

Prosser et al.

Appendix 1: Description of habitat classifications used in the digitization of the land cover of Poplar Island from yearly aerial imagery spanning 2006-2017.

1. Building/Artificial

This class includes permanent and semi-permanent manmade structures, but does not include vehicles. Vehicles are not included in any classification with the area covered defaulting to the surrounding cover type.

2. Canal

Canals are defined as non-vegetated, manmade channels of water, and include only manmade canals in undeveloped cells. Canals are marked as canals if there is a clear line. Depth of canals was always >25 cm, though these are highly variable areas. Canals are not marked if there is not a clear line on the imagery; if the canal disappears and reappears later, it would be marked as two separate canals.

3. Creek

Creeks are defined as non-vegetated water inlets, and includes only manmade creeks in completed wetland cells. Creeks are marked during the wetland cell development process if they contain water; otherwise they are marked as undeveloped until the cell is developed.

4. DevHighMarsh<50

Stands for “Developed high marsh with <50% vegetation”, and includes areas that are marked as high marsh in the development plans but have <50% vegetation in the imagery. Areas that were planted high marsh but have since lost significant amounts of vegetation are marked as DevHighMarsh<50, including areas composed of mostly bare soil. A few of the two track “roads” that extend from the main road into developed cells are considered DevHighMarsh<50 because they have marsh vegetation and seldom function as roads.

5. DevHighMarsh>50

Stands for “Developed high marsh with >50% vegetation”, and includes areas of high marsh in completed cells. Areas of high marsh are distinguished from low marsh via a combination of the original development plans, and the color on the imagery. This classification does include areas not originally planted as high marsh, but which clearly demonstrate a change to high marsh vegetation based upon review of aerial imagery.

6. DevLowMarsh<50

Stands for “Developed low marsh with <50% vegetation”, and includes areas of low marsh in completed cells. Areas that were planted high marsh but have since lost

significant amounts of vegetation are marked as DevLowMarsh<50, unless they are flooded with water, in which case they are marked as TidalMudflats.

7. DevLowMarsh>50

Stands for “Developed low marsh with >50% vegetation”, and includes areas of low marsh in completed cells. Areas of low marsh are distinguished from high marsh via a combination of the original development plans, and the color on the imagery. This classification does include areas not originally planted as low marsh, but which clearly demonstrate a change to low marsh vegetation based upon review of aerial imagery.

8. PeaGravel

Pea gravel includes places where pea gravel was physically placed on the island, and only occurs in cell 1B from 2006-2010.

9. RipRap

Riprap is marked in areas of clear rock piles, including areas that are partially submerged but visible, and shadowed areas of clear rock, but does not include shadowed areas of what appears to be water, or areas where rock is hidden by the breaking of waves. Because it occurs along the outside edge of the island, riprap is not given a cell number. The riprap offshore of the island on the NW side of cell 6 is marked as riprap and labeled “Offshore” in the notes column, but is not given a cell number. The rock piles on the SW side of cell 6 from 2006-2007 are marked as riprap and given the cell number, 6

10. Road

Roads are defined as manmade gravel pathways for vehicle traffic, and includes main roads but excludes road inlets and secondary sand roads. Because roads are used to distinguish between cells, roads are not given a cell number in the attribute table. Sand roads should be placed in the “Undev<50” category as they may serve other habitat roles depending upon frequency of use.

11. Sand/shell

Sand/shell is defined as light colored areas of dry undeveloped land, and includes areas in undeveloped cells as well as habitat islands in both undeveloped and developed cells. Areas categorized as Sand/shell have < 50% vegetative coverage.

12. Sand/shellw/Veg

Stands for “Sand and/or shell mixed with vegetation” and includes areas of sand in undeveloped or developed cells, as well as habitat islands, with $\geq 50\%$ vegetative covering.

13. TidalMudflat

Tidal mudflats are defined as non-vegetated, wet substrate in completed cells. Areas that were originally planted as marsh but consistently appear to be mudflats for multiple years are considered mudflat

14. Undev<50

This includes areas of wet or dry land with less than 50% vegetation in undeveloped areas.

15. Undev>50

This includes areas of wet or dry land with greater than 50% vegetation in undeveloped areas.

16. UplandPlants

This includes forbs and upland grasses planted in developed wetland cells and along roadways. Grasses and forbs present in the area between the two main roads along the center of the island were considered upland plants, in addition to those between the two roads surrounding cell 2. However, the area between cell 2 and cell 6 was not considered upland, as the plants were not planted and could have been comprised of a mix of species. Similarly, the edges of undeveloped cells were not considered upland, as the plants were not planted and could have been comprised of a mix of species

17. UplandShrubs

This includes woody shrubs in developed wetland cells.

18. Water<15

Non-vegetated visible surface water in both developed and undeveloped cells that is believed to be <15 cm deep based on biologist knowledge of the site across time. These areas of water may be tidal or nontidal.

19. Water15-25

Non-vegetated visible surface water in both developed and undeveloped cells that is believed to be between 15 and 25 cm deep based on biologist knowledge of the site across time. These areas of water may be tidal or nontidal.

20. Water>25

Non-vegetated visible surface water in both developed and undeveloped cells that is believed to be >25 cm deep based on biologist knowledge of the site across time. These areas of water may be tidal or nontidal.