, pollution management or discharge facility or device; practices required by this certification; and any mitigation wetland site;
 - d) to sample or monitor any discharge of pollutants or any mitigation site.
- 3) Complete all approved discharges no later than two (2) years of the date of issuance of this Section 401 Water Quality Certification. You may request a one (1) year extension to the Section 401 Water Quality Certification by submitting a written request ninety (90) days prior to the deadline stated above. The written request shall contain an account of which discharges and mitigation have been completed and list the reasons an extension is requested.
- 4) Implement the mitigation plan as described in the application received September 22, 2011, and correspondence from Laura Hilden, INDOT, dated March 12, 2012, and electronic mail correspondence from Jeremy Kieffner, Bernardin Lochmueller and Associates, dated May 15, 2012, and May 16, 2012, (referred to collectively hereinafter as the "mitigation plan"), and as modified by the conditions of this certification. The wetland(s) created or restored pursuant to the mitigation plan shall be referred to hereinafter as the "mitigation wetland" or "mitigation wetlands." The stream(s) created or restored pursuant to the mitigation plan shall be referred to hereinafter as the "mitigation stream" or "mitigation streams".
- 5) Complete all activities necessary to create the mitigation wetland within two (2) years of the effective date of this certification, unless IDEM grants a written extension upon request. These activities include excavation, grading, installation of hydrologic controls, and planting.
- 6) Monitor the mitigation wetland and mitigation stream sites for a minimum period of ten (10) years. If the mitigation sites do not meet the success criteria, specified in **Conditions 7 & 8**, during the ten (10) year period, then corrective actions will be required. These corrective actions may include additional grading, planting, relocation, or other actions deemed necessary by IDEM to meet the success criteria. Corrective actions often include extended monitoring to verify the effectiveness of the corrective action. Extended monitoring may constitute the sole corrective action if IDEM believes that the sites need more time to meet the success criteria. For IDEM to release the mitigation sites from this monitoring requirement, you must demonstrate to IDEM, through your monitoring reports, that the sites meet or exceed the success criteria. Once you believe that the sites meet or exceed all of the success criteria listed below, you may submit a proposed final monitoring report to IDEM and suspend monitoring. If

IDEM confirms that the mitigation sites meet or exceed all of the success criteria, then IDEM shall notify you that the mitigation is complete and that you may permanently discontinue monitoring.

- 7) Ensure that the mitigation wetlands meet all of the following success criteria at the end of monitoring:
- a) The area of wetland established, as measured by a wetland delineation, must meet or exceed the 19.62 acres of wetland compensatory mitigation required.
 - b) The wetland actually established must consist of 9.25 acres of forested wetland, 0.57 acre of scrub/shrub wetland, and 9.8 acres of emergent wetland.
 - c) Greater than 50% of the dominant vegetation species must have a wetland indicator of FAC (i.e., facultative) or wetter.
 - d) The hydrology at the mitigation wetland site must meet the wetland hydrology criteria contained in the United States Army Corps of Engineers Wetland Delineation Manual, Technical Report Y-87-1 (January, 1987).
 - e) The combined surface areal coverage of *Phalaris arundinacea* (reed canary grass) and *Typha spp.* (cattail) shall not exceed 15% of the mitigation wetland.
 - f) The mitigation wetland is free of the following exotic species: *Lythrum salicaria* (purple loosestrife), *Phragmites australis* (common reed), and *Myriophyllum spicatum* (water milfoil).
 - g) Native plant species excluding *Typha spp.* (cattail) must have an areal cover of at least 70%.
 - h) No more than 10% of the surface area coverage of the mitigation wetland may be open water, bare ground, or a combination of the two. Open water and bare ground are defined as areas with less than 10% areal vegetative cover.
 - i) For forested areas, the average density of live individuals of planted tree species shall be at least 200 stems per acre.
 - j) For forested and shrub areas, the average density of live individuals of planted shrub and vine species shall be at least 436 stems per acre.
 - k) No more than 20% of the volunteer species listed in the mitigation plan may be counted as part of meeting the live stem density survival rates.
 - l) All contingency wetlands must meet the success criteria specified in Condition 7(c) through 7(k) in order to be used as contingency wetland.
 - m) All forested wetland mitigation sites are planted with the forested wetland seed mix submitted via electronic mail from Jeremy Kieffner, Bernardin Lochmueller and Associates, dated May 16, 2012.
 - n) Any additional success criteria specified in the mitigation plan.
- 8) Ensure that the stream mitigation areas meet all of the following success criteria at the end of monitoring:
- a) Approximately 2,904 linear feet of stream channel is constructed onsite using natural stream channel design techniques.

