

Project Name	BCWD Permit 24-18 County Road 15B Grading	Date	1/3/2025
To / Contact info	BCWD Board of Managers		
Cc / Contact info	Jeremy Nielsen, PE / SRF Consulting Group		
Cc / Contact info	Ryan Hoefs / Washington County		
Cc / Contact info	Karen Kill, Administrator / BCWD		
From / Contact info	Paul Nation, PE; Julia Lau / EOR		
Regarding	Permit Application No. 24-18 Engineer's Report		

The BCWD engineer conducted the following review of the above-captioned project located within the legal jurisdiction of the Brown's Creek Watershed District (BCWD) to determine compliance with the BCWD rules for purposes of the engineer's recommendation to the Board of Managers for its determination of the permit application.

Applicant: Washington County Highway Department

Permit Submittal Date: 12/11/2024

Completeness Determination: 12/13/2024

Board Action Required By: 2/9/2025

Review based on BCWD Rules effective April 1, 2020

Recommendation: Approve with Conditions

GENERAL COMMENTS

Washington County has applied to BCWD for a permit for grading across several properties needed to establish grades suitable for the future construction of County Road 15B from Manning Avenue east to a point 800 feet west of Memorial Avenue, and along and south of Trunk Highway 36. (See Figure 1.) The application, if approved, will authorize grading only; no road or other construction would be authorized.

Existing Conditions: The entire existing 16.7-acre project area drains to a ravine, crosses under Highway 36, and drains north toward Long Lake. 3.1 acres drain north to a ditch along the south side of TH 36 and 13.6 acres drain south through existing wetlands, then to the ravine. There is no existing impervious area within the project limit of disturbance. The applicant proposes to disturb 16.7 acres across six parcels:

- *PIDs 0602920220012, 0602920220013 – owned by Central Commons LLC*
- *PID 0602920210001 – owned by Anderson Holdings Inc*
- *PIDs 0602920120005, 0602920120006 – owned by Roger and Bruce Tuckner (Century Power)*
- *PID 0602920210002 – owned by Washington County*

There are 13 wetlands on these parcels, 6 of which are not impacted by the proposed work as will be discussed below.

Proposed Conditions: The county is proposing grading the roadway corridor from Manning Avenue to the existing ravine splitting the Tuckner and Anderson Holdings properties. The county proposes

to rough grade for the future roadway and place stockpiles on the adjacent Central Commons and Anderson parcels.

The Central Commons parcels are the area that is subject to BCWD Permit 19-05, which was conditionally approved in November of 2020. The county's proposed grading is consistent with the development conditionally approved by Permit 19-05. (The grading proposed under the present application will not affect the stormwater management plan approved for 19-05. Future work in the right of way, if any, that is not consistent with the stormwater management plan or other compliance measures that constituted the premise underlying BCWD's conditional approval of permit 19-05 may require amendment of permit 19-05.)

Washington County has submitted documentation of its ongoing coordination with the owners of the parcels that are the location of its proposed grading but has not yet secured the necessary land-use rights. The recommended conditions of permit approval (see end of report) include submission of final easement documents for the proposed right-of-way, demonstrating Washington County's authorization to undertake the proposed grading (and roadway construction under a future application).

In addition to the grading work, the county proposes to install a culvert and fill in the ravine in preparation for the future road construction, and a wet pond will be constructed for floodplain mitigation (Figure 1). The county has requested a variance from compliance with Rule 7.0 because the storage provided by the wet pond is not located within the ravine floodplain. The final Wetland Conservation Act approval of fill in two ravine wetlands within the proposed project area must be provided as a condition of permit approval. Wetland impacts for filling of wetlands on the Central Commons site were approved through WCA using state-approved mitigation credits. Central Commons LLC has authorized Washington County to rely on these approvals for the wetland fill related to the county's work on their property.

