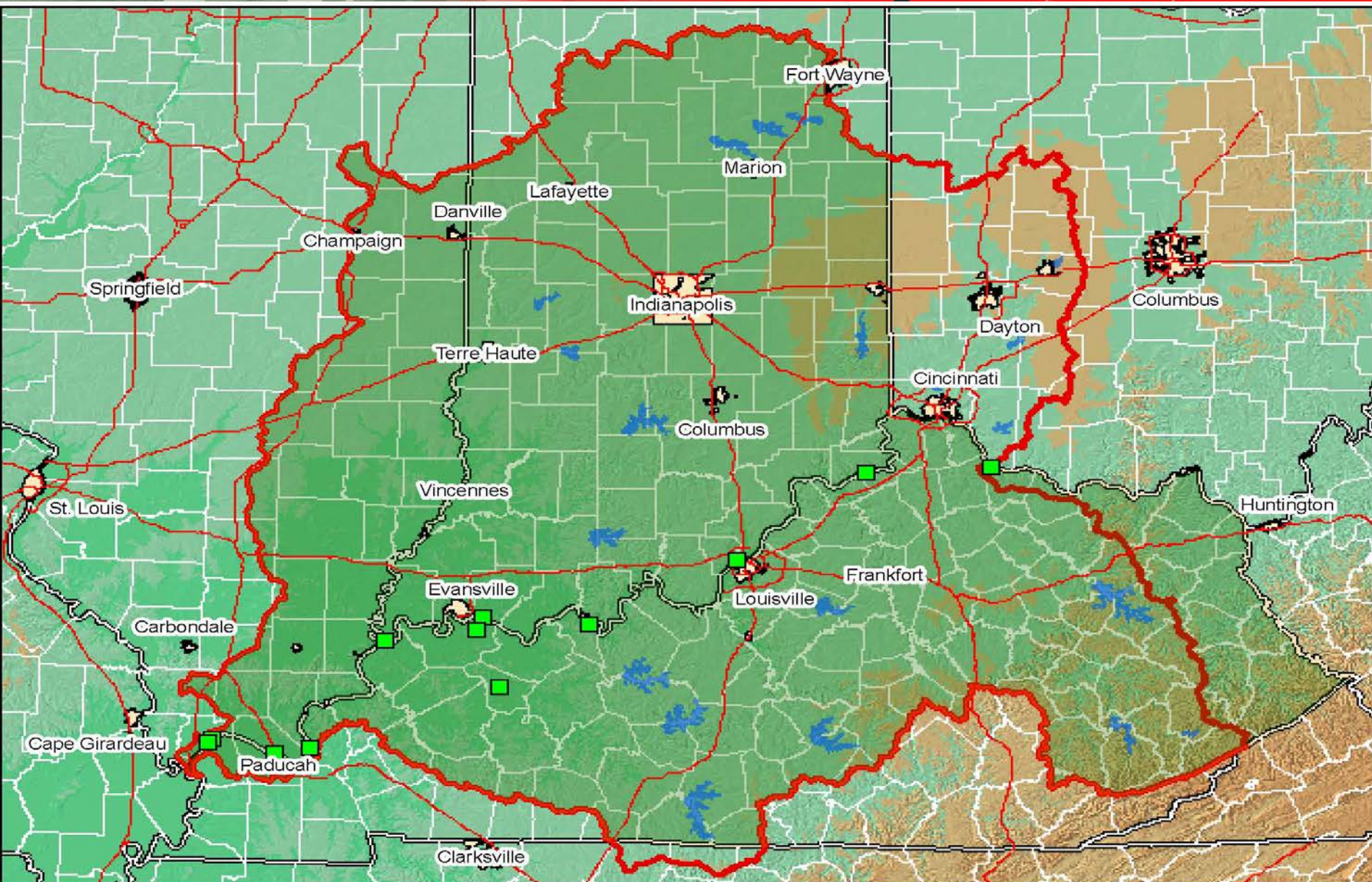




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US Army Corps of Engineers The Louisville Engineer District





