

indicators of poorer water quality, whereas scuds and crayfish are moderately tolerant to pollution though not usually found in severely polluted waters.

2.4 Wetlands

Wetlands generally are associated with lakes, streams, or localized depressional areas. Within the study area, the relief is gently rolling to nearly flat. Most of the study area is urbanized and has been affected by development. Based on a review of the resources discussed below and preliminary fieldwork, there are 3,828 acres of wetland within the study area (see Exhibit 2-8).⁵ Of that total, roughly 71 percent (2,702 acres) are within special lands (see subsection 2.7) that would not be directly affected by the proposed improvements.

Wetlands are “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”⁶ The 1987 *Corps of Engineers' Wetland Delineation Manual* identifies three essential characteristics of a jurisdictional wetland: hydrophytic vegetation, hydric soils, and wetland hydrology (Environmental Laboratory, 1987).⁷

Published wetlands data sources were used to locate mapped wetlands. The DuPage County Wetland Inventory (DCWI) was used to identify mapped wetlands in DuPage County (DuPage County Department of Development and Environmental Concerns, 1999). In general, it is considered more locally accurate than the National Wetlands Inventory (NWI).⁸ Because the DCWI does not include Cook County information, the NWI was used for Cook County.⁹ Wetland data from the OMP was used for parts of the study area that overlapped with the OMP project limits.

The DCWI identifies two categories of wetlands: critical and regulatory.¹⁰ Critical wetlands are high quality wetlands that “play crucial roles in storing or conveying flood waters, controlling erosion, maintaining or enhancing water quality, and providing habitat for threatened or endangered species.” All wetlands in DuPage County that are not designated as critical are considered regulatory. The NWI does not distinguish between critical and regulatory wetlands for the purposes of quality evaluation. Based on the DCWI, approximately 142 acres of mapped critical wetland are located within the study area.¹¹

⁵ Mapped wetlands adjacent to the proposed improvements were refined based on preliminary field reconnaissance. Open waters (e.g., creeks, ponds, etc.) located proximate to proposed improvements were also identified during preliminary field reconnaissance, but are not included in this total. For the remainder of the study area, open waters mapped in the NWI and DCWI GIS database were not excluded when calculating wetland totals. Unvegetated open water areas are not regulated by the Interagency Wetland Policy Act, but still may be regulated by the USACE, following a jurisdictional determination.

⁶ 40 CFR 230.3(t)

⁷ The *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region*, (September 2008) provides additional guidance regarding completion of wetland delineations in most of Illinois (USACE, 2008).

⁸ The NWI is a series of topical maps developed by the USFWS to show wetlands and deepwater habitats. The NWI serves only as a large-scale guide and actual wetland locations and types often vary from those that are mapped.

⁹ The NRCS Wetland Maps were not used for this study. The NRCS Wetland Maps, if available, will be used as a reference during the formal wetland delineation process to be completed as part of the Tier Two environmental studies and/or during the approval process for individual projects.

¹⁰ Several criteria are used to determine if a wetland is regulatory or critical. Wetlands, in addition to those mapped as critical on the DCWI, may be considered critical following site investigation and data analysis (DuPage County, Illinois, 2008).

¹¹ Based on preliminary field reconnaissance, approximately 12.4 acres of mapped critical wetland are located near proposed project improvements.

After identifying wetland locations from the published wetland inventories described above, field reconnaissance was conducted to generally confirm wetland boundaries and to identify other potential wetlands in the area. Field reconnaissance focused on wetland resources near the proposed improvements and resulted in better definition of about 247 acres of wetlands proximate to those improvements.¹² The U.S. Army Corps of Engineers (USACE), USFWS, and USEPA concurred with the Tier One wetland methodology, wherein the level of detail and field truthing was sufficient to support reasonably representative levels of impact for this type of study.¹³ See Appendix B for further discussion of methodology.

Past human disturbances and runoff from the urban environment appear to have adversely affected the majority of the wetlands located near the proposed improvements. In general, most of the wetland sites identified in the field are characterized by low diversity and richness of native plant species. The palustrine cover type is dominated by invasive plant species. Except for wetlands identified in special lands, within constructed stormwater facilities, or exhibiting hydrologic connections to creeks, most appear to be hydrologically isolated¹⁴ and average less than one acre in size. The principal functions performed by most existing wetland sites are stormwater storage, which can reduce water quality impacts, and conveyance. The wetlands may also provide habitat for common and adaptable wildlife. The stormwater storage function and water quality benefit of most of the wetlands is limited because of their small size and apparent shallow depth and storage capacity. Though providing limited functional value on an individual basis, when combined, the wetlands contribute to the functions of stormwater storage, conveyance, and overall water quality benefits.

