

IAFSM 2013 ANNUAL CONFERENCE

MITIGATION: ON THE GROUND ISSUES

(FILL 'EM IN – WE'LL MAKE MORE!)

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INTRODUCTION

- Those who intend to impact wetlands or other waters of the U.S. must obtain a permit from the Corps under the Clean Water Act.
- Consistent with the program's goal of no net loss, these permits require mitigation.

MITIGATION IS A 3-STEP PROCESS

- Avoiding impacts
- Minimizing impacts
- Compensating for impacts

Wetlands and other water resources play an important role in the landscape.



WETLAND IMPACTS

- Filling in and paving over a portion of a wetland?
- Lengthening an existing culvert (wetland or stream crossing)?
- Discharging storm sewer into wetland or waters of the U.S.?
- Diverting all drainage away from a wetland?

What constitutes wetland impacts???

Direct vs. indirect impacts???

STEP 1: AVOIDANCE

- Can the project be modified so that wetlands are not impacted?
- Have alternative road alignments, site plans, etc. been considered?
- Be prepared to explain why you can't avoid wetland impacts



STEP 2: MINIMIZATION

- Can the project be modified to minimize wetland impacts?
- Alternative road alignments, site plans, etc.?
- Wetland buffers
- Stormwater best management practices (BMPs)



STEP 3: COMPENSATION

- Construct wetlands on-site
- Construct wetlands off-site
- Enhance on-site or off-site existing wetlands
- Purchase credits from a wetland mitigation bank (preferred)
- Fee-in-lieu programs



AVOIDANCE: BUFFERS



- check regulations for width
- native vegetation (prairie)
- restrictions on what can be within a buffer

AVOIDANCE: BMPs



- bioswales, rain gardens, naturalized detention
- native vegetation
- level spreaders

COMPENSATION: CREATION



- Restore drained (historic) wetlands
- Create new wetlands
- Separate from detention

COMPENSATION: ENHANCEMENT



- Improve quality of existing wetlands
- Often get partial credit

COMPENSATION: BANKING

Regulatory In-lieu Fee and Bank Information Tracking System

Navigation

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District

State

FWS Field Office

Chicago

Map Results

38 banks in USACE District of Chicago including single clients

Bank Name	District	Status
Alkinson Road	Chicago	Approved
Bank 4 - Neal Marsh	Chicago	Approved
Big Saq 1	Chicago	Approved
Big Saq 2	Chicago	Approved
Big Saq 3	Chicago	Approved
Cedar Creek A1	Chicago	Approved
Cedar Creek A2	Chicago	Approved
Cedar Creek B	Chicago	Approved
Cedar Creek C	Chicago	Approved
Cedar Creek D	Chicago	Approved
Delaney A	Chicago	Approved
Delaney B	Chicago	Approved
Delaney C	Chicago	Approved
Des Plaines Township	Chicago	Approved
Jakes Creek 1B	Chicago	Approved
Jakes Creek 2A	Chicago	Approved
Kishwaukee	Chicago	Approved
Lake Station	Chicago	Approved
Lily Patches	Chicago	Approved
Mink Creek 1	Chicago	Approved
Mink Creek 2	Chicago	Approved
Prairie Green 1	Chicago	Approved
Red Wine Slough	Chicago	Approved
Sauk Trail	Chicago	Approved
Slough Creek	Chicago	Approved
Squaw Creek A	Chicago	Approved

Status: All... Include: Single Client All... Credit Type: All... Credit Classification: All...

Roads Borders USACE Districts FWS Field Offices HUCS Footprint

Download KML

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Wetland Mitigation Bank:

- Same watershed as project
- Purchase “credits”
- Avoid and minimize

BUILDING WETLANDS



Hydrology:

- Disable drain tiles
- Earthwork
- Post detention stormwater

BUILDING WETLANDS



Soils:

- Re-using hydric (wetland) soils
- Using soil from uplands
- Topsoil vs. clay

BUILDING WETLANDS



Planting prep:

- Weed control
- Disking
- Soil amendments (e.g. fertilizer)

BUILDING WETLANDS



Seeding:

- Native plant species
- Local source
- Specialized equipment

BUILDING WETLANDS



Planting:

- Native plant species
- Local source
- Protect from wildlife

BUILDING WETLANDS



Erosion control:

- Mulch
- Erosion control blanket and turf reinforcement mat
- Riprap

MONITORING & MANAGEMENT

- Post-construction Monitoring and Management (M & M) is often a permit requirement
- 3 years to 15 years
- Monitor mitigation efforts and compare to performance criteria included in permit
- Natural areas (adaptive) management

Applies to:

- Created, restored, enhanced, or preserved wetlands
- Buffers
- BMPs

i.e. everything!

MANAGEMENT



Weed control:

- Mowing
- Burning
- Selective herbicide application (spot spray)
- Hand pulling

MANAGEMENT



Desirable vegetation:

- Weed control
- Additional seeding or planting
- Irrigation
- Water level control

IN CONCLUSION...

- Avoid impacts
- Minimize impacts
- Compensate for impacts
- ...and don't forget M & M!

