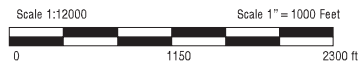
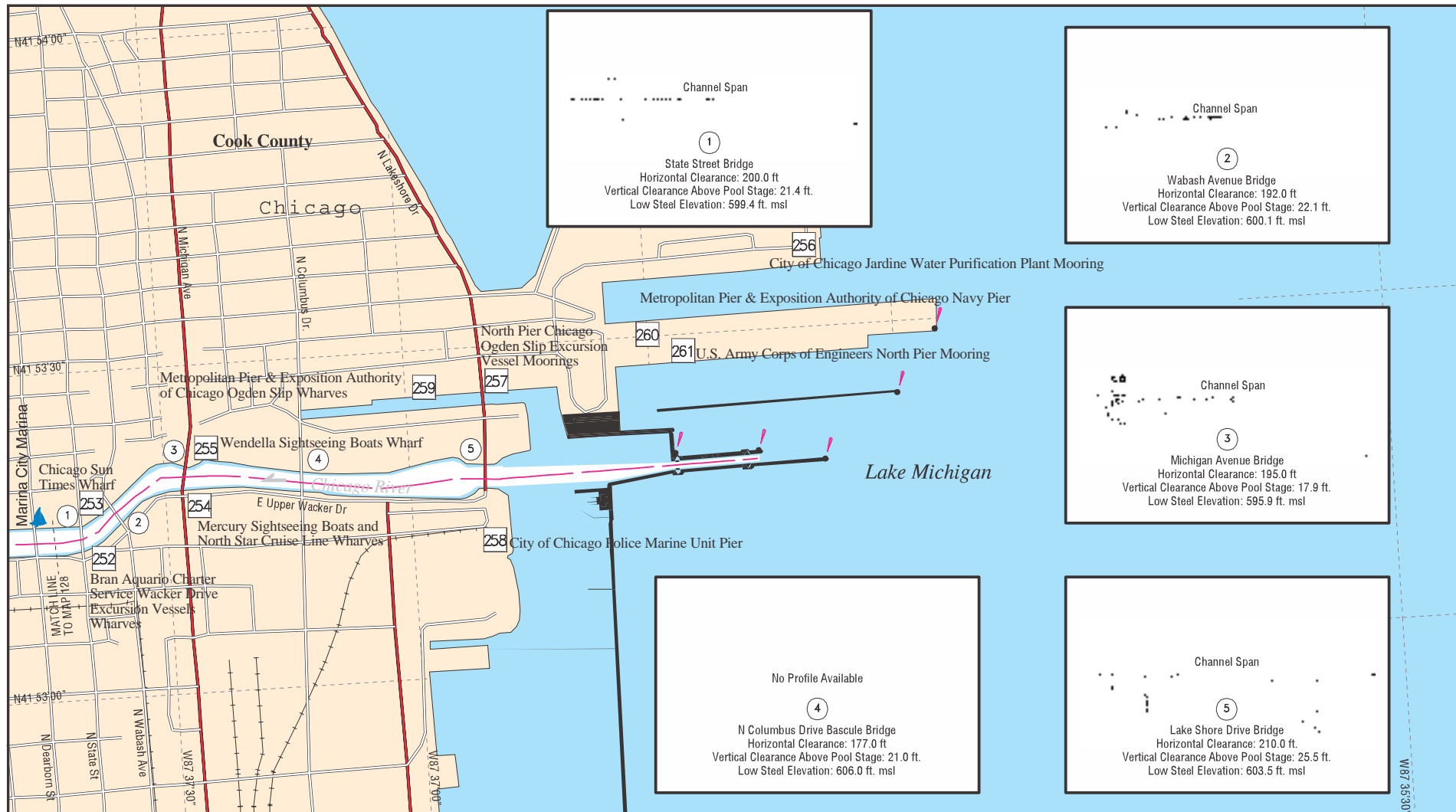


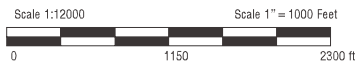
1) The legend is located immediately preceding map No. 1
 2) Barge Facility information and submerged cable and pipeline clearances are located in appendices A and B respectively.





1998

- 1) The legend is located immediately preceding map No. 1
- 2) Barge Facility information and submerged cable and pipeline clearances are located in appendices A and B respectively.