- b) Approximately 8,166 linear feet of step pool streams are constructed onsite.
 - c) Approximately 77,192 linear feet of stream channel is constructed at the offsite mitigation sites.
 - d) Streams constructed using the natural stream channel design process shall be assessed using the Qualitative Habitat Evaluation Index (QHEI) or Headwater Habitat Evaluation Index (HHEI) and must meet or exceed the pre-impact score.
 - e) On-site step pool mitigation shall consist of the natural substrate from existing I-69 Section 4 streams and the constructed cross vanes for grade control shall be stable and showing no signs of movement with pools developed at the downstream end of each cross vane.
 - f) The mean channel width, depth, channel slope, sinuosity, bankfull dimensions, and bank characteristics of the stream channel mitigation areas shall match the mitigation design plans in Attachment 1 of the "Supplemental Information Package" dated March 5, 2012 and the revised "Section 4 Mitigation Plan Revision" dated May 15, 2012, with the range of natural variability.
 - g) Boulder, boulder slab, cobble, and gravel substrates in all constructed riffle/run complexes, cross veins, j-hooks, and step pool mitigation streams shall be <50% embedded by fine materials (sand, silt, clay).
 - h) Approximately 138.57 acres of forested riparian corridor shall be present at the end of monitoring.
 - i) 50% of the planted trees and shrubs shall be alive and showing signs of growth at the end of monitoring.
 - j) No more than 20% of the volunteer species listed in the mitigation plan may be counted as part of meeting the live stem density survival rates.
 - k) 50% of the installed live willow stakes shall be alive and showing signs of growth at the end of monitoring.
 - l) The forested riparian corridor is free from *Elaeagnus umbellate* (autumn olive), *Elaeagnus angustifolia* (russian olive), *Rosa multiflora* (multiflora rose), and *Lonicera maackii*, *L. morrowii*, *L. tatarica* (honeysuckle).
 - m) All forested riparian corridor plantings are planted with the woodland seed mix submitted via electronic mail from Jeremy Kieffner, Bernardin Lochmueller and Associates, dated May 16, 2012.
 - n) All contingency streams must meet the success criteria specified in Condition 8 (f) through 8 (i) in order to be used as contingency stream.
 - o) Any additional success criteria specified in the mitigation plans.
- 9) Monitor the mitigation wetlands and mitigation streams during the 1st, 2nd, 3rd, 5th, 7th, and 10th years, starting one full growing season after construction and planting, to determine whether the sites are achieving the success criteria specified in **Conditions 7 & 8** of this certification. You must complete corrective actions as are necessary to ensure the mitigation wetlands and mitigation streams will achieve the success criteria within the required period. These corrective actions may include additional grading, plantings, or relocation of the mitigation wetland, along with extended monitoring.

Describe, in the monitoring reports, any corrective actions taken to ensure success of the mitigation sites.

