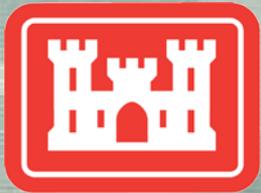


Horner Park Aquatic Ecosystem Restoration

Chicago, Illinois



®

US Army Corps of Engineers
BUILDING STRONG.

USACE-Chicago District

Mission: USACE-Chicago District provides **valued, world class leadership, engineering services, and management capabilities** for diverse **stakeholders and partners** within the greater Chicagoland metropolitan area and to the Nation.

Engineer District Mission Areas:

- Navigation
- Flood Risk Management
- **Ecosystem Restoration**
- Shoreline Protection
- Emergency Management



Great Lakes and Ohio River Division



9 Counties (IL – 6; IN – 2+); 5,000 Sq. Mi.; 9.1 Million people

Chicago – Ecosystem Restoration Projects



Hofmann Dam (SECT 206)



63RD ST BEACH (SECT 506)

Ecosystem Restoration

- 19 projects completed or in construction
- over 2600 acres of habitat & 60 miles of unimpeded river flow
- At least 2 projects to construction in 2013
- 30 active studies in progress

Orland Tract (SECT 206)

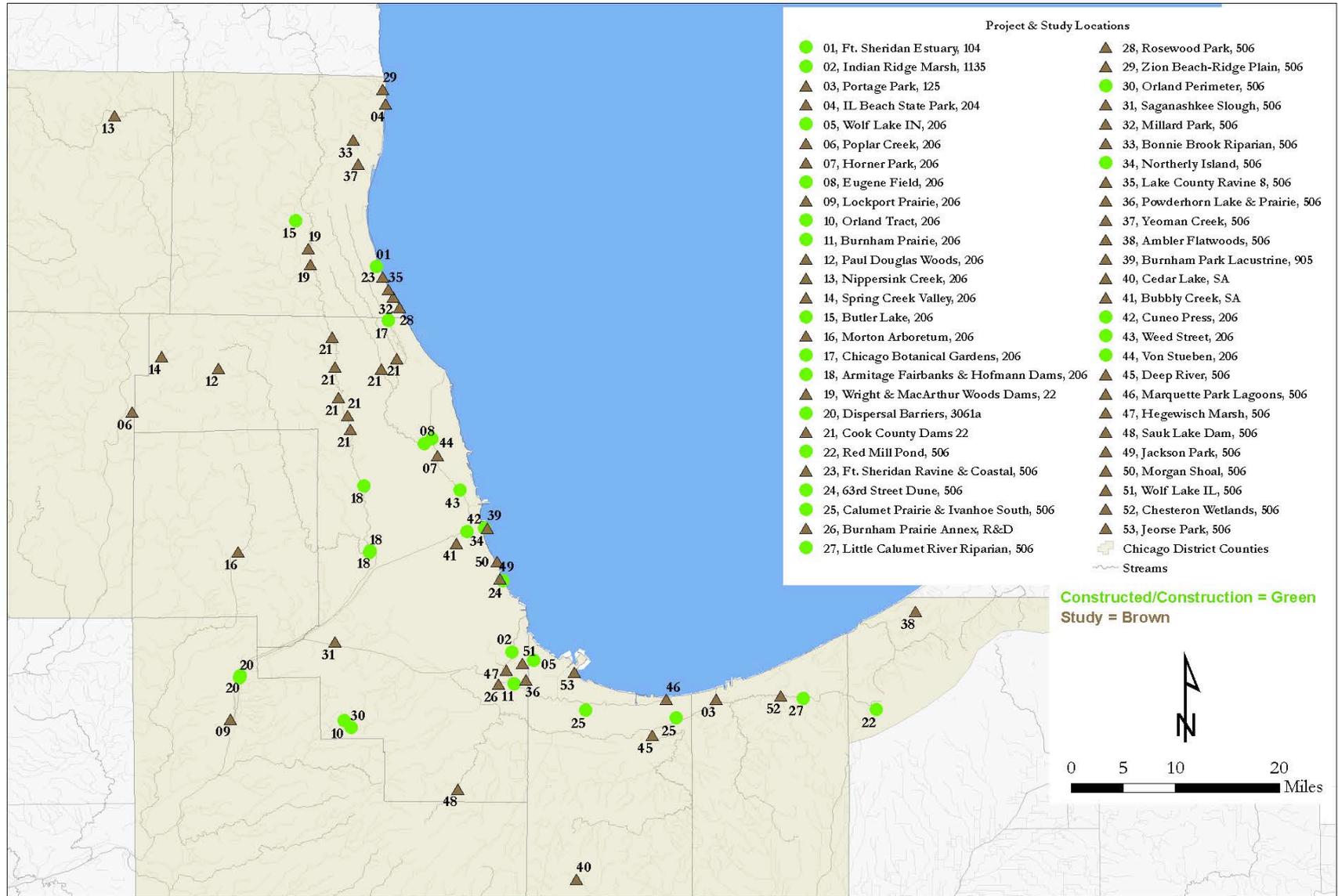


Red Mill Pond (SECT 506)