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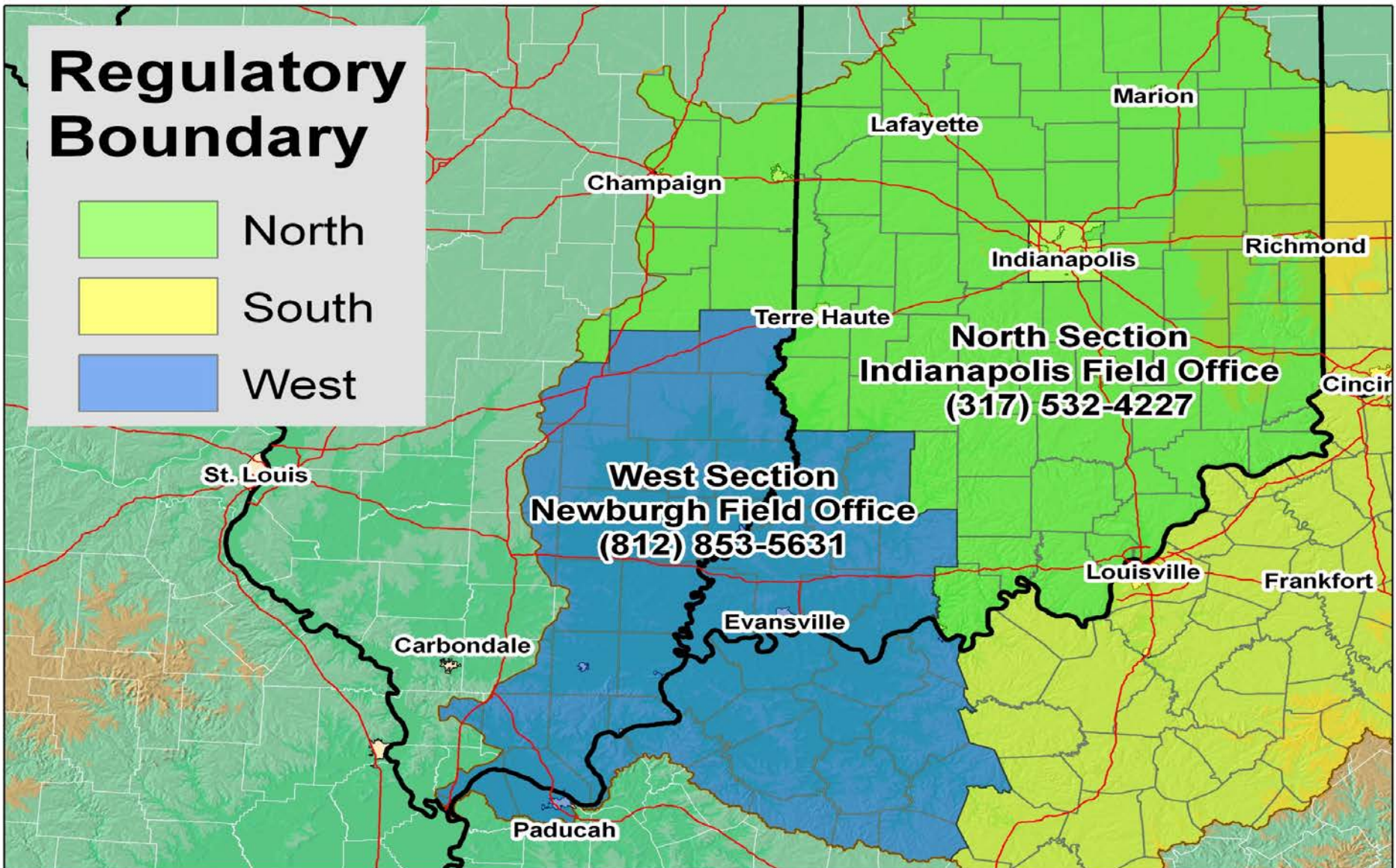
US Army Corps of Engineers

The Louisville Engineer District



Regulatory Boundary

-  North
-  South
-  West





Laws

- Section 10 of the Rivers and Harbors Act
Regulation of the placement of any structure or work that takes place in, under, or over a navigable water affecting course, location, or condition of navigable capacity.
- Section 404 of the Clean Water Act
Regulation of the discharge of dredged or fill material into all waters of the U.S., including wetlands



Definition of Fill Material

- Federal Register, May 9, 2002
- Change from “cause” to “effect”
- The discharge of material to waters of the U.S. that has the effect of replacing any portion of a water of the U.S. with dry land or changing the bottom elevation of any portion of a water of the U.S.



Flow Regime

- Ephemeral
- Flows only during, and for a short duration after, precip. Events in a typical year.
- Streambeds are located above the water table year-round.
- Groundwater is not a source of water for the stream.



