

**Project ID:** R09Y14P20- Final Fill In:

**Project area description:** Areas within the Lower 48 States where no previous data existed.

**Source Imagery:**

ESRI World imagery (2010)  
(<http://server.arcgisonline.com/arcgis/services>)

**Collateral Data:**

- USGS 1:24,000 topographic quadrangles

**Inventory Method:** The delineations were done “heads-up” in ArcMap using ARCGIS 10.2 software on Natural Color imagery (1-meter ground resolution).

**Data Limitations:** The user of the map is cautioned that, due to the limitation of mapping primarily through aerial photo interpretation, a small percentage of wetlands may have gone unidentified. Since the photography was taken during a particular time and season, there may be discrepancies between the map and current field conditions. Changes in landscape which occurred after the photography was taken would result in such discrepancies.

**Classification:** The wetland classifications are in accordance with the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979).

**General Description of the Project Area:**

The project area consists of areas within the United State previously unmapped by the USFWS. These areas were either outside the USGS 7.5” quadrangles or were not full quads (OE). Many of the areas were between project areas or where photo “holidays” had taken place on the original source imagery.

**Description of attribute values:**

| ATTRIBUTE | DESCRIPTION   |
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| L1UBH     | Permanently flooded, deepwater habitat greater than 20 acres in size (e.g., natural lake).  |
| L1UBHh    | Permanently flooded, deepwater habitat greater than 20 acres in size that is created by an impoundment (e.g., reservoir).   |
| PABF      | Semi-permanently flooded ponds vegetated with aquatic beds (e.g., <i>Lemna</i> spp., <i>Potamogeton</i> spp. and <i>Nymphaea</i> spp.).   |
| PABH      | Permanently flooded ponds vegetated with aquatic beds (e.g., <i>Lemna</i> spp., <i>Potamogeton</i> spp. and <i>Nymphaea</i> spp.).  |
| PEMA      | Temporarily flooded wetlands dominated by persistent herbaceous vegetation. These areas are comprised of <i>Juncus</i> spp., <i>Carex</i> spp., <i>Eleocharis</i> spp., <i>Rumex</i> spp., <i>Equisetum</i> spp., <i>Polygonum</i> spp., <i>Potentilla anserina</i> , and <i>Phalaris arundinacea</i> . |
| PEMAh     | Temporarily flooded wetlands dominated by herbaceous vegetation. This code was applied to diked former tidelands that are now partially drained agricultural fields.  |