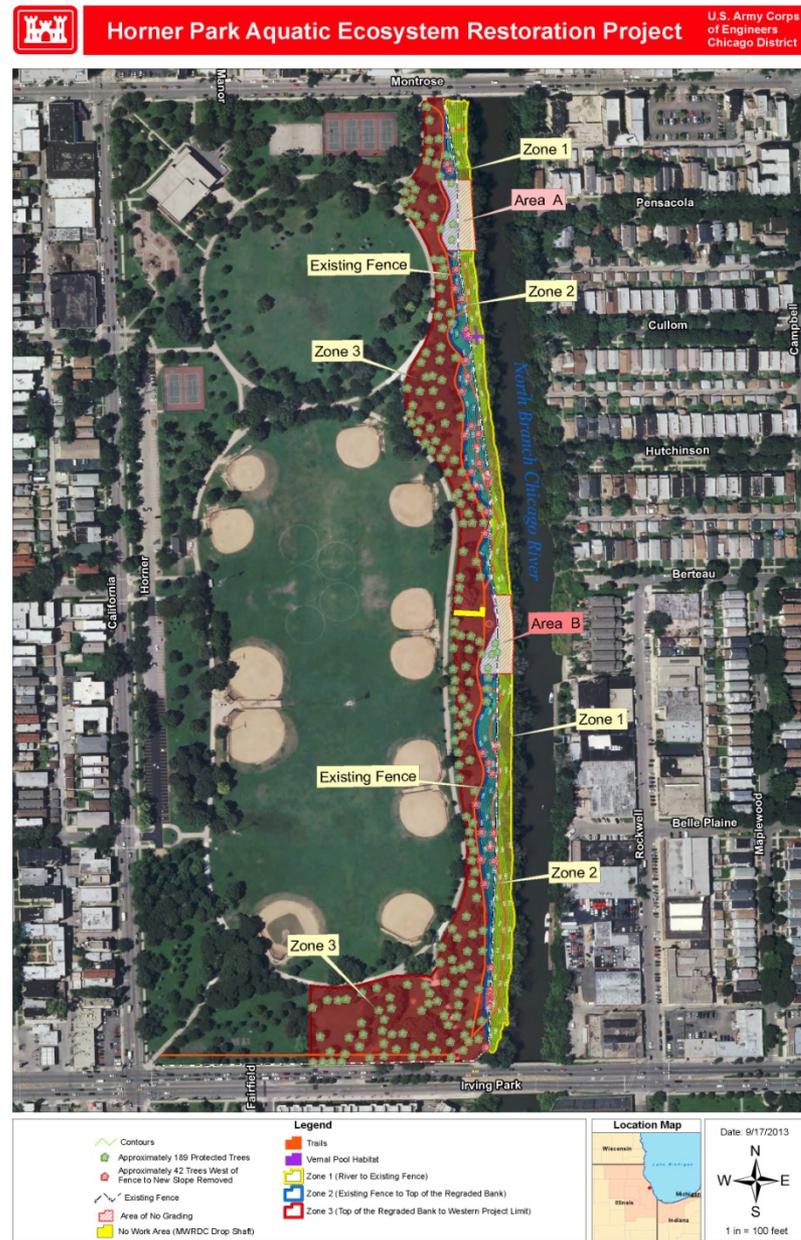
Select USACE Chicago District Ecosystem Restoration Projects & Studies

U.S. Army Corps
of Engineers
Chicago District



Project Overview

- Aquatic Ecosystem Restoration
- Local Sponsor: Chicago Park District
- 3.2 acres of riverbank restoration
- 5.8 acres of upland restoration



Design Refinements

Original Plan July 2013	Refined Plan August 2013	Current Plan September 2013
<ul style="list-style-type: none"> • 3,432 ft of woodchip trail 	<ul style="list-style-type: none"> • 3,432 ft of woodchip trail 	<ul style="list-style-type: none"> • 5,314 ft of woodchip trail, increased access points
<ul style="list-style-type: none"> • Regrade all riverbank to gentle slope (except for MWRD structures) 	<ul style="list-style-type: none"> • Regrade all riverbank to a 3:1 slope (except for MWRD structures) 	<ul style="list-style-type: none"> • Protect Existing trees on Approx. 20% of riverbank
<ul style="list-style-type: none"> • Approx 25% of trees removed from parkland west of area to be regraded 	<ul style="list-style-type: none"> • Approx 20% of trees removed within parkland 	<ul style="list-style-type: none"> • Modified the Grading Plan to protect mature healthy trees • Keep Trees within parkland
<ul style="list-style-type: none"> • No trees to be planted in Stream bank area during construction 	<ul style="list-style-type: none"> • No trees to be planted in Stream bank area during construction 	<ul style="list-style-type: none"> • Installing 9 tree species, 10 shrub species, and 1 vine in Stream bank area
<ul style="list-style-type: none"> • 8 foot mowed grass buffer 	<ul style="list-style-type: none"> • 8 foot mowed grass buffer 	<ul style="list-style-type: none"> • 10 foot mowed grass buffer