Recommendation: The BCWD engineer recommends that the board approve the application and determines that there is sufficient technical support for the managers' approval of the requested variance, with the conditions and stipulations stated below.

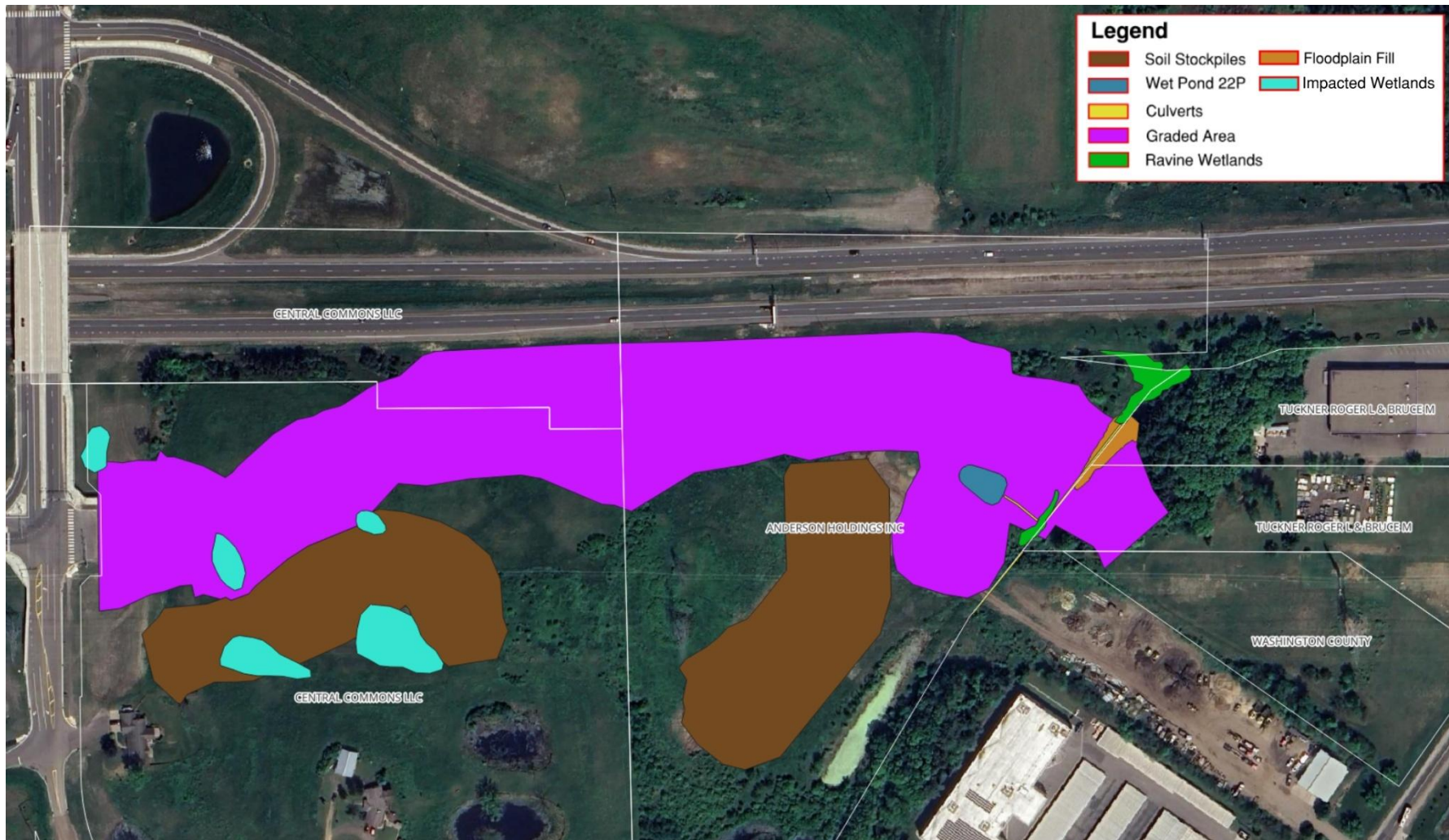


Figure 1: Site Plan

Rule 2.0—STORMWATER MANAGEMENT

According to BCWD Rule 2.2(c), linear projects that create one or more acres of new and/or reconstructed impervious surfaces are subject to the requirements of Rule 2.0.

