

## For Interested Party Review - February 2006 Draft

### 3745-32-04 Plans, design and monitoring for mitigation.

(A) Mitigation proposals submitted pursuant to this paragraph must be accompanied by a comprehensive plan to achieve that proposal in accordance with the requirements of rules 3745-1-55 and 3745-1-56 of the Administrative Code and must address each of the following topics:

(1) Mitigation goals and objectives.

(a) Impact sites. An applicant shall:

(i) Describe and quantify the aquatic resource type and functions that will be impacted at the proposed impact site, including temporary and permanent impacts to the aquatic environment.

(ii) Describe aquatic resource concerns in the watershed (e.g., flooding, water quality, habitat) and how the impact site contributes to overall watershed and regional functions, and identify watershed or other regional plans that describe aquatic resource objectives.

(b) Mitigation sites. An applicant shall:

(i) Describe and quantify the aquatic resource type and functions for which the mitigation project is intended to compensate.

(ii) Describe the contribution to overall watershed and regional functions that the mitigation site or sites are intended to provide.

(2) Baseline information for each type of site: proposed impact sites, proposed mitigation sites and, if applicable, proposed reference sites.

(a) Location. An applicant shall provide the following for each of the proposed impact sites, proposed mitigation sites and, if applicable, proposed reference sites:

(i) Coordinates, preferably using differential global positioning system (DGPS), and written location description including block, lot, township, county, and hydrologic unit code (HUC) number, as appropriate and pertinent;

(ii) Maps (e.g., site map with delineation verified by the U.S. army corps of engineers, map of vicinity, map identifying location within the watershed, national wetlands inventory map, natural resources conservation service soils map, zoning or planning maps) indicating the area of proposed fill on the site; and

- (iii) Aerial or satellite photos.
- (b) Classification. An applicant shall identify hydrogeomorphic classification, as well as Cowardin classification, Rosgen stream type, and natural resources conservation service classification, as appropriate.
- (c) An applicant shall identify the quantity of wetland resources (acreage) or stream resources (linear feet) by type or types.
- (d) An applicant shall describe the assessment method or methods, such as hydrogeomorphic (HGM), index of biotic integrity (IBI), and wetland rapid assessment procedure (WRAP), used to quantify impacts to aquatic resource functions. The applicant shall explain the findings. The same method or methods should be used at both impact and mitigation sites.
- (e) Existing hydrology. An applicant shall identify the following:

  - (i) Water budget. An applicant shall include water sources (e.g., precipitation, surface runoff, ground water, and streams) and losses. Provide budgets for both wet and dry years;
  - (ii) Hydroperiod (e.g., seasonal depth, duration, and timing of inundation and saturation) and per cent open water;
  - (iii) Historical hydrology of mitigation site if different than present conditions;
  - (iv) Contributing drainage area (acres); and
  - (v) Results of water quality analyses (e.g., data on surface water, ground water, and tides for such attributes as pH, redox, nutrients, organic content, suspended matter, dissolved oxygen, and heavy metals) of samples taken from the site.
- (f) Existing vegetation. An applicant shall provide the following:

  - (i) A list of species on site, indicating dominants;
  - (ii) Species characteristics such as densities, general age and health, and native, nonnative, and invasive status;
  - (iii) Percentage of vegetative cover and community structure (canopy stratification); and

- (iv) Map showing locations of plant communities.
- (g) Existing soils. An applicant shall provide the following:
  - (i) Soil profile description (e.g., soil survey classification and series) or stream substrate identification. Soil sample locations shall be identified on the site map;
  - (ii) Results of standard soils analyses, including per cent organic matter, structure, texture, and permeability; and
  - (iii) Description of existing wildlife usage. An applicant shall indicate possible threatened and endangered species habitat.
- (h) An applicant shall identify the historic and current land use, noting prior converted cropland.
- (i) An applicant shall list the name and address of current owner or owners.
- (j) An applicant shall describe the watershed context and surrounding land use, including:
  - (i) Impairment status of aquatic resources and impairment type (e.g., determinations made under section 303(d) of the Federal Water Pollution Control Act);
  - (ii) Description of watershed land uses (including the percentages of land uses that are agricultural, forested, wetland, and developed);
  - (iii) Sizes and widths of natural buffers. An applicant shall describe the buffers and show them on a map;
  - (iv) Description of landscape connectivity such as proximity and connectivity of existing aquatic resources and natural upland areas. An applicant shall show connectivity on a map; and
  - (v) Relative amounts of aquatic resource areas, by individual type and overall resources, that the impact site represents for the watershed or region.
- (3) Mitigation site selection and justification. In the mitigation proposal, the applicant shall:
  - (a) Describe site-specific objectives, including mitigation types, acreages, and proposed compensation ratios.