Positive Project Impacts

Problem	Solution	Benefit
<ul style="list-style-type: none"> • Unnatural steepness of riverbank • Bare dirt and higher erosion rate (due to lack of groundcover) • Disconnected riparian zone 	<ul style="list-style-type: none"> • Regrading of Riverbank 	<ul style="list-style-type: none"> • Increase the connection of the riparian zone to river, allowing greater use by reptiles and amphibians. • Reduce the adverse effects of invasive plants.
<ul style="list-style-type: none"> • Abundance of harmful species 	<ul style="list-style-type: none"> • Invasive and Non Native Species Removal 	<ul style="list-style-type: none"> • Increase wildlife migration corridors quality • Provide shelter and food for migratory birds • Increase native plant and insect diversity.
<ul style="list-style-type: none"> • Lack of native shrub cover • Low diversity of native plants • Poor quality wildlife habitat 	<ul style="list-style-type: none"> • Native Plantings 	<ul style="list-style-type: none"> • Provide sources of native seed to other natural areas in region. • Provide compatible recreational trails • Create opportunities for public education of the historic and present Chicago River ecosystem

Restored Wetland Shelf

ZONE 1



Blue Joint Grass



Wild Iris



Great Bulrush

- Provides food resources for resident and migrating waterfowl and shore birds
- Provides foraging opportunities for Herons and Egrets

Restored River Bank

Zones 1 & 2



Blue-Fruited Dogwood



Indigo Bush

- Provide migratory and resident bird food resources
- Support greater diversity of insects – greater foraging for birds
- Source of native shrub seeds to be dispersed to other natural areas

Restored River Bank

Zones 1 & 2



Smooth Blue Aster



Wild Senna

- Increase diversity of resources for native pollinators
- Improve soil quality and function
- Decrease soil erosion

Restored River Bank Zones 1 & 2



Swamp White Oak



American Plum

- Oaks provide food and shelter for resident wildlife (reptiles and amphibians)
- Plums provides for native pollinators in the spring and fruit-eating birds in the summer

Restored Oak Savanna Zone 3



Cream Wild Indigo

- Provide resources for Bee species
- Increase diversity of seed types and timing of seed availability



Hairy Wood Mint

Restored Oak Savanna

Zone 3



Sky-Blue Aster
(Fall)



Virginia Strawberry
(Spring)

- Increase numbers and coverage of native plant species
- Increase diversity of flower seasonal availability (spring vs. fall)

Restored Oak Savanna Zone 3



Bur Oaks



Butterfly Milkweed

- Provide quality habitat for resident and migratory wildlife
- Increase the resiliency and sustainable ecosystem function and structure



Wild Columbine

Native Plantings

Wetland Shelf Zone 1 (0.09-acres):

- 14 species
- 3,402 plugs

River Bank Zones 1 & 2 (3.9-acres):

- 10 shrub species, 1 vine
 - 282 individuals
- 9 tree species
 - 128 individuals
- 27 herbaceous species
 - 3,680 plugs
 - 356.5 lbs of seed

Oak Savanna Zone 3 (5.8-acres):

- 1 tree species
 - 10 individuals
- 45 herbaceous species
 - 58,360 plugs
 - 305.2 lbs of seed

Summary of Benefits

- Increase quality of wildlife migration **corridors**.
- Provide shelter and food for **migratory** birds.
- Increase the **connection** of the riparian zone to river, allowing greater use by reptiles and amphibians.
- Increase native plant and insect **diversity**.
- **Reduce the adverse effects** of invasive plants.
- Provide **sources of native seed** to other natural areas in region.
- Provide compatible **recreational** trails.
- Create opportunities for **public education** of the historic and present Chicago River ecosystem.



Anticipated Schedule

<i>Event</i>	<i>Date</i>
<i>Contract award</i>	<i>Sep 2013</i>
<i>Construction Start</i>	<i>Feb 2014</i>
<i>Clearing and Grubbing Complete</i>	<i>Mar 2014</i>
<i>Earthwork Complete</i>	<i>May 2014</i>
<i>Material Haul off Complete</i>	<i>Jun 2014</i>
<i>Riparian Habitat Establishment Period</i>	<i>Sep 2014 - 2019</i>
<i>Monitoring of Vegetation</i>	<i>5 years (after project turnover)</i>



Chicago District, US Army Corps of Engineers

OTHER RESTORATION PROJECTS



63rd St Beach (without Project)

2008



63rd St Beach

2013



Eugene Field (without project)

2009



Eugene Field

2013



Red Mill Pond (without Project)

2003



Red Mill Pond

2011



Red Mill Pond

2012

QUESTIONS?

Public Input Opportunities

- NEPA Scoping Period 10.28.10 – 12.01.10
- NEPA Public Review Period 09.07.12 – 10.07.12
- IDNR Public Notice Period 08.13.13
- Presented and answered questions at HPAC meetings 2010-2013
- Public Walk Through 09.12.2013