- Rule Not Applicable to Permit. *The proposed project does not create any impervious surfaces. A stormwater permit will be required for the subsequent road paving permit.*

Rule 3.0—EROSION CONTROL

According to BCWD Rule 3.2, all persons undertaking any grading, filling, or other land-altering activities which involve the movement of more than 50 cubic yards of earth or removal of vegetative cover on 5,000 square feet or more of land must submit an erosion control plan to the District, and secure a permit from the District approving the erosion control plan. The proposed project triggers the application of Rule 3.0 Erosion Control because it includes 16.7 acres of disturbance on the project site.

- Rule Requirements Met with Conditions

The erosion and sediment control plan includes:

- *Erosion control blanket*
- *Silt fence*
- *Double row of silt fence in ravine*
- *Stabilized construction exit*
- *Permanent stabilization with native vegetation*
- *De-compaction to restore soil infiltration capacity to match existing conditions*
- *Hydraulic reinforced fiber matrix on 2:1 slopes*

The following conditions must be addressed in the erosion and sediment control plan to comply with the District's requirements:

Rule 3.0 Conditions:

- 3-1. Provide the contact information for the erosion and sediment control responsible party during construction once a contractor is selected. Provide the District with contact information for the Erosion Control Supervisor and the construction schedule when available (BCWD 3.3.2).

Rule 4.0—LAKE, STREAM, AND WETLAND BUFFER REQUIREMENTS

According to BCWD Rule 4.2.1, Rule 4.0 applies to land that is (a) adjacent to Brown's Creek; a tributary of Brown's Creek designated as a public water (Minnesota Statutes section 103G.005, subdivision 15); a lake, as defined in the rules; a wetland one acre or larger; or a groundwater-dependent natural resource; and (b) that has been either (i) subdivided or (ii) subject to a new primary use for which a necessary rezoning, conditional use permit, special-use permit or variance has been approved on or after April 9, 2007, (for wetlands and groundwater-dependent natural resources other than public waters) or January 1, 2000 (for other waters).

- Rule Requirements Not Met.

Rule 4.0 applies to the project because it is adjacent to two wetlands greater than one acre and the creation of right-of-way counts as subdivision of the property.

There are two wetlands larger than one acre located on the impacted properties, an 8.90-acre Manage 2 wetland (DNR Public Water 316W) on the Central Commons property and a 4.66-acre Manage 1 wetland located on both the Central Commons and Anderson Holdings properties (see Figure 2). The county asserts that it made a good faith effort to obtain rights to establish buffers for these wetlands. However, the buffers for these wetlands would be entirely outside of the right-of-way and therefore, not within the county's control. The required buffers must be established in the course of implementation of the work approved for Central Commons LLC permit 19-05. Anderson Holdings has indicated that it will complete a wetland delineation prior to any future development of its property and has verbally acknowledged the wetland buffer requirement.

