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Getting vaccinated will help keep you from getting the COVID-19 illness and may also protect people around you. The vaccine will be offered to all Chicagoans who want it as soon as larger quantities become available. [Learn more at Chicago.gov/COVIDVax.](#)



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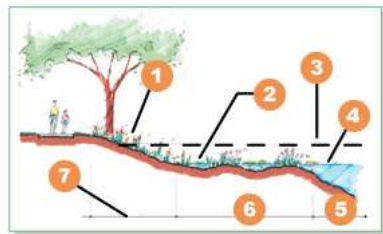
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Naturalized Detention Basins



Conventional detention is designed to prevent flooding by temporarily storing stormwater runoff and releasing it gradually to the downstream drainage system. Naturalized detention is intended to serve multiple functions, in addition to flood prevention, including pollutant removal and creation of wildlife habitat (where appropriate). Natural detention basin designs emulate natural lake or wetland systems by utilizing native plants along the water's edge and on side slopes. The design generally incorporates flat slopes at the edge of the water or wetland, shallow zones of emergent vegetation at the edge of wet basins, and a combination of vegetated and open water areas in wetland basins.

Effective detention designs will dramatically reduce runoff rates and prevent most increases in flooding associated with new development. However, unless underlying soils are highly permeable, detention will not significantly reduce flood volumes. The greatest benefit of naturalized designs is the reduction of runoff pollutants. Suspended sediments and attached pollutants, which are removed primarily by settling, can be reduced by 60 percent to 90 percent. Some dissolved pollutants, including nutrients and organic matter, can be reduced by 40 percent to 80 percent.

Because wet basins are more effective at removing pollutants, in some instances they are a beneficial alternative to dry bottom basins. Naturalized basins also will not experience shoreline erosion, further improving water clarity.

Naturalized detention also can provide desirable habitat for birds and aquatic organisms and at the same time discourage nuisance populations of Canada geese that are commonly found around conventional basins. In addition, many property owners prefer the appearance of a well-designed natural basin over the more manicured look of a conventional basin (such as coarse gravel shorelines and/or concrete channels), thereby enhancing property value

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Applicability

Natural detention basin designs are suitable for all development types. Detention may not be feasible on very small sites – such as individual lots – due to the need for very small outlet structures. On very small site, rain garden or bioinfiltration designs may be more appropriate.

Maintenance Considerations

Conventional basins require regular mowing of side slopes and/or basin bottoms. In contrast, naturalized detention basins typically require only annual (or less frequent) mowing once the vegetation is established. Also, because native vegetation provides effective shoreline stabilization, there should be little need to repair shoreline erosion problems commonly found in conventional wet basins. Other maintenance concerns – occasional sediment removal and trash control – are similar for naturalized and conventional basins.



The Chicago Center for Green Technology on Sacramento has an effective naturalized detention basin.

Cost Considerations

The construction costs of naturalized detention basins are generally comparable or less than the costs of conventional detention basins. Some cost savings may result from the use of native vegetation for shoreline stabilization versus coarse gravel, stone or concrete. In the long term, costs for naturalized basins will be lower due to reduced needs for conventional turf maintenance.

Local Examples

A notable example of a naturalized detention basin in the City is at the CET1 power plant located at 117th & Torrence Avenue.

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