Flow Regime

- Intermittent
- Flowing water during certain times of year, when groundwater for stream flow.
- May not have flowing water during dry periods.
- Runoff from rainfall is a supplemental source of hydrology.



Flow Regime

- Perennial
- Flowing water year around during a typical year.
- The water table is located above the streambed for most of the year.
- Groundwater is the primary source of water for stream flow.
- Runoff from rainfall is a supplemental source of hydrology.



Types of Permits

- Currently 2 permitting instruments for impacts as a result of mining
 - Nationwide Permits- NWP 21, 49, 50
 - * To use NWP's it's necessary to reach minimal impacts.
 - * Timeline restrictions
 - Individual Permits
 - * Bar is lower than NWP's
 - * Must achieve Finding of No Significant Impacts (FONSI)
 - * Can be authorized for life of mining impacts



Mitigation Plan

- Mitigation Bank Credits
- In-Lieu Fee Program Credits
- Permittee responsible mitigation under a watershed approach
- Permittee responsible mitigation through On-site and In-kind compensation
- Permittee responsible mitigation through Off-site and/or Out-of-Kind compensation



Mitigation

Can be based on functional replacement and/or linear footage/acreage. Need to utilize baseline assessment information (location, size, type, and existing conditions) to determine mitigation requirements.



Mitigation

- Provide measurable Goals and Objectives

Provide a discussion and objective statement on the functions and values of the resources to be impacted and compare that to the functions and values proposed in the mitigation.



Mitigation

Site Selection

Detail the factors considered in the site selection process. These could include factors such as watershed considerations/needs and practicability.



Mitigation Plan

- 1. Preparation
- Must prepare a final mitigation plan
- Final mitigation plan must include the items described on the following slides.



Mitigation Plan

- 2. Objectives
 - - description of resource type and amount provided.
 - - method of compensation (restoration, establishment, etc.)
 - - how mitigation will address needs of watershed, ecoregion, physiographic or other geographic area of interest.



Mitigation Plan

- 3. Site selection
- - description of factors considered (to include watershed needs, on-site alternatives, and practicability of accomplishing self sustaining resource restoration, establishment, etc.



Mitigation Plan

- 4. Site Protection Instrument
- - description of legal arrangement and instrument that will be used to ensure long term protection of the mitigation site.



Mitigation Plan

- 5. Baseline Information
- - a description of the ecological characteristics of proposed mitigation site and proposed impact site.
 - Can include descriptions (both historic and existing) of plant communities, hydrology, soil conditions, etc.
 - should include delineation of “waters of the U.S.” on the proposed project site.



Mitigation Plan

- 6. Determination of Credits
- - a description of the number of credits to be provided, including a brief explanation of the rationale for this determination.



Mitigation Plan

7. Mitigation Work Plan

At a minimum the plan should consist of:

- Construction methods, timing and sequencing
- Boundaries of proposed mitigation site
- Elevations and slopes
- Hydrology and hydrologic source (watershed size, discharge, regional curves)
- Connectivity to other waters
- Proposed plantings
- Control of volunteer and invasive vegetation, and



Mitigation

Work Plan cont.

- Erosion control
- Geomorphology and special stream structures
- Site management, maintenance plan, and long term plan for the site.
- Stream dimensions including: bankfull depth width/depth ratio, bankfull width etc.



Mitigation Plan

- 8 Maintenance Plan
- - a description and schedule of maintenance requirements to ensure the continued viability of the resource once initial construction is completed.



Mitigation Plan

- 9. Performance Standards
- Ecologically-based standards that will be used to determine whether the mitigation is achieving its objectives.



Mitigation Plan

- 10. Monitoring Requirements
- - description of parameters to be monitored to determine if the mitigation project is on track to meet performance standards.



Mitigation Plan

- 11. Long-term Management Plan
- - a description of how the mitigation will be managed after performance standards have been achieved to ensure long-term sustainability of the resource



Mitigation Plan

- 12. Adaptive Management
- - a strategy to address unforeseen changes.
- - the plan will guide decisions for revising mitigation plans and implementing corrective measures for both foreseeable and unforeseen circumstances that adversely affect mitigation success.



Mitigation Plan

- 13. Financial Assurances
- - Financial assurances provided and how they are sufficient to ensure a high level of confidence that mitigation is successful.



Mitigation Plan

- 14. Other
- - Other information may be needed as necessary to determine the appropriateness, feasibility, and practicability of the mitigation project.