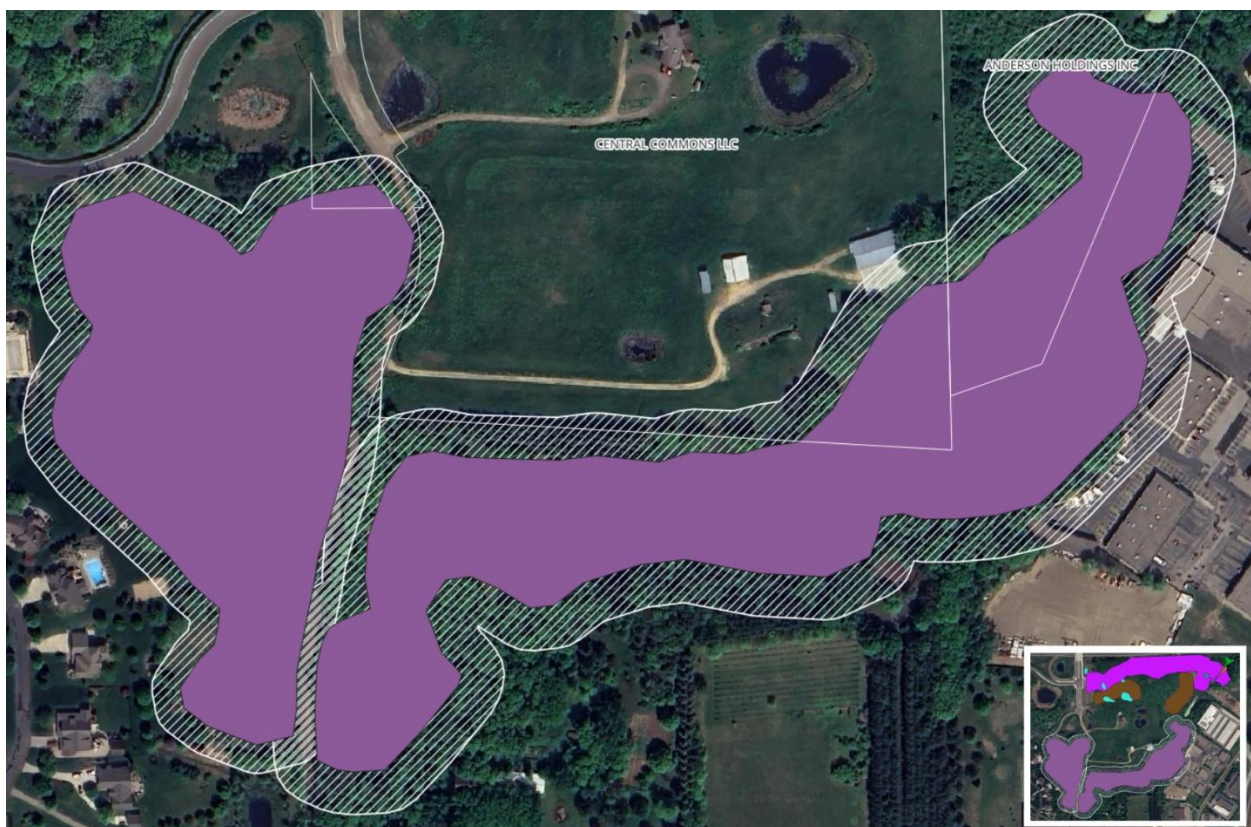


Figure 2: Large Wetlands with buffers South of Grading Site

The two wetlands within the ravine are each less than an acre (0.13 acres and 0.758 acres) and are not shown in the BCWD Watershed Management Plan as groundwater dependent, nor were any indicators of groundwater dependency observed during the TEP site visit. Therefore Rule 4.0 is not applicable to these wetlands.

Rule 5.0—SHORELINE AND STREAMBANK ALTERATIONS

According to BCWD Rule 5.2, no person may disturb the natural shoreline or streambank partially or wholly below the ordinary high water mark of a waterbody, without first securing a permit from the District.

☒ Rule Requirements Met with Conditions

According to Rule 5.3, Bioengineering techniques must be used to the extent possible under the following criteria.

5.3.1 The resultant project must be structurally stable. Special emphasis will be given to the stability of the toe of slope where traditional engineering techniques may be more appropriate.

5.3.2 Native vegetation must be used in all cases. Preferable species include those that form dense root systems or can be planted from cuttings.

5.3.3 Bioengineering projects must include a long-term maintenance plan that will ensure that small erosion spots are corrected and native plant materials are successful.