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| PEMC    | Seasonally flooded wetlands dominated by persistent herbaceous vegetation. These areas are comprised of <i>Juncus</i> spp., <i>Carex</i> spp., <i>Eleocharis</i> spp., <i>Rumex</i> spp., <i>Equisetum</i> spp., <i>Polygonum</i> spp., and <i>Phalaris arundinacea</i> .                     |
| PEMCdh  | Seasonally flooded wetlands dominated by herbaceous vegetation. This code was applied to diked former tidelands that are now partially drained agricultural fields.   |
| PEMF    | Semi-permanently flooded depressions comprised of erect, rooted, herbaceous vegetation (e.g., <i>Scirpus</i> spp., <i>Typha</i> spp., <i>Carex</i> spp., and <i>Juncus</i> spp.).   |
| PEMH    | Permanently flooded depressions comprised of erect, rooted, herbaceous vegetation (e.g., <i>Scirpus</i> spp., <i>Typha</i> spp., and <i>Juncus</i> spp.).   |
| PEMKh   | Artificially flooded basin, located behind an impoundment that contains persistent herbaceous vegetation. (e.g., storm water detention pond).   |
| PEMN    | Regularly flooded, freshwater tidal flats consisting of <i>Scirpus acutus</i> .   |
| PEMR    | Permanently flooded depressions which are influenced by tidal fluctuations and are comprised of erect, rooted, herbaceous vegetation (e.g., <i>Scirpus</i> spp., <i>Typha</i> spp., and <i>Juncus</i> spp.).  |
| PEMS    | Temporarily flooded depressions which are influenced by tidal fluctuations and are comprised of erect, rooted, herbaceous vegetation (e.g., <i>Scirpus</i> spp., <i>Typha</i> spp., and <i>Juncus</i> spp.).  |
| PEMT    | Permanently flooded depressions which are influenced by tidal fluctuations and are comprised of erect, rooted, herbaceous vegetation (e.g., <i>Scirpus</i> spp., <i>Typha</i> spp., and <i>Juncus</i> spp.).  |
| PFO/EMA | Temporarily flooded depressions and floodplains characterized by a matrix of forested and herbaceous vegetation.  |
| PFO/EMB | Depressions, bogs, or floodplain areas characterized by a matrix of forested and herbaceous vegetation in which the soils remain saturated at or near the surface. These wetlands often occur below springs.  |
| PFO/EMC | Seasonally flooded depressions and floodplains characterized by a matrix of forested and herbaceous vegetation.   |
| PFO/SSA | Temporarily flooded depressions and floodplains characterized by a matrix of forested and scrub-shrub vegetation.   |
| PFO/SSC | Seasonally flooded depressions and floodplains characterized by a matrix of forested and scrub-shrub vegetation.  |
| PFO/SSR | Seasonally flooded, freshwater tidal depressions and floodplains characterized by a matrix of forested and scrub-shrub vegetation.  |
| PFO/SSS | Temporarily flooded, freshwater tidal floodplains and banks dominated by a matrix of forested and scrub shrub vegetation.   |
| PFOA    | Temporarily flooded depressions and floodplains dominated by forested vegetation. Common palustrine forested species include <i>Fraxinus latifolia</i> , <i>Acer macrophyllum</i> , <i>Picea sitchensis</i> , <i>Pinus contorta</i> , <i>Thuja plicata</i> , and <i>Populus trichocarpa</i> . |

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| PFOB    | Saturated forested wetland usually associated with springs. Common tree species include willow and cottonwood.   |
| PFOC    | Seasonally flooded depressions and floodplains dominated by forested vegetation. Common palustrine forested species include <i>Fraxinus latifolia</i> , <i>Acer macrophyllum</i> , <i>Picea sitchensis</i> , <i>Pinus contorta</i> , <i>Thuja plicata</i> , and <i>Populus trichocarpa</i> .             |
| PFOR    | Seasonally flooded, freshwater tidal floodplains and banks dominated by forested vegetation. Common palustrine forested species include <i>Fraxinus latifolia</i> , <i>Acer macrophyllum</i> , <i>Picea sitchensis</i> , <i>Pinus contorta</i> , <i>Thuja plicata</i> , and <i>Populus trichocarpa</i> . |
| PFOS    | Temporarily flooded, freshwater tidal floodplains and banks dominated by forested vegetation.  |
| PSS/EMA | Temporarily flooded depressions and floodplains characterized by a matrix of scrub-shrub and herbaceous vegetation.  |
| PSS/EMC | Seasonally flooded depressions and floodplains characterized by a matrix of scrub-shrub and herbaceous vegetation.   |
| PSS/EMF | Semi-permanently flooded depressions and floodplains characterized by a matrix of scrub-shrub and herbaceous vegetation.   |
| PSS/EMR | Seasonally flooded, freshwater tidal floodplains and banks that are comprised of scrub-shrub and herbaceous vegetation.  |
| PSS/FOA | Temporarily flooded depressions and floodplains characterized by a matrix of scrub-shrub and forested vegetation.  |
| PSS/FOC | Seasonally flooded depressions and floodplains characterized by a matrix of scrub-shrub and forested vegetation.   |
| PSS/USA | Temporarily flooded floodplains and vegetated gravel bars characterized by a matrix of sparse scrub-shrub vegetation and unconsolidated substrate.   |
| PSS/USC | Seasonally flooded floodplains and vegetated gravel bars characterized by a matrix of sparse scrub-shrub vegetation and unconsolidated substrate.  |
| PSSA    | Temporarily flooded scrub-shrub wetland typically found along drainages. Common scrub shrub species include <i>Salix</i> spp., <i>Alnus rubra</i> , <i>Spirea douglassi</i> , <i>Cornus stolonifera</i> , <i>Myrica californica</i> , and <i>Rubus spectabilis</i> .                                     |
| PSSB    | Saturated scrub-shrub wetland usually associated with springs or bogs.   |
| PSSC    | Seasonally flooded scrub-shrub wetland typically found along drainages. Common scrub shrub species include <i>Salix</i> spp., <i>Alnus rubra</i> , <i>Spirea douglassi</i> , <i>Cornus stolonifera</i> , <i>Myrica californica</i> , and <i>Rubus spectabilis</i> .                                      |
| PSSKf   | Cranberry bogs created and managed for crop production.  |