Wetland resources evaluated by field reconnaissance are summarized in Tables 2-16 and 2-17 and discussed by watershed below. Slightly higher wetland acreage totals were identified during preliminary field reconnaissance in Cook County (128 acres) when compared to DuPage County (119 acres). Over 47 percent of the field identified Cook County wetlands were located in the Des Plaines River Watershed and roughly 70 percent of the field identified DuPage County wetlands were located in the Salt Creek Watershed. Note that detailed wetland studies that fully comply with state and federal approved methodology will be completed as part of Tier Two environmental documents for individual project improvements.

¹² Wetland acreage includes wetlands, wetland bottom stormwater management facilities, and wetland mitigation sites located near the proposed project improvements.

¹³ Resource Agency field visit on November 12, 2008.

¹⁴ Isolated status is based on preliminary assessment. Jurisdictional status is subject to change pending more detailed studies to be completed as part of the Tier Two environmental studies and following a USACE jurisdictional determination.

TABLE 2-16
Summary of Wetlands and Watersheds by County

| Watershed | Cook County | | | DuPage County | | |
|--------------------------|---------------------------------|-------------------------------|---|---------------------------------|-------------------------------|---|
| | Watershed Acreage in Study Area | Wetland Acreage in Study Area | Wetland Acreage ^a Near Proposed Improvements | Watershed Acreage in Study Area | Wetland Acreage in Study Area | Wetland Acreage ^a Near Proposed Improvements |
| Addison Creek | 2,787.3 | 15.5 | 0.1 | 5,843.6 | 161.7 | 8.1 |
| Des Plaines River | 12,864.7 | 352.4 | 60.4 | 2,487.2 | 104.1 | 3.0 |
| Salt Creek | 18,057.4 | 1242.1 | 35.7 | 17,513.2 | 1350.6 | 82.8 |
| Weller Creek | 2,634.5 | 16.6 | 0 | 0 | 0 | 0 |
| West Branch DuPage River | 3,029.3 | 178.1 | 11.5 | 2,259.5 | 160.9 | 9.3 |
| Willow Creek | 10,377.7 | 74.4 | 20.3 | 2,862.2 | 65.1 | 15.7 |
| Totals | 49,750.9 | 1,879.1 | 128.0 | 31,852.3 | 1,842.4^b | 118.9 |

^a Wetland acreages are approximate and are based on preliminary field reconnaissance. Wetland acreage includes wetlands, wetland bottom stormwater management facilities, and wetland mitigation sites located near the proposed project improvements.

^b In the study area, 106.3 acres of wetland are mapped within the East Branch DuPage River Watershed. The East Branch DuPage River Watershed is within the study area, but it is not located proximate to proposed improvements. Therefore, it was not included in this table.

TABLE 2-17
Summary of Field Reconnaissance for Wetlands Near Proposed Improvements

| Wetland Type ^a | Addison Creek Watershed (acre) | Des Plaines River Watershed (acre) | Salt Creek Watershed (acre) | West Branch DuPage River Watershed (acre) | Willow Creek Watershed (acre) |
|--|--------------------------------|------------------------------------|-----------------------------|---|-------------------------------|
| Emergent wetland | 3.5 | 0.6 | 64.8 | 10.8 | 17.3 |
| Scrub-shrub wetland | 0.1 | 0 | 3.1 | 0 | 0.5 |
| Wet old field | 0.1 | 0.4 | 8.4 | 3.5 | 2.5 |
| Wooded wetland | 0.7 | 0.9 | 7.2 | 0 | 2.9 |
| Vegetated drainage ditch/channel | 0.1 | 2.7 | 1.2 | 0 | 9.9 |
| OMP wetlands ^b | 0 | 27.7 | 0 | 0 | 0.6 |
| Wetland mitigation sites ^c | 0.5 | 0 | 10.6 | 2.5 | 0 |
| Undetermined ^d | 0.7 | 1.0 | 0 | 0 | 0 |
| Wetland bottom stormwater management facility ^e | 2.7 | 30.0 | 23.2 | 4.0 | 2.2 |
| Total | 8.4 | 63.4 | 118.5 | 20.8 | 35.9 |

TABLE 2-17
Summary of Field Reconnaissance for Wetlands Near Proposed Improvements

| Wetland Type ^a | Addison Creek Watershed (acre) | Des Plaines River Watershed (acre) | Salt Creek Watershed (acre) | West Branch DuPage River Watershed (acre) | Willow Creek Watershed (acre) |
|---------------------------|--------------------------------|------------------------------------|-----------------------------|---|-------------------------------|
| % | 3.4 | 25.7 | 48.0 | 8.4 | 14.5 |

Note: Acreages are approximate. Wetlands near proposed EO-WB project improvements were not identified in the East Branch DuPage River or Weller Creek Watersheds; therefore, they are not included in this table.
Source: CH2M HILL, 2008.

^a Some wetlands include more than one community type or contained areas of open water. The dominant community type is listed.

^b OMP obtained a Section 404 permit from the USACE in December 2005. As authorized by that permit, onsite wetlands are in the process of being filled and these wetland acreages are likely to decrease; as such, the wetlands within OMP limits are listed separately in the table above.