- (b) Describe watershed and regional objectives. An applicant shall describe how the mitigation project will compensate for the functions identified in the paragraph (A)(1) of this rule.
  - (c) Describe how the mitigation project will contribute to aquatic resource functions within the watershed or region (i.e., sustain and protect existing watershed functions) identified in paragraph (A)(1)(d) of this rule. An applicant shall describe how the planned mitigation project will contribute to landscape connectivity.
  - (d) Show on a map or aerial photo the likely future adjacent land uses and compatibility.
  - (e) Describe site selection practicability in terms of cost, existing technology, and logistics.
  - (f) If the proposed mitigation is off-site or out-of-kind, explain why on-site or in-kind options are not practicable or environmentally preferable.
  - (g) Identify existing and proposed mitigation site deed restrictions, easements and rights-of-way and describe how the existence of any such restrictions, easements and rights-of-way will be addressed, particularly in the context of incompatible uses.
  - (h) Explain how the design is sustainable and self-maintaining. An applicant shall show, by means of a water budget, that there is sufficient water available to sustain long-term wetland or stream hydrology and provide evidence that a legally defensible, adequate and reliable source of water exists.
  - (i) Provide a U.S. fish and wildlife service and national oceanic and atmospheric administration fisheries listed species clearance letter or biological opinion, as appropriate.
  - (j) Provide a state historic preservation office cultural resource clearance letter.
- (4) Mitigation work plan. An applicant shall provide the following:
- (a) Maps marking the boundaries of the proposed mitigation types, including DGPS coordinates;
  - (b) A description of the timing of mitigation: before, concurrent or after authorized impacts. If mitigation is not in advance or concurrent with impacts, the applicant shall explain why it is not practicable and describe other measures to compensate for the consequences of temporal losses;

- (c) A grading plan that:
  - (i) Indicates existing and proposed elevations and slopes; and
  - (ii) Describes plans for establishing appropriate microtopography. Reference wetland can provide design templates;
- (d) A description of construction methods (e.g., equipment to be used);
- (e) A construction schedule, including expected start and end dates of each construction phase and the expected date for as-built plan;
- (f) A description of the planned hydrology for the mitigation site, including:
  - (i) Source of water;
  - (ii) Connections to existing waters;
  - (iii) Hydroperiod (seasonal depth, duration, and timing of inundation and saturation), per cent open water, and water velocity;
  - (iv) Potential interaction with ground water;
  - (v) Existing monitoring data, if applicable, indicating the location of monitoring wells and stream gauges on a site map;
  - (vi) Stream or other open water geomorphic features (e.g., riffles, pools, bends, and deflectors); and
  - (vii) Structures requiring maintenance. An applicant shall show the structures on a map and explain structure maintenance as required in paragraph (A) of this rule;
- (g) A description of the planned vegetation, including:
  - (i) Native plant species composition (e.g., list of acceptable native hydrophytic vegetation);
  - (ii) Sources of native plant species (e.g., salvaged from impact site, local source, seed bank), stock types (bare root, potted, seed), and plant ages and sizes;
  - (iii) Plant zonation and location map (refer to grading plan to ensure plants will have an acceptable hydrological environment);