Rule 5.0 applies to the project because the ravine wetlands will be partially filled which will disturb their natural shorelines below the ordinary high water mark of the waterbodies.

The applicant has provided construction plans meeting the requirements of 5.3.1 and 5.3.2. MnDOT native seed mix Southern Tallgrass Roadside will be established along the disturbed wetland edge up to the proposed road grade.

Washington County has provided documentation of their plans for inspection and maintenance of this area until native vegetation is established, satisfying the requirements of 5.3.3.

Rule 6.0—WATERCOURSE AND BASIN CROSSINGS

According to Rule 6.2, no person may use the beds of any waterbody within the District for the placement of roads, highways and utilities without first securing a permit from the District.

☒ Rule Requirements Met

Rule 6.0 applies to the project because the project uses the beds of the ravine wetlands for the placement of a road.

According to Rule 6.3, use of the bed must:

6.3.1 Meet a demonstrated public benefit;

Washington County has determined that the proposed road is needed to support future development of this area and to aid in vehicle mobility by closing the gap in CSAH 15 between Stillwater and Oak Park Heights. CSAH 15 serves as a primary connection to the regional transportation system (e.g., Interstate, TH 36), and facilitates access to businesses, schools, churches, and residential properties/neighborhoods. In present conditions, traffic cannot go from CSAH 15 on the north end (Manning Ave) and CSAH 15 on the south end (Stillwater Blvd) without using TH 36. A secondary purpose of the project is to improve the bikeability/walkability at TH 36 and Manning Avenue.

6.3.2 Retain adequate hydraulic capacity;

HydroCAD modeling has demonstrated the retention of adequate hydraulic capacity. The proposed 30" culvert under the road is the same size as the existing culvert under TH 36. HydroCAD modeling demonstrates that the HWL downstream of the proposed culvert matches or is reduced from existing conditions due to the added storage in the adjacent wet pond. The HWL upstream of the proposed ravine culvert is in a deep depression (remaining portion of the ravine) with significant freeboard to the surrounding area and does not adversely affect the HWL of the existing channel or wetlands upstream.

6.3.3 Retain adequate navigational capacity;

N/A

6.3.4 Not adversely affect water quality; and

There is no proposed impervious cover, and all disturbed areas will be stabilized with vegetation. Outside of the road bed (which will eventually be impervious surface), the seed mixes in the plans are native seed mixes. Additionally, the proposed wet pond, which provides treatment of stormwater, offsets the impacts of fill in the wetlands. Therefore, the project will not increase pollutants in the runoff.

6.3.5 Represent the “minimal impact” solution to a specific need with respect to all other reasonable alternatives.

The future road is proposed to be constructed between rather than through the 2 ravine wetlands, which reduces wetland impacts significantly. Project alternatives were considered as part of the TH 36/Manning Ave interchange project, and include the following options that were ultimately dismissed: No Build, Standard Diamond with Auxiliary Lanes, Northwest and Southwest Quadrant Loops, Southeast Quadrant Loop, and Double Roundabouts. Additionally, existing watersheds were maintained as much as possible to support wetland hydrology and the proposed wet pond was sited in upland area to further minimize wetland impacts. The BCWD engineer has reviewed the proposed road layout and determined that it represents the minimal impact solution as it minimizes wetland impacts relative to all other reasonable road layouts.

Rule 7.0—FLOODPLAIN AND DRAINAGE ALTERATIONS

According to Rule 7.2, no person may alter or fill land below the 100-year flood elevation of any waterbody, wetland, or stormwater management basin, or place fill in a landlocked basin, without first obtaining a permit from the District. No person may alter stormwater flows at a property boundary by changing land contours, diverting or obstructing surface or channel flow, or creating a basin outlet, without first obtaining a permit from the District.