MAP NO. 131

APPENDIX I: CITY OF CHICAGO HARBOR PERMIT REVIEW

Harbor Permit Review Process

Department of Construction and Permits is responsible for the issuance of permits for construction projects in the City of Chicago, however, the Chicago Department of Transportation has the responsibility of approving City Harbor Permits. CDOT has the authority to regulate construction activity in and adjacent to the City of Chicago waterways and is pleased to provide the following information regarding obtaining a harbor permit.

A City Harbor Permit is needed to perform construction within 40 feet of the waterway (shoreline, riverbank, dockwall/ riverwall, beach, etc.). CDOT will assist residential and business developments with the renovation of the City's shores. The City of Chicago encourages the appropriate treatment of riverbanks to preserve and enhance the attractiveness of this great natural resource for both people and wildlife to enjoy.

CDOT permit review process is triggered by:

- Department of Zoning Permit application
- Office of Underground Coordination

After reviewing the project drawings and scope of work CDOT will determine what drawings need to be submitted for the issuing of a Harbor Permit and also inform the applicant as to the permits that may be required from other city, county, state and federal agencies.

CDOT will **NOT** issue a Harbor Permit until all permits have been obtained from all other government agencies including Metropolitan Water Reclamation District, Illinois Department of Natural Resources and Army Corps of Engineers and United States Coast Guard.

See the Jurisdiction Chart on the left for the agency jurisdictions and responsibilities.

When are Harbor Permits required?

A City Harbor Permit is required when any work in and within 40 feet of the Base Flood Elevation of any City of Chicago waterway is being performed. The Federal Emergency Management Agency (FEMA), Illinois Department of Natural Resources - Office of Water Resources (IDNR/DWR) and Department of Planning and Development have established the Base Flood Elevation (BFE) for the city's waterways.

The Chicago Department of Transportation Harbor Review process begins with either a request for the Office of Underground Coordination or a Zoning permit application through the Department of Construction and Permits. The utility companies have 30 days to review the drawings and comment.

Project drawings, scope of work and owners information are sent to the Bureau of Bridges and Transit for a preliminary Review. If CDOT determines that the proposed work is not within 40 feet of the Base Flood Elevation of any Chicago waterway, then a Harbor Permit not required.

Examples of Work that Require A Harbor Permit:

- Dockwalls (steel sheet piling, H-piles and wood lagging, concrete, etc.)
- Buildings (foundations, walls, slabs, etc.)
- Earth Retention Systems
- Storm Sewer Outfalls
- Riverwalk and landscaping
- Repairs to existing dockwalls
- Temporary structures
- Bridge repair and reconstruction
- Soil borings
- Directional Bores and/or tunneling
- Demolition and backfilling

Requirements for Harbor Permits

CDOT requires drawings stamped by a registered Professional Engineer and/or Structural Engineer.

The following is a list of drawings that may be required:

- Plat of Survey
- Existing Site Plan with all existing conditions including utilities shown
- Proposed Site Plan
- Limits of the proposed work
- Locate proposed work from the right-of-way lines
- Typical cross-sections of all proposed work
- Elevation in Chicago City Datum (CCD) of top of riverbank, dockwall, riverwalk, landscaping, etc.
- Elevation of water in CCD
- Elevation of floor slabs (basement and ground floor)
- Elevation of top and bottom of foundations (footings, caissons, h-piles, etc.)
- Elevation of top and tip of sheet piling
- Distance from the nearest improvement/ work to the edge of the waterway.
- Design calculations
- Geotechnical Investigation report

