Review of requested basins for shallow lake and wetland assignment. VBWD

MPCA was supplied with VBWD management plans, vegetative survey maps, photos, and other supporting formation to determine the appropriate classification of 5 draft impaired lakes that were assessed during the St. Croix Watershed assessments.

MPCA has provided to anyone wishing to have a lake reviewed for classification as either a wetland or shallow lake to provide information on vegetation, substrate, depth, uses – fishery, recreation, etc.

Unnamed (Bay) Lake – DNR ID: 82-0011-00

DNR – Class V wetland (all lakes in MN have this classification). The basin is protected on the PWI list as a wetland.

NWI – Palustrian wetland

VBWD – Level V wetland; low priority water (shallow, no public access, poor water quality)

VBWD reports a maximum depth for the basin of 1 meter. Vegetation is highly variable – ranging from few plants to 100% vegetated. The district notes mucky substrate and a shoreline dominated by vegetation. Passive viewing noted as the primary use of the waterbody. Unsuccessful attempts by DNR in the early 80s to use the basin as a fish rearing occurred. Extremely poor water quality is present on this basin and may be limiting rooted aquatic vegetation; average phosphorus levels exceeded 380 ug/L and chlorophyll-a levels exceeded 200 ug/L. **Due primarily to the extremely shallow nature of the basin, the MPCA has agreed that this basin should be classified as a wetland and the basin will be removed from the 2014 Impaired waters list.**

Downs Lake – DNR ID: 82-0110-00

DNR – Class V wetland (all lakes in MN have this classification). The basin is protected on the PWI list as a XXXXXX

NWI – Lacustrian limnetic

VBWD – Level III waterbody (supported fish, wildlife viewing); low priority water (shallow, no public access, poor water quality).

VBWD reports a maximum depth of 2.1 meters with an average depth of 1.5 meters. Vegetation is sparse, and limited to the fringe of the basin and substrate varies between rock/sand/gravel to muck. Defined uses include aesthetic viewing, paddle boating, sailing, and canoeing by waterbody residents. The basin was listed earlier during the 2006 assessment and was removed during the public comment period. Since 2010, MPCA has used a more comprehensive approach to determining shallow lake and wetland status instead of relying solely on the DNR’s Protected Waters Inventory. The water quality of the basin is poor; phosphorus averaging 180 ug/L and chlorophyll-a averaging 76 ug/L. With considerable open water, limited vegetation and depth greater than 2 meters and documented use of the basin for recreational purposes, the MPCA intends to keep Downs Lake on the draft 2012 impaired waters list for the shallow lake eutrophication standard.

Unnamed (Echo) Lake – DNR ID: 82-0135-00

DNR – Class V wetland (all lakes in MN have this classification). The basin is protected on the PWI list as XXXXXX

NWI – Lacustrian limnetic

VBWD – Level III waterbody (supported fish, wildlife viewing); low priority water (shallow, no public access, poor water quality).

VBWD reports a maximum depth of 1.8 meters. Vegetation is limited to the outer ring of the lake with denser stands in the southern and western portions of the basin; however, the basin still does have a considerable area with no rooted aquatic vegetation. Defined uses include swimming, canoeing, row boating and passive aesthetic viewing by waterbody residents. The City of Mahtomedi has plans to put a public walking path along the west side of the lake and it is possible a public access may be considered in the future; VBWD has acknowledged that this would possibly trigger a review of the district’s classification of the basin. With considerable open water, depth approaching 2 meters and documented swimming and boating recreational uses, the MPCA intends to keep Unnamed (Echo) Lake on the draft 2012 impaired waters list for the shallow lake eutrophication standard.

Kramer Lake – DNR ID: 82-0117-00

DNR - Class IV wetland. The basin is protected on the PWI list as XXXXXX.

NWI – Palustrian

VBWD – Level V (wetland) waterbody; low priority water (shallow, no public access, poor water quality).

VBWD reports a maximum depth of 1.4 meters. Vegetation is limited primarily to the southeastern lobe of the lake, which is fully inundated; the main portion of the lake supports vegetation only on the basin perimeter and a northeastern lobe is separate by and berm and with drier conditions in inundated with wetland grasses. Muck and clay compose the substrate. The defined uses of the basin are limited to aesthetic viewing and wildlife. This basin has extremely poor water quality with average phosphorus concentrations over 550 ug/L and chlorophyll-a greater than 200 ug/L; it is likely that rooted aquatic vegetation is limited in the main basin due to the dense algae population. **With shallower depth and considerable portions of the waterbody inundated with vegetation, the MPCA agrees that this basin is best classified as a wetland and will be removed from the 2014 Impaired Waters list.**

Goose Lake (N) – DNR ID: 82-0113-01 – agreed during the initial assessment that this basin was less than 10 acres and would not be assessed as a lake. This decision still stands and MPCA will not assess this basin.

Goose Lake (S) – DNR ID: 82-0113-02

DNR – Class V wetland (all lakes in MN have this classification), natural environment lake, protected as XX in PWI

NWI – Lacustrian limnetic

VBWD – Level III waterbody (supported fish, wildlife viewing); low priority water (no public access, shallow, poor water quality)

VBWD reports a maximum depth of 2.1 meters. Vegetation is limited to the near shore fringe with the basin dominated by open water. The basin does have considerable fetch. Defined uses include aesthetic viewing and occasional fishing has been noted. Substrate varies between sand, gravel, and muck. Has been used historically as a DNR rearing pond; winterkill has occurred on the basin before. Populations of curlyleaf pondweed are present in the basin. With the large fetch, 2 meter maximum depth and dominance of algae and sustained curlyleaf pondweed population, the MPCA considers this basin to be a shallow lake and it will remained as an impaired basin on the draft 2012 Impaired Waters List.