Rule Requirements Met with Conditions

BCWD Rule 7.3.1 states, “Floodplain filling must be accompanied by a replacement of flood volume between the ordinary water level and the 100-year flood elevation. The floodplain mitigation area must be calculated by a professional engineer registered in the State of Minnesota or by a qualified hydrologist”.

The proposed project places fill below the 100-year water level of the ravine, and within several existing wetlands on the Central Commons property.

The applicant asserts, and the BCWD engineer concurs, that it is infeasible to provide replacement floodplain storage adjacent to the impacts on the Central Commons property, as additional impacts are anticipated once Permit 19-05 is issued and the work approved thereunder proceeds. Any replacement flood volume on this property would be lost once development occurs.¹ Instead, replacement flood volume is provided in the proposed wet pond. HydroCAD modeling demonstrates that 100-year HWLs on the large southern wetlands (the two requiring buffers as noted previously) will be reduced or maintained at existing conditions. These wetlands are downstream of the Central Commons wetlands to be filled (8P, 14P, 20P, 21P, and 23P), but upstream of the proposed wet pond (22P). The proposed wet pond will have a storage volume of 1.330 ac-ft. Redirection of water to the wet pond, instead of to the two large southern wetlands will help to offset the wetland fill, as shown in Table 1.

The applicant asserts, and the BCWD engineer concurs, that it is infeasible to provide replacement floodplain storage within the ravine due to the existing steep slopes and impacts additional grading would have on the adjacent landowners. As noted above, redirection of water to the wet pond, prior to discharging to the ravine, provides replacement floodplain storage. The location of the wet pond, relative to the floodplain fill in the ravine, is shown in Figure 3 below.

¹ Note that floodplain impacts from the Central Commons development were approved and replacement floodplain storage would be provided in the infiltration basin proposed for Permit 19-05. Inclusion of floodplain fill for these wetlands is due to the possibility that this permit is issued prior to Permit 19-05 and replacement floodplain storage is needed until the 19-05 infiltration basin is constructed.