AGENCY KEY

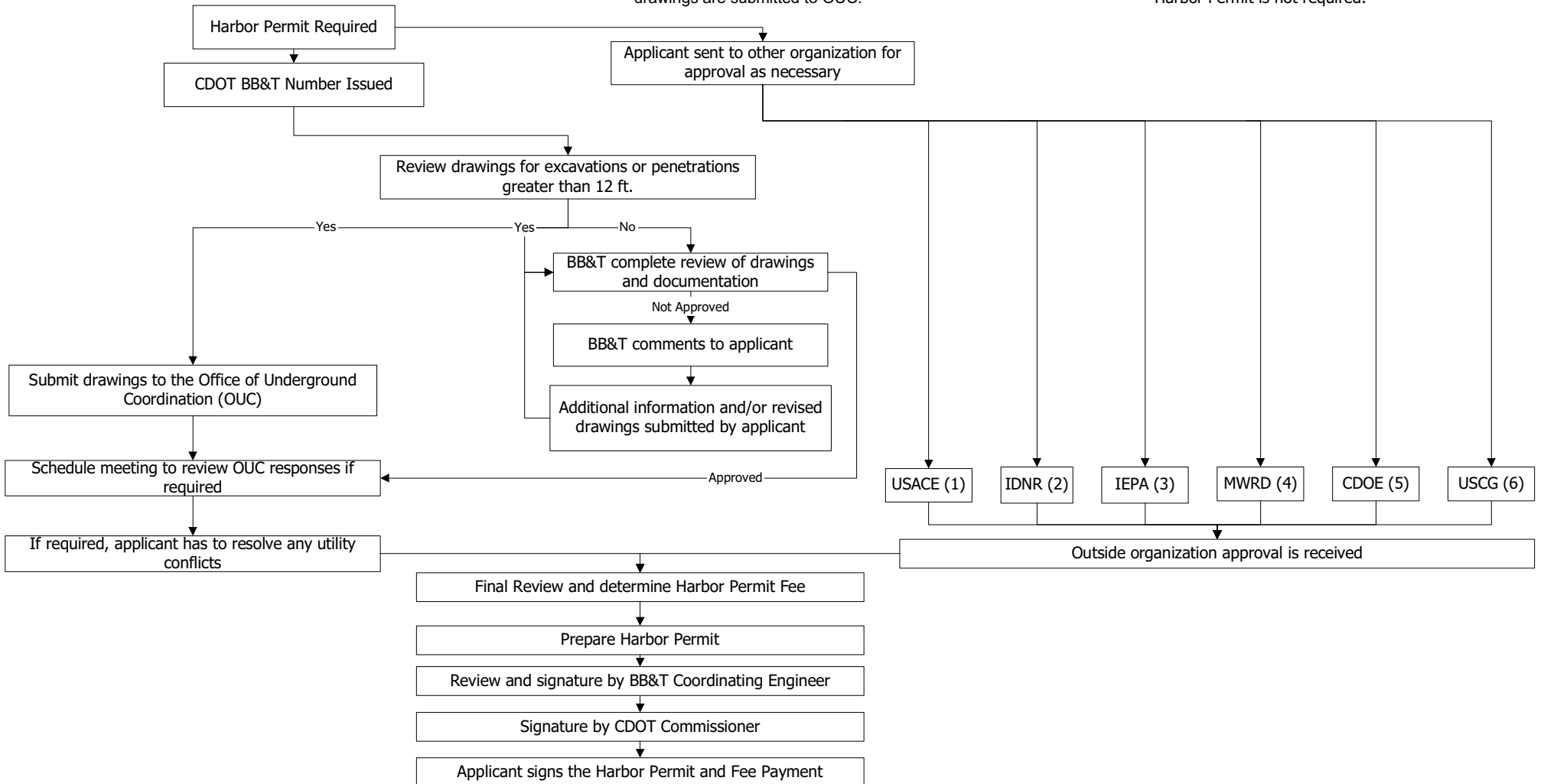
ACOE	Army Corps of Engineers
Coast Guard	U.S. Coast Guard
U.S. EPA	United States Environmental Protection Agency
IEPA	Illinois Environmental Protection Agency
IDOC	Illinois Department of Conservation
IDOT/DWR	Illinois Department of Transportation/ Illinois Department of Natural Resources- Department of Water Resources
NIPC	Northeastern Illinois Planning Commission
MWRD	Metropolitan Water Reclamation District
CDOT	Chicago Department of Transportation
DCAP	Department of Construction and Permits
DPD	Department of Planning and Development
Police	Chicago Police Department
Planning Commission	Chicago Planning Commission
City Council	Chicago City Council
DOE	Department of Environment
DWM	Department of Water Management



Harbor Permit Review

*Office of Underground Coordination (OUC): The utility companies have 30 days to review the drawings and comment. This process takes a minimum of 35 days from the date the drawings are submitted to OUC.

*If the preliminary review by CDOT Bureau of Bridges and Transit (BB&T) determines that the proposed work is not within 40 feet of the Base Flood Elevation of any City of Chicago waterway, then a Harbor Permit is not required.