- (iv) Plant spatial structure including quantities and densities, per cent cover, and community structure (e.g., canopy stratification); and
        - (v) Expected natural regeneration from existing seed bank, plantings, and natural recruitment;
      - (h) A description of the soils planned for the mitigation site, including:
        - (i) Soil profile;
        - (ii) Source of soils (e.g., existing soil or imported impact site hydric soil), target soil characteristics (e.g., organic content, structure, texture, and permeability), and soil amendments (e.g., organic material or topsoil); and
        - (iii) Erosion and soil compaction control measures;
      - (i) A description of planned habitat features. Identify large woody debris, rock mounds, etc. on a map;
      - (j) A description of the planned buffer (identify on a map), including:
        - (i) An evaluation of the buffer's expected contribution to aquatic resource functions; and
        - (ii) The physical characteristics (e.g., location, dimensions, native plant composition, spatial and vertical structure); and
      - (k) Other planned features, such as interpretive signs, trails, and fences.
- (5) Performance standards.
  - (a) An applicant shall identify clear, precise, quantifiable parameters that can be used to evaluate the status of desired functions. These may include hydrological, vegetative, faunal, and soil measures (e.g., plant richness, per cent exotic and invasive species, water inundation and saturation levels). The applicant shall describe how performance standards will be used to verify that objectives identified in paragraphs (A)(3)(b) and (A)(3)(c) of this rule have been attained.
  - (b) An applicant shall set target values or ranges for the parameters identified. These targets should be set to mimic the trends and eventually approximate the values of a reference wetland.
- (6) Site protection and maintenance. An applicant shall:

- (a) Identify the long-term legal protection instrument (e.g., conservation easement, deed restriction, or transfer of title);
  - (b) Identify the party or parties responsible, their addresses, and their roles (e.g., site owner, easement owner, or maintenance implementation). If there is more than one party, the applicant shall identify the primary party;
  - (c) Provide a plan and schedule for maintenance of the mitigation site (e.g., measures to control predation and grazing of mitigation plantings, temporary irrigation for plant establishment, replacement planting, and structure maintenance and repair); and
  - (d) Provide an invasive species control plan (plant and animal).
- (7) Monitoring plan. The applicant shall identify the following:
- (a) The party or parties responsible for monitoring. If there is more than one party, the applicant shall identify the primary party;
  - (b) The data to be collected and reported, including how often and for how long it will be collected. The applicant shall identify proposed monitoring stations, including transect locations on map;
  - (c) The assessment tools and methods to be used for data collection and monitoring the progress towards attainment of performance standard targets;
  - (d) The format for reporting monitoring data and assessing mitigation status; and
  - (e) A monitoring schedule.
- (8) Adaptive management plan. The applicant shall identify the following:
- (a) The party or parties responsible for adaptive management;
  - (b) Potential challenges (e.g., flooding, drought, invasive species, seriously degraded site, or extensively developed landscape) that pose a risk to project success. The applicant shall discuss how the design accommodates these challenges;
  - (c) Potential remedial measures in the event mitigation does not meet performance standards in a timely manner; and
  - (d) A proposed set of procedures to allow for modifications of performance standards if mitigation projects are meeting mitigation goals, but in unanticipated ways.

- (9) Financial assurances. The applicant shall identify the following:
- (a) The party or parties responsible to establish and manage the financial assurance, the specific type of financial instrument, the method used to estimate assurance amount, the date of establishment, and the release and forfeiture conditions for each of the following:
    - (i) Construction phase;
    - (ii) Maintenance;
    - (iii) Monitoring;
    - (iv) Remedial measures; and
    - (v) Project success;
  - (b) The types of assurances (e.g., performance bonds, irrevocable trusts, escrow accounts, casualty insurance, or letters of credit); and
  - (c) The schedule for reviewing and adjusting financial assurance to reflect current economic factors.
- (B) The applicant shall conduct ecological monitoring of the compensatory mitigation project and submit annual reports detailing the results of the ecological monitoring for a period of at least five years following construction of the compensatory mitigation. The ecological monitoring may include, but is not limited to:
- (1) Collection of data on hydrologic characteristics;
  - (2) Collection of data on vegetation communities and soils at the compensatory mitigation site; and
  - (3) Conducting an assessment of the compensatory mitigation wetlands using an appropriate wetland evaluation method acceptable to the director.

The director may reduce or increase the number of years for which ecological monitoring is required to be conducted based on the effectiveness of the compensatory mitigation project.

Effective:

R.C. 119.032 rule review date: None

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Certification

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Date

Promulgated Under: 119.03  
Statutory Authority: 6111.03  
Rule Amplifies: 6111.03  
Prior Effective Date: None