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| PSSR  | Seasonally flooded, freshwater tidal floodplains and banks that are dominated by scrub-shrub vegetation.  |
| PSSS  | Temporarily flooded, freshwater tidal floodplains and banks that are dominated by scrub-shrub vegetation.   |
| PUBF  | Semi-permanently flooded ponds.   |
| PUBH  | Permanently flooded ponds.  |
| PUBK  | Artificially flooded pond usually excavated and comprised of an artificial substrate (e.g., sewage detention pond).   |
| PUBV  | Permanently flooded ponds that are influenced by tidal fluctuation.   |
| PUSC  | Seasonally flooded basins with little or no vegetation.   |
| PUSR  | Seasonally flooded, freshwater tidal basins with little or non-persistent vegetation.   |
| R1EMR | Seasonally flooded, freshwater tidal floodplains and banks that are characterized by erect, rooted, herbaceous vegetation.  |
| R1UBV | Permanently flooded, tidally influenced riverine deepwater habitat.   |
| R1USN | Regularly flooded, freshwater tidal floodplains and banks that are characterized by unconsolidated substrate and little or no vegetation.   |
| R1USR | Seasonally flooded, freshwater tidal floodplains, banks, and sand bars that are characterized by unconsolidated substrate and little or no vegetation.  |
| R2ABF | Areas along permanently flowing lower perennial rivers that are characterized as having aquatic beds and are semi-permanently flooded. Common species would include <i>Lemna</i> spp., <i>Potamogeton</i> spp. and <i>Nymphaea</i> spp. |
| R2ABH | Areas within permanently flowing lower perennial rivers that are characterized as having aquatic beds. Common species would include <i>Lemna</i> spp., <i>Potamogeton</i> spp. and <i>Nymphaea</i> spp.                                 |
| R2UBH | Permanently flowing lower perennial rivers.   |

### Description of Special Modifiers:

| SPECIAL MODIFIER | DESCRIPTION   |
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| <b>b</b>         | Beaver - Wetland is created, modified or supported by the action of beavers. The beaver modifier is used on all delineations where visible hydrologic changes have occurred due to beaver activity. |

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| <b>d</b> | Partially Drained - The water level has been artificially lowered, but the area is still classified as wetland because soil moisture is sufficient to support hydrophytes. This modifier is also used to indicate extensive ditch networks in wetlands where, due to the complexity or narrow width of the ditches, individual delineation is not possible. |
| <b>f</b> | Farmed - The soil surface has been mechanically or physically altered for production of crops, but hydrophytes will become re-established if farming is discontinued.   |
| <b>h</b> | Diked/Impounded - Created or modified by a man-made barrier or dam which obstructs the inflow or outflow of water.  |
| <b>r</b> | Artificial - Substrates classified as Rock Bottom, Unconsolidated Bottom, Rocky Shore and Unconsolidated Shore that were emplaced by man using natural or synthetic materials.  |
| <b>x</b> | Excavated - Lies within a basin or channel excavated by man.  |

**Regional specialized conventions: None.**

**Other discussion of mapping issues (image quality, water conditions, etc.): None.**

**References:**

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. Laroe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. United States Department of the Interior, Fish and Wildlife Service, FWS/PBS 79/81, Washington, D.C.

Dahl, T.E., J. Dick, J. Swords and B.O. Wilen. 2009. Data Collection Requirements and Procedures for Mapping Wetland, Deepwater and Related Habitats of the United States. Division of Habitat and