

Gorton
Blues
Gray
Ellinger
James
Beard
Stevens
Stinnett
Crosbie
McChord

A G E N D A
PLANNING COMMITTEE
February 19, 2008
1:00 P.M

1. Loudon Avenue Phase 1 Update - James
Materials Will Be Distributed At The Meeting
2. Constructed Wetlands - Gray (1-3)
3. Items Referred to Committee (4)

"Planning Committee, to which should be referred matters relating to parks, planning and zoning, housing, transportation, grants, legislation and social services."

Council Rules & Procedures, Section 2.102(1)



U.S. ENVIRONMENTAL PROTECTION AGENCY

Wetlands

Recent Additions | Contact Us | Print Version Search: **GO**

EPA Home > Water > Wetlands, Oceans and Watersheds > Wetlands > Wetlands and Watersheds

Laws, Regulations,
Guidance, and
Scientific Documents

State, Tribal, and
Local Initiatives

Landowners

Water Quality and
401 Certification

Monitoring and
Assessment

Wetlands and
Watersheds

Restoration

Education

In Your Area

Wetlands and Watersheds

- Wetlands and Watershed Planning
- Non-Point Source Pollution and Wetlands
- Urban Stormwater and Wetlands
- Floodplain Protection
- Wetland Restoration and Creation

Wetlands and Watershed Planning

Wetlands are important elements of a watershed because they serve as the link between land and water resources. Wetlands protection programs are most effective when coordinated with other surface water and ground-water protection programs and with other resource management programs, such as flood control, water supply, protection of fish and wildlife, recreation, control of stormwater, and non-point source pollution.

EPA has been working in partnership with many others to design and implement the watershed approach. The following EPA resources may be helpful to you:

Partnership Agreement for Watershed Management between the U.S. Department of the Army Office of the Assistant Secretary of the Army (Civil Works) and the U.S. Environmental Protection Agency (office of Water)

Wetlands and Watersheds Factsheet

The Watershed Approach

Center for Watershed Protection [\[EXIT Disclaimer\]](#) - A watershed planning site containing guidance on local tools to protect wetlands.

The Watershed and Wetland Protection Information Kit [\[EXIT Disclaimer\]](#), a collection of resources that can assist county and local officials with efforts to protect and restore the multiple benefits of their community's water resources. The information kit was produced by the Center for Watershed Protection and the National Association of Counties with support from the U.S. EPA.

Non-Point Source Pollution and Wetlands

Non-point source pollution is the Nation's leading source of surface water and ground water quality impairment. When properly managed, wetlands can help prevent non-point source pollution from degrading water quality.

Wetlands and Runoff Factsheet

Wetlands and Non-Point Source Factsheet - Managing Wetlands to Control Non-Point Source Pollution - This is one in a series of factsheets designed to help the public increase their understanding and management of non-point source pollution in their community.

1990 National Guidance: Wetlands and Non-Point Source Control - describes how State non-point source programs can use the protection of existing wetlands and the restoration of previously lost or degraded wetlands to meet the water quality objectives of adjacent or downstream water bodies.

Clean Water Act Section 319 Nonpoint Source Management Program

Urban Stormwater and Wetlands

Natural Wetlands and Urban Stormwater: Potential Impacts and Management (PDF) (84 pp, 212K, About PDF) - Addresses the issues and options related to the protection of natural wetlands that receive stormwater and urban runoff.

Protecting Natural Wetlands: A Guide for Stormwater Best Management Practices (PDF) (181 pp, 2.8MB, About PDF) - This document describes the potential benefits, limitations, and appropriate application of best management practices (BMPs) that can be implemented to protect the functions of natural wetlands from the impacts of urban stormwater discharges and other diffuse sources of runoff. (protecti.pdf)

Floodplain Protection

Floodplains are the relatively low areas adjacent to rivers, lakes, and oceans that are periodically inundated. Floodplain lands and adjacent waters, including wetlands, combine to form a complex, dynamic physical and biological system that supports a multitude of water resources. Floodplains provide the Nation with natural flood and erosion control, natural water filtering processes, a wide variety of habitats for plant and animal communities, places for recreation and scientific study, and historic sites.