^c Mitigation wetlands within OMP limits are categorized as "OMP Wetlands." Mitigation sites may not meet all three wetland parameters (i.e., vegetation, soils, and hydrology).

^d Includes one potential wetland area (± 1.0 acre) that was identified within railroad property based on review of aerial photography, and additional wetland area (± 0.7 acre) that appeared recently planted based on 2008 field observation.

^e Stormwater management facilities were inventoried due to their potentially jurisdictional nature; however, several may be exempt from state or federal regulation following a review of soils data and site records.

2.4.1 Addison Creek Watershed

About 8.4 acres of wetlands in the Addison Creek Watershed are near the proposed transportation improvements. Of those, 1.7 acres are located in Fischer Woods Forest Preserve. Based on approximate locations and information provided by IDNR, some wetlands in and near Fischer Woods Forest Preserve may provide habitat for state-listed threatened and endangered species. Wetlands supporting state- or federal-listed threatened or endangered species are considered High Quality Aquatic Resources by the USACE and require higher wetland compensation ratios under the Interagency Wetland Policy Act. An additional 0.5 acre of wetlands comprises a mitigation site. The quality of the other wetland areas identified during field reconnaissance ranges from low to high.

2.4.2 Des Plaines River Watershed

About 63.4 acres of wetlands in the Des Plaines River Watershed are near proposed improvements. Roughly 91 percent of that area (57.7 acres) includes wetland bottom stormwater management facilities and wetlands within the OMP project limits. OMP wetlands within the study area are permitted for fill under Section 404 of the Clean Water Act (CWA). Thus, the acreage of OMP wetlands near the proposed improvements will decrease as wetlands are filled. Most remaining wetland resources in the watershed appear to be relatively low quality.

2.4.3 Salt Creek Watershed

An estimated 118.5 acres of wetlands in the Salt Creek Watershed are near the proposed improvements. Roughly one-third of that area is contiguous with, or mapped as, critical wetland or is a wetland mitigation site. Impacts to mapped critical wetlands or wetland mitigation sites most likely will require higher compensation ratios under Section 404 of the CWA and the Interagency Wetland Policy Act. Based on preliminary field reconnaissance,

most of the remaining wetland sites near proposed improvements in the watershed are relatively low quality, although higher quality wetlands are present.

2.4.4 West Branch DuPage River Watershed

An estimated 20.8 acres of wetlands in the West Branch DuPage River Watershed are near the proposed transportation improvements. Of that, approximately 12 percent (2.5 acres) are wetland mitigation sites. Most of the other wetlands identified during field reconnaissance are of low quality.

2.4.5 Willow Creek Watershed

An estimated 35.9 acres of wetlands in the Willow Creek Watershed are near the proposed transportation improvements. Approximately 82 percent (29.4 acres) of that area includes emergent wetland, vegetated drainage ditch/channel, or wetland bottom stormwater management facilities. Most of the wetlands are manmade or induced; are in channelized corridors adjacent to roads, buildings or parking lots in developed areas; or have an open water component. Based on field reconnaissance, most of the wetland sites are of low quality, although higher quality wetlands are present.

2.5 Floodplains

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs)¹⁵ for Cook and DuPage counties show 673 acres of 100-year floodplain (including Zone A floodplain) proximate to the project improvements. Table 2-18 lists watersheds containing 100-year floodplain near the proposed improvements. Some waterways have regulatory floodways.¹⁶ Exhibit 2-9 shows the 100-year floodplain from the FEMA FIRMs.

TABLE 2-18
Summary of Floodplain Areas Located near Proposed Improvements

| Watershed | Floodplain (acres) | Contributing Floodplains |
|--------------------------|--------------------|---|
| Addison Creek | 96 | Addison Creek and Addison Creek Tributary 2. |
| Des Plaines River | 215 | Bensenville Ditch, Crystal Creek, Crystal Creek Tributary, Industrial Tributary, Motel Tributary, Sexton Ditch, and Silver Creek. |
| Salt Creek | 192 | Devon Avenue Tributary, Meacham Creek, and Salt Creek. |
| West Branch DuPage River | 16 | West Branch DuPage River. |
| Willow Creek | 154 | Higgins Creek, Higgins Creek Tributaries A and B, Willow Creek, Willow Creek South Tributary, and Willow Creek North Tributary. |

Sources: CBBEL, 2006; FEMA, 2004a; FEMA, 2008a.

¹⁵ The FEMA FIRMs used for the portions of the proposed study area located in Cook County became effective on August 19, 2008 while the FIRMs for DuPage County were effective December 16, 2004. The floodplain of the Willow Creek North Tributary and Willow Creek South Tributary were refined based on the *DuPage County Countywide Stormwater and Flood Plain Ordinance Stormwater Management Report for the Willow Creek Tributaries Improvements, Bensenville, DuPage County, Illinois* (CBBEL, 2006).

¹⁶ The floodway is defined as the channel of a waterway and its adjacent land areas that must be preserved to discharge the base flood (the 100-year flood) without cumulatively increasing the water surface elevation more than a designated height.