1.) **Unite States Army Corps of Engineers**
Chicago District Regulatory Branch
111 N. Canal Street, Suite 600
Chicago IL, 60606
312-353-6400 (Main)

4.) **Metropolitan Water Reclamation
District of Greater Chicago**
100 East Erie Street
Chicago IL, 60611
312-751-5600

Joseph Schuessler
joseph.schuessler@mwr.org
312-751-4059

2.) **Illinois Department of Natural Resources**
Office of Water Resources
36 South Wabash, Suite 1415
Chicago IL, 60603

James Casey jcasey@ndrmail.state.il.us
312-793-3123

5.) **Department Of Environment**
30 North LaSalle, Suite 2500
Chicago IL, 60602
312-744-7606

3.) **Illinois Environmental Protection Agency**
1021 N. Grand Avenue East.
P.O. Box 19276
Springfield IL, 62794-9276

Surface Water/ Watershed Management
Section
217-782-3362

6.) **United States Coast Guard
Marine Safety Office Chicago**

Attn: Waterways Management
215 West 83rd Street
Burr Ridge, IL 60527
630-986-2155

APPENDIX J: POLLUTION OF WATERS ORDINANCE

CITY OF CHICAGO MUNICIPAL CODE ARTICLE VIII. POLLUTION OF WATERS

11-4-1410 Disposal in waters prohibited.

No person shall throw, discharge, dump, dispose or deposit, or cause, suffer, allow or procure to be thrown, discharged, disposed or deposited in Lake Michigan within three miles of the corporate limits or in any other waters within the corporate limits any waste or material of any kind unless such person has obtained (a) permits pursuant to the Clean Water Act from all applicable federal or state agencies and (b) all other necessary approvals and permits from federal, state and local regulator bodies or special districts.

11-4-1420 Ballast tank, bilge tank or other discharge.

No operator of any vessel, craft, floats or motorboat shall throw, discharge, dump, dispose or deposit into any waters any fuel, solid or liquid, or the contents of any ballast tank, bilge tank or other container capable of causing pollution of waters.

11-4-1430 Waste retention tank.

All vessels, crafts, floats and motorboats equipped with toilets, heads, urinals or capable of discharging galley wastes which have not been discharged through a grease trap or grease interceptor, or solid or liquid waste from shipboard hospital facilities, shall be equipped with a waste retention tank of approved type and capacity to store such waste material for subsequent disposal at a legally operating shoreside facility.

11-4-1440 Wharfs, docks and similar structures in unsafe condition.

Every wharf, dock, pier, seawall, riverbank retaining wall, riverbank bulkhead, dolphin, boom, bulkhead, jetty mooring facility, piling, sheeting or other similar structure on or appurtenant to premises abutting on any waters which has disintegrated, rotted, deteriorated or is otherwise out of repair, or is in unsanitary condition, or in an unsafe or dangerous condition, or which in any manner endangers the health or safety of any person or persons or which in any manner endangers navigation is hereby declared to be a public nuisance.

11-4-1450 Gas manufacturing residue.

No person being a manufacturer of gas, or engaged about the manufacture

thereof, shall throw, deposit or allow to run, or permit to be thrown or deposited into any waters, or into any sewer therewith connected, any gas-tar or any refuse matter of or from any gashouse, works or manufactory.

11-4-1460 Enforcement.

(a) Violations of Sections 11-4-1410 through 11-4-1450 shall be punishable by a civil penalty of \$1,000.00 to \$2,000.00 for the first offense, \$2,000.00 to \$4,000.00 for the second offense and \$4,000.00 to \$10,000.00 for each third and subsequent offense. Each day that the violation continues shall be deemed a separate offense.

(b) The Department may issue cease and desist orders for any violation of Sections 11-4-1410 through 11-4-1450. Violations of a cease and desist order shall be punishable by a civil penalty of \$5,000.00. Each day that the violation continues shall be deemed a separate offense.

(c) The department or the city may obtain permanent or temporary injunctive relief in the Circuit Court of Cook County, Illinois, for any violation of Sections 11-4-1410 through 11-4-1460.

APPENDIX K: RIVERBANK RESTORATION SOLUTIONS

The following are natural riverbank restoration solutions that can be used on the Chicago River (source: Chicago Park District River Master Plan)

Riverbank & Slope Treatments

The banks along the Chicago River are experiencing two distinct types of erosion. One type of erosion is caused by flowing water, the other is caused by surface runoff.

Riverbank erosion caused by flowing river water occurs when high velocity flow erodes the toe of the slope. Once significant material is lost from the toe, the upper bank becomes overly-steep or loses its foundation and slope failure occurs. The upper banks are generally protected from direct erosion induced by flowing river water (due to significant tree cover on the riverbank). However, contrary to conventional wisdom, a heavily wooded riverbank is generally not sufficient erosion protection.