- 10) Permanently and clearly identify on-site all mitigation wetlands and mitigation streams after construction. If the mitigation wetlands and mitigation streams to be established are adjacent to or near existing wetlands or streams, then permanent stakes/markers must distinguish the mitigation wetlands and mitigation streams from the existing wetlands and streams.
- 11) Submit annual monitoring reports of the mitigation wetlands and mitigation streams to this office by December 31 of each year the sites were monitored until released from monitoring by this office. These reports shall contain information concerning what steps you have taken to create the mitigation wetland and mitigation streams and whether they are achieving each of the success criteria specified in **Conditions 7 & 8**. The reports shall include the following:
 - a) The IDEM identification number.
 - b) As-built plans (in the first year's report).
 - c) Discussion of hydrology at the mitigation site.
 - d) Discussion of plant community development at the mitigation wetland site.
 - e) Discussion of methods or means used to determine compliance with the success criteria.
 - f) Photographs representative of the mitigation wetland site and sampling points.
 - g) Identification of any problems with meeting the success criteria.
 - h) Recommendations for correcting any problems identified.
 - i) Wetland delineation for the mitigation wetland in the final monitoring report.
- 12) Submit as-built plans with the first year's monitoring report for the mitigation stream and/or wetland. As-built plans shall include the final grade elevations at one foot contours, including a plan view and cross sections. For relocated streams, this shall include a longitudinal profile, and lateral cross sections at the apex of each meander and at the midpoint between meanders. For wetlands, this shall include a cross section along the primary axis and secondary axis. In addition, as-built plans shall include locations and elevations of structures (e.g., culvert inverts, outfalls, inlets, berms, piezometers, wells, etc.), including markers specified in Condition 11. As-built plans shall also include the species and quantities of each species that were planted. Deviations from the approved mitigation plan must be highlighted and explained.
- 13) File a signed and recorded environmental notice, which describes the compensatory mitigation contained in the mitigation plan, with the department within sixty (60) days of the release from monitoring requirements. You may substitute a copy of a properly recorded deed restriction or conservation easement protecting the mitigation site(s) to satisfy this condition.

- 14) Notify IDEM at least 30 days prior to the installation of any temporary crossing or temporary causeway. All requests for temporary crossings or temporary causeways must be routed through the INDOT Office of Environmental Services or an alternate staff member designated by INDOT.
- 15) Ensure all temporary stream crossings and causeways are installed in a manner that will maintain near normal downstream flows and are constructed of material that will not be eroded by expected high flows. All temporary crossings and causeways must be completely removed upon completion of the project and the affected areas restored to preconstruction contours, grades, and vegetated conditions.
- 16) Ensure all stream pump-around activities are discharged in a manner that does not cause erosion at the outlet. Cofferdam dewatering activities must use filter bags, upland sediment basins/traps, or a combination of other appropriate sediment control measures to minimize the discharge of sediment-laden water into waters of the U.S. All sediment control measures must be installed and maintained in good working order. For stream pump-around activities, the in-stream material used to construct the dam must be constructed of non sediment producing sources. Examples include, but may not be limited to sand bags and sheet pile walls.
- 17) Ensure you comply with the United States Fish and Wildlife Service, *Tier 2 Biological Opinion for Section 4 of the Proposed Interstate 69 (I-69) Extension From Evansville to Indianapolis for the Federally Endangered Indiana Bat*, dated July 6, 2011.
- 18) Ensure you comply with the 1993 Karst Memorandum of Understanding dated October 13, 1993, and the 1-69 Section 4 Karst Agreement dated March 9, 2012.
- 19) Ensure you have on-site construction personnel trained in the identification of karst features and that all karst features are clearly marked before construction and during construction if features are exposed.
- 20) Ensure the spring box installed at karst feature 4-0509 outlets directly back to its channel to Indian Creek or a newly constructed channel to Indian Creek and is not incorporated into any road side ditch or detention feature.
- 21) Ensure you avoid karst feature 4-0173. This feature is located at the edge of the right-of-way and has a high infiltration rate. Reduce slopes and use retaining walls to avoid impact to this feature.
- 22) Ensure karst spring features 4-1457 and 4-1458 are conveyed through the median via an open channel with shrub and native herbaceous plantings installed to provide shade and water quality buffering.
- 23) Ensure, to the maximum extent practical, that all karst spring box flows are perpetuated

through the site and into the nearest offsite receiving stream. Spring water should not be routed through road side ditches where spill containment or sediment trapping is proposed.