Wetland Restoration and Creation

Wetland Restoration

Constructed Wetlands

[About the Wetlands Program](#) | [Helpline](#) | [Publications](#) | [Español](#)

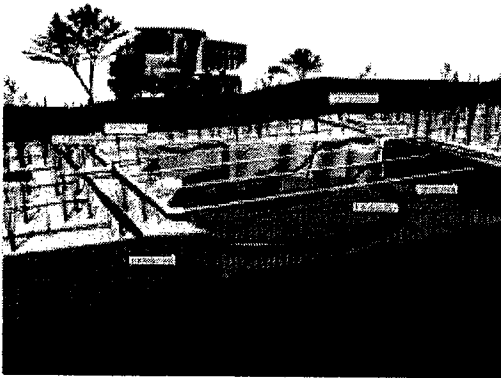
[EPA Home](#) | [Privacy and Security Notice](#) | [Contact Us](#)

Last updated on Friday, October 5th, 2007
URL: <http://www.epa.gov/owow/wetlands/watersheds/>

Constructed wetland

From Wikipedia, the free encyclopedia

A **constructed wetland** is an artificial marsh or swamp, created for anthropogenic discharge such as wastewater, stormwater runoff or sewage treatment, and as habitat for wildlife, or for land reclamation after mining or other disturbance. Natural wetlands act as biofilters, removing sediments and pollutants such as heavy metals from the water, and constructed wetlands can be designed to emulate these features.



Vertical Flow Constructed Wetlands

Vegetation in a wetland provides a substrate (roots, stems, and leaves) upon which microorganisms can grow as they break down organic materials. This community of microorganisms is known as the periphyton. The periphyton and natural chemical processes are responsible for approximately 90 percent of pollutant removal and waste breakdown. The plants remove about seven to ten percent of pollutants, and act as a carbon source for the microbes when they decay. Different species of aquatic plants have different rates of heavy metal uptake, a consideration for plant selection in a constructed wetland used for water treatment.

Constructed wetlands are of two basic types: subsurface-flow and surface-flow wetlands. Subsurface-flow wetlands can be further classified as horizontal flow and vertical flow constructed wetlands. Subsurface-flow wetlands move effluent (agricultural or mining runoff, tannery or meat processing wastes, wastewater from sewage or storm drains, or other water to be cleansed) through a gravel or sand medium on which plants are rooted; surface-flow wetlands move effluent above the soil in a planted marsh or swamp, and thus can be supported by a wider variety of soil types including bay mud and other silty clays. In subsurface-flow systems, the effluent may move either horizontally, parallel to the surface, or vertically, from the planted layer down through the substrate and out. Subsurface horizontal-flow wetlands are less hospitable to mosquitoes, whose populations can be a problem in constructed wetlands (carnivorous plants have been used to address this problem). Subsurface-flow systems have the advantage of requiring less land area for water treatment, but are not generally as suitable for wildlife habitat as are surface-flow constructed wetlands.



Newly Planted Constructed Wetland

Plantings of reedbeds are popular in European constructed wetlands, and plants such as cattails or bulrushes (*Typha* spp.), sedges, water hyacinth and *Pontederia* spp. are used worldwide. Recent research in use of constructed wetlands for subarctic regions has shown that buckbeans (*Menyanthes trifoliata*) and pendant grass (*Arctophila fulva*) are also useful for metals uptake.

Contents

- 1 General Contaminant Removal

Planning Committee- Issues Outstanding

Issue	Member Referred	Date Referred	Status
• Liberty Road Project Status	Stinnett	Jan 06	March 08: Bi-Monthly Updates
• Newtown Pike Status	Blues	Feb 06	March 08: Bi-Monthly Updates
• Tax Increment Financing (TIF)	Stinnett	Mar 06	Oct 07
• Loudon Avenue Phase 1	James	Oct 06	Quarterly Updates
• Buffering ED Zone	DeCamp	Jan 07	Jan 07
• Board Composition & Accountability– Planning Commission, Board of Architecture Review & Board of Adjustment			
• Development Plan Adherence	Myers	Jan 07	
• Right of Way Signage	Myers	Jan 07	
• Local Sales Tax Option	McChord	Mar 07	Moved from Services Committee
• Bluegrass Regional Economic Analysis	Stevens	Mar 07	Moved from Budget & Finance Committee
• DDA Land Bank Budget Amendment	Stevens	Apr 07	Moved from Budget & Finance Committee
• On Street Parking	James	June 07	October 07
• I-64 Water Pipeline	Beard	June 07	
• Student Housing Issues	Beard	July 07	August/Sept 07
• Social Services Report	Stevens	Sept 07	Scheduled Nov 07
• Fence Regulations	Stinnett	Oct 07	March 08
• Trailer Park Quality of Life	Blues	Dec 07	
• Eastern State Hospital Site Plan	James	Dec 07	Sub Committee Formed
• Constructed Wetlands	James	Jan 08	
	Gray	Jan 08	

2/13/08