Form 4.3-7 Volume Based Biotreatment (DA   ) – Constructed Wetlands and Extended Detention

Biotreatment BMP Type *Constructed wetlands, extended wet detention, extended dry detention, or other comparable proprietary BMP. If BMP includes multiple modules (e.g. forebay and main basin), provide separate estimates for storage and pollutants treated in each module.*	DA DMA BMP Type		DA DMA BMP Type *(Use additional forms for more BMPs)*	
	Forebay	Basin	Forebay	Basin
1 Pollutants addressed with BMP forebay and basin *List all pollutant of concern that will be effectively reduced through specific Unit Operations and Processes described in Table 5-5 of the TGD for WQMP*				
2 Bottom width (ft)				
3 Bottom length (ft)				
4 Bottom area (ft²) A_{bottom} = Item 2 * Item 3				
5 Side slope (ft/ft)				
6 Depth of storage (ft)				
7 Water surface area (ft²) $A_{surface}$ =(Item 2 + (2 * Item 5 * Item 6)) * (Item 3 + (2 * Item 5 * Item 6))				
8 Storage volume (ft³) *For BMP with a forebay, ensure fraction of total storage is within ranges specified in BMP specific fact sheets, see Table 5-6 of the TGD for WQMP for reference to BMP design details* V =Item 6 / 3 * [Item 4 + Item 7 + (Item 4 * Item 7)^0.5]				
9 Drawdown Time (hrs) *Copy Item 6 from Form 2.1*				
10 Outflow rate (cfs) Q_{BMP} = (Item 8$_{forebay}$ + Item 8$_{basin}$) / (Item 9 * 3600)				
11 Duration of design storm event (hrs)				
12 Biotreated Volume (ft³) $V_{biotreated}$ = (Item 8$_{forebay}$ + Item 8$_{basin}$) +(Item 10 * Item 11 * 3600)				

13 Total biotreated volume from constructed wetlands, extended dry detention, or extended wet detention :

(Sum of Item 12 for all BMP included in plan)