Des Plaines River Watershed: Opportunity Areas
North Community Cluster

Map Codes and Descriptions: Green Infrastructure Retrofit Templates

- SFR: Single Family Residential
- UMF: Urban Multi-Family
- DTC: Downtown Commercial District
- UMF: Urban Multi-Family
- DTC: Downtown Commercial District
- SC: Suburban Commercial
- CMF: Campus/Suburban Multi-Family
- DRN: Detention Retrofit/Naturalization
- DTC: Downtown Commercial District
- SWP: Stormwater Park
- RES: Ecological Restoration (Existing Parks/Open Space)
- BCG: Bike Corridor/Greenway

This map was compiled as part of "Des Plaines River Communities Green Infrastructure Mapping Project" available on the Chicago Wilderness website (www.chicagowilderness.org). See report for detailed information about how this map was developed.
Opportunity Areas

The opportunity area mapping process resulted in the creation of the Green Infrastructure Opportunity Area map. To assist in the mapping and to ease understanding of the proposed green infrastructure, the opportunity areas were organized into the following categories below. During the workshops, presentations were prepared to ensure a common understanding of the template categories and then the participants were directed to assign a template category to each of the recommendations. The template categories are listed below, followed by more detailed descriptions and illustrations.

- Single Family Residential
- Urban Multi-Family Residential
- Downtown Commercial District
- Big Box Commercial / Industrial / Institutional
- Campus / Suburban Multi-Family
- Stormwater Park
- Right-of-Way Retrofit
- Detention Retrofitting / Naturalization
- Ecological Restoration

Single Family Residential (SFR) - The single family residential land use dominates the study area. This template as shown is intended to illustrate green infrastructure practices that could be utilized within this land use. Practices could be implemented within the right-of-way as well as within individual private lots. The template shows permeable paving that could be installed in driveways or within the street, either over the entire section or within the parking lanes. The template also illustrates bioretention in the right-of-way, either in the roadway between the sidewalk and street or, potentially, in medians where they exist or created where overly wide street widths would allow. Bioretention rain gardens could be also be developed on individual lots through municipal rain garden technical and/or financial assistance programs.

Urban Multi Family Residential (UMFR) - Multi-family residential is also a common land use within the study area and can occur in either a more dense urban form as discussed here or as a lower intensity suburban form with more open space as discussed under a subsequent template. For the urban form, the lot is largely covered by building and paving with smaller landscape zones. Within this land use, practices such as green roofs, permeable paving, and bioretention are appropriate. Due to the tight spaces, bioretention are likely to be in the form of planters that can accept runoff from building downspouts or adjacent pavement areas. Permeable paving can be used for parking, patios, and walkways. A variation on permeable paving can also be used for playgrounds where the permeable rubber surface that provides fall protection is underlain by open graded stone similar to permeable paving.
Downtown Commercial District - Most of the suburbs within the study area were founded and developed prior to the turn of the previous century and include historic downtown commercial districts. As many communities are moving towards streetscape and other projects to revitalize their downtowns, significant opportunities exist to incorporate green infrastructure practices into these plans. West Union Iowa provides an excellent case study for integrating green infrastructure into downtown revitalization. West Union and other projects have incorporated permeable paving into the streets, sidewalks, and parking lots; bioretention into sidewalk planters and protected parking bumpouts; and green roofs onto individual buildings. Another more local example is in Riverside where an existing downtown parking lot was repaved in permeable pavers.

Big Box Commercial/Industrial/Institutional - The big box form of development is ubiquitous throughout the suburbs, including within the study area. Although the land use may be retail or commercial, industrial or manufacturing, or institutions such as libraries, the basic form of a large building with a large parking lot is common to them all. The large parking lot areas that are often over-sized provide excellent opportunities to incorporate bioretention landscape islands. Further pavement reconstruction that is necessary from time to time provides an opportunity to convert from asphalt to more durable permeable paver systems.

Campus/Suburban Multi-Family Residential - Institutions such as communities colleges and suburban multi-family residential developments are often developed in the form of a campus with multiple buildings, distributed parking areas, and large areas of open space. The large open space areas can often benefit from increased landscape that can also serve as bioretention for roof and pavement runoff. Parking lots can often be retrofit with bioretention landscape islands and/or permeable paving as illustrated in the template graphic.
Stormwater Parks - Cities and suburbs often have small land areas of either vacant parcels or small, underutilized parks. Depending on their topographic position in the landscape, drainage systems can often be modified to accept runoff from adjacent properties or rights of way. Through generous bioretention landscapes mixed with community amenities such as public art, permeable playgrounds (see Urban Multi-family), and small gathering areas, the spaces can be enlivened while also filtering and retaining runoff.

Right-of-Way Retrofit - In many suburbs, up to 25% of the land cover is transportation right of way. Further electrical transmission right of ways abound. Aging streets in many older communities are often in need of major rehabilitation or even complete reconstruction. This presents opportunities to reconstruct the streets in permeable pavers, to introduce bioretention into parkways and medians, and implement other measures to reduce the runoff impact of what is often considered the most polluting land use.

Drainage and Detention Naturalization - Detention has been required within northeastern Illinois since the middle 1970s and many of the older facilities are dry bottom detention basins where attempts are made to maintain a turf landscape. Even within wet detention basins, turf vegetation maintained to the waters edge has led to significant shoreline erosion. In many cases these dry and wet bottom detention basins can be naturalized with native species better adapted to the wet conditions and with denser root systems that can better protect shorelines from erosion.

Ecological Restoration - As part of the mapping process, many areas of open space were identified as opportunities to implement native landscapes to improve habitat and water quality as well as expand the core green infrastructure network.
RECOMMENDATIONS

See pages 36-42 in the full report for specific strategies recommended for the sites identified in the Opportunities Areas map.