While tree roots provide some level of protection of bank soils, the coarseness of the roots allows flow at the toe of the slope to erode soil from around them. Once the erosion progresses to a sufficient degree, the tree eventually topples and causes catastrophic soil loss as the root fan dislodges a substantial portion of the bank.

Deep-rooted herbaceous vegetation has very fine roots that bind the soil together. Further, the roots are continuously regenerated, increasing stability over time. While no purely vegetative method is likely to completely stop erosion under the conditions experienced along most of the Chicago River, a healthy and diverse layering of deep-rooted grasses, sedges, and forbs will considerably slow the erosion and help hold the slopes.

The other type of erosion observed on the banks of the river is sheet erosion, which is caused by surface runoff down the slope. In some areas, the source of runoff is adjacent paved surfaces (such as parking lots, tennis courts, etc.) or lawn areas that directly drain to the banks. In other areas, the slopes are sufficiently long enough that runoff from the slope itself appears to cause erosion. This type of erosion is common on densely wooded slopes (virtually all of the parks) that have no vegetative cover to protect the soil surface from sheet and rill erosion. With sufficient thinning of the tree canopy and understory, deep-rooted herbaceous cover can be established. The herbaceous cover protects the soil surface from erosion and prevents or slows down runoff from the slope itself.

Riverbank erosion treatments for the parks along the Chicago River are broken into two groups – river edge treatments and slope treatments. Most reaches of the river will require both river edge and slope treatments.

River Edge Treatments

River edge treatments are intended to address riverbank erosion at the toe of the slope caused by flowing river water and wave action. The river edge treatments generally address the normal water line up to approximately 2 feet. The demarcation between river edge and slope treatments will vary depending on the amount of water level fluctuation and wave height.

Slope Treatments

Slope treatments are intended to address the slope approximately 2 feet above the normal water level. In most cases, the slope treatment must be combined with toe protection at the water's edge.

Treatment Options

Within four of the parks two options are proposed for stabilizing the toe of slope and riverbank. In general, Option A involves regrading of the banks to a shallow stable slope and using rock to stabilize the toe. Due to the steepness of the banks and height, Option A can not be implemented without losing most or all of the trees along the river. However, installation of scattered native oaks and hickories consistent with open woodland landscapes are included in the cost estimate for Option A.

Option B generally involves installation of sheetpile to reduce regrading of the upper bank and may allow preservation of some of the existing trees along the river. However, in most of these parks the existing trees are non-native and their density is contributing to bank erosion. Thus Option B includes significant thinning of the existing tree and shrub cover even where complete removal is not necessary.

1. River Edge Treatment - Stacked Flat Rock

Stacked flat rock such as limestone, granite, or broken concrete slabs provides a relatively aesthetic and functional alternative for shoreline treatment in urban settings. This treatment is present along many areas of the Upper North Branch upstream of the confluence of the North Shore Channel. Though the time of installation in these areas is unknown, much of it appears to have been present for decades and be quite stable. The greatest source of failure of this treatment appears to be tree roots dislodging individual slabs. In addition, stacked flat rock offers a seating and walking surface at the water's edge that accommodates walkers, anglers, and others. The reestablished slope should be seeded, covered with erosion control blanket, and planted with native plugs as necessary.

If stacked flat rock treatment is installed with stable, overhanging slabs adjacent and within the water, this may provide cover for some macroinvertebrate species. This may also provide a resting area for waterfowl and possibly other species. This type of treatment will not create a habitat per se, but it may provide resting and cover opportunities for some fauna species.

Advantages:

- Provides significant toe protection from flow and wave energy.
- Can be mortared or stacked (gravity).
- Visually appealing along an urban river.
- Provides access to the water's edge (fishing, walking, etc).
- Stone will absorb and resist wave action.
- Provides some level of macroinvertebrate habitat, which can be important in the Chicago River where the majority of the bottom is very silty and devoid of macroinvertebrate habitat.
- Opportunity for use of recycled material.

Disadvantages:

- Tends to transmit flow and reflect wave energy.
- Subject to failure where there is potential movement in the riverbed.
- Can be expensive, depending on height of wall and material used. Cost may be relatively low in areas where an existing wall can be rebuilt using material still present.
- Possible vandalism concerns, depending on the size of the material. No significant vandalism of existing stack walls was observed.
- There may be significant wetland and floodway permitting issues related to the use of retaining wall river edge treatments.

Maintenance:

- Unlike many retaining walls, stacked stone is generally quite repairable if not mortared.
- Provided that a proper foundation is constructed and trees are prevented from growing too close to the wall, little maintenance should be required.