- 24) Ensure sinking stream 4-0098 has a specific construction sequence created prior to the bidding of the contract that will ensure karst protection measures are installed and maintained prior to and during construction.
- 25) Plant native trees and shrubs along any streams captured into roadside side ditches on the outside right-of-way line or leave enough tree cover to provide shade to the captured streams.
- 26) Prior to construction, submit a list of streams for each contract or by workable segments within each contract, where in-stream sediment trapping measures are proposed. The list should be submitted to the IDEM Section 401 Project Manager and shall include the name of each stream as identified in the Section 401 Water Quality Certification application, the QHEI/HHEI score, the design plans for the measures, and a restoration plan for each stream. Upon receipt of each list, IDEM will review and determine if IDEM will allow these measures to be installed. Please be advised, you will also need Army Corps of Engineers approval for the discharge of fill material associated with the installation of in-stream sediment trapping measures.
- 27) Ensure that all streams that have in-stream sediment trapping measures are restored to preconstruction grades, contours, vegetated conditions, and substrate types upon completion of construction activities at each stream. Upon completion of restoration activities, the original substrates must be embedded <50%.
- 28) Install sediment control measures prior to any land disturbance to prevent soil from leaving the construction site. Appropriate sediment control methods include, but are not limited to, sediment basins, traps, straw bale barriers, filter berms, and silt fence. All methods selected must be appropriate, based on drainage area and other site characteristics.
- 29) Install appropriate sediment control measures, selected based on drainage area and other on-site characteristics around the perimeter of any wetlands and/or other waterbodies. These measures may include, but are not limited to sediment basins, sediment traps, filter berms, and silt fence.
- 30) Utilize runoff control measures, including but not limited to, diversions and slope drains. These measures are effective for directing and managing runoff to sediment control measures and may have a significant impact on appropriately sizing of the sediment control measures.
- 31) Phase all construction activities to ensure that all storm water quality measures are

installed and implemented in a timely manner that takes into consideration the sequence in which the measures are installed in relation to the progression of clearing and grading.

- 32) Ensure all contractors on Section 4 of I-69 have the capability to seed within 7 days. Ensure all areas that may remain idle for more than 7 days are seeded immediately. As appropriate, seeding shall include the application of mulch that is appropriately anchored by crimping or tackifiers. Install erosion control blanket in areas that are not conducive to the application of mulch. Appropriate blanket shall be chosen based on site characteristics such as slope length and steepness and/or velocity for channel applications.
- 33) Ensure all cut and fill slopes adjacent to wetlands, streams or captured streams or that directly drain to these aquatic features are stabilized using rapid/incremental seeding. Slopes shall be seeded in 10 foot cut/fill increments.
- 34) Designate on-site erosion and sediment control inspectors that are trained and knowledgeable of storm water quality principles and practices to ensure the contractors are properly installing and maintaining erosion and sediment control measures in accordance with 327 IAC 15-5 and to ensure compliance with this Section 401 Water Quality Certification.
- 35) INDOT shall establish a mechanism for quality assurance that ensures storm water quality measures are installed and maintained. This may be achieved through quality adjustments, stop work orders, or other alternatives that INDOT deems effective to achieve compliance with 327 IAC 15-5 and this Section 401 Water Quality Certification.
- 36) In areas determined to be out of compliance, corrective action to bring the area back into compliance shall take precedence over continuation of construction activities.
- 37) Upon discovery, remove all discharges of sediment into waters of the state and restore the stream channels back to the original grades, contours, substrates, and vegetated conditions. This includes sediment discharges off your right-of-way, provided access has been granted by the property owner. If access is denied, IDEM shall be notified.
- 38) Ensure that wing walls are immediately installed after the installation of box culverts and all adjacent areas are immediately seeded and stabilized.
- 39) Ensure the Project Engineers/Project Supervisors enforce the conditions of this Section 401 Water Quality Certification on each contract.

This certification does not relieve you of the responsibility of obtaining any other permits or authorizations that may be required for this project or related activities from IDEM or any other agency or person. You may wish to contact the Indiana Department of Natural

Resources at 317-232-4160 (toll free at 877-928-3755) concerning the possible requirement of natural freshwater lake or floodway permits. In addition, you may wish to contact IDEM's Storm Water Permits Section at 317-233-1864 concerning the possible need for a 327 IAC 15-5 (Rule 5) permit if you plan to disturb greater than one (1) acre of soil during construction.

This certification does not:

- (1) authorize impacts or activities outside the scope of this certification;
- (2) authorize any injury to persons or private property or invasion of other private rights, or any infringement of federal, state or local laws or regulations;
- (3) convey any property rights of any sort, or any exclusive privileges;
- (4) preempt any duty to obtain federal, state or local permits or authorizations required by law for the execution of the project or related activities; or
- (5) authorize changes in the plan design detailed in the application.

Failure to comply with the terms and conditions of this Section 401 Water Quality Certification may result in enforcement action against you. If an enforcement action is pursued, you could be assessed up to \$25,000 per day in civil penalties. You may also be subject to criminal liability if it is determined that the Section 401 Water Quality Certification was violated willfully or negligently.

This certification is effective eighteen (18) days from the mailing of this notice unless a petition for review and a petition for stay of effectiveness are filed within this 18-day period. If a petition for review and a petition for stay of effectiveness are filed within this period, any part of the certification within the scope of the petition for stay is stayed for fifteen (15) days, unless or until an Environmental Law Judge further stays the certification in whole or in part.

This decision may be appealed in accordance with IC 4-21.5, the Administrative Orders and Procedures Act. The steps that must be followed to qualify for review are:

- 1) You must petition for review in writing that states facts demonstrating that you are either the person to whom this decision is directed, a person who is aggrieved or adversely affected by the decision, or a person entitled to review under any law.
- 2) You must file the petition for review with the Office of Environmental Adjudication (OEA) at the following address:
Office of Environmental Adjudication
100 North Senate Avenue
IGCN Room N501
Indianapolis, IN 46204
- 3) You must file the petition within eighteen (18) days of the mailing date of this decision. If the eighteenth day falls on a Saturday, Sunday, legal holiday, or other day that the OEA offices are closed during regular business hours, you may file the petition the next

day that the OEA offices are open during regular business hours. The petition is deemed filed on the earliest of the following dates: the date it is personally delivered to OEA; the date that the envelope containing the petition is postmarked if it is mailed by United States mail; or, the date it is shown to have been deposited with a private carrier on the private carrier's receipt, if sent by private carrier.

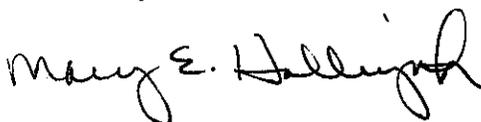
Identifying the certification, decision, or other order for which you seek review by number, name of the applicant, location, or date of this notice will expedite review of the petition.

Note that if a petition for review is granted pursuant to IC 4-21.5-3-7, the petitioner will, and any other person may, obtain notice of any prehearing conferences, preliminary hearings, hearings, stays, and any orders disposing of the proceedings by requesting copies of such notices from OEA.

If you have procedural questions regarding filing a petition for review you may contact the Office of Environmental Adjudication at 317-232-8591.

If you have any questions about this certification, please contact Jason Randolph, Project Manager, of my staff at 317-233-0467, or you may contact the Office of Water Quality through the IDEM Environmental Helpline (1-800-451-6027).

Sincerely,



Mary E. Hollingsworth, Branch Chief
Surface Water, Operations & Enforcement Branch
Office of Water Quality

cc: Deb Snyder, USACE-Louisville, Indianapolis Field Office
Robin McWilliams Munson, USFWS
Matt Buffington, IDNR
Melissa Gebien, USEPA Region 5
Michelle Allen, FHWA-Indiana
Jeremy Kieffner, Bernardin Lochmueller and Associates
Randy Braun, IDEM Section Chief Wetlands and Storm Water

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