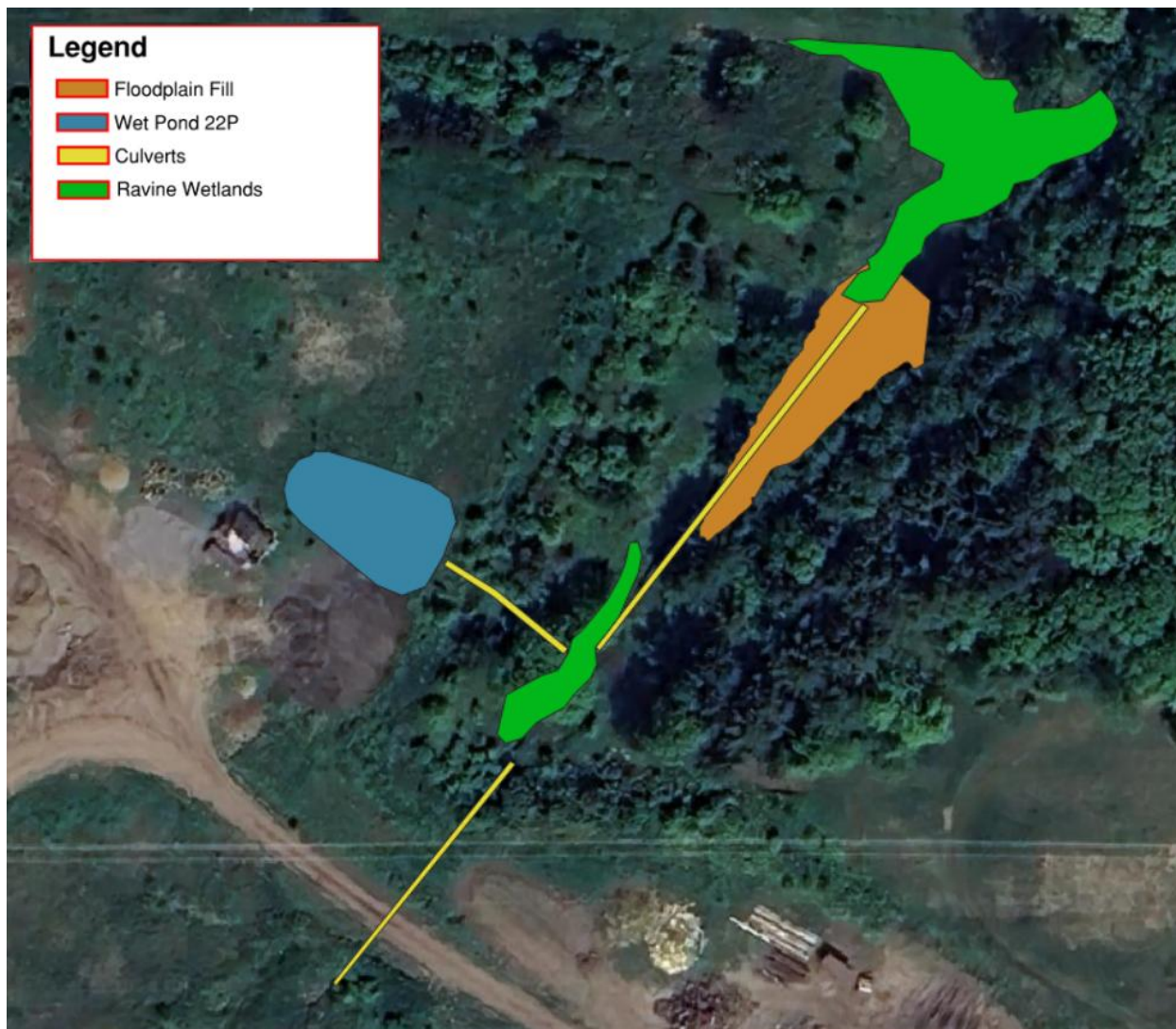


Figure 3: Floodplain Fill and Replacement Storage at Wet Pond 22P

Since replacement floodplain storage is provided in the proposed wet pond and not within the floodplain of impacted wetlands, the applicant is requesting a variance to Rule 7.3.1, which is discussed under Rule 10.0.

Table 1 below shows a comparison of floodplain fill and created floodplain storage due to the proposed grading. HydroCAD analysis demonstrated that the net flood storage increases for a 100-year event with the addition of the Wet Pond (22P) and additional storage upstream of the proposed Culvert 30P.

Table 1 – Floodplain Storage Summary

Location	Floodplain Fill (ac-ft)	Created Storage (ac-ft)	Notes
8P – Wetland	0.012	0	Partially impacted
14P – Wetland	0.017	0	Partially impacted
20P – Wetland	0.030	0	Partially impacted
21P – Wetland	0.409	0	Fully impacted
23P – Wetland	0.098	0	Fully impacted
31P – Ravine Wetland	0.210	0	Partially impacted
22P – Wet Pond	0	1.330	Proposed wet pond
30P – Ravine Storage	0	0.086	Additional storage created from new culvert
Total	0.776	1.416	Net increase of 0.64 ac-ft

According to BCWD rule 7.3.2 all new and reconstructed buildings must be constructed such that the lowest floor is at least two feet above the 100-year high water elevation or one foot above the emergency overflow (EOF) of a constructed basin.

There are no new or existing buildings within the limit of disturbance and no buildings adjacent to the proposed wet pond

Under BCWD Rule 7.3.5, the District will issue a permit to alter surface flows under paragraph 7.2 only on a finding that the alteration will not have an unreasonable impact on an upstream or downstream landowner and will not adversely affect flood risk, basin or channel stability, groundwater hydrology, stream baseflow, water quality or aquatic or riparian habitat.

HydroCAD modeling demonstrates a reduction in discharge rates from the project area through the culvert under TH 36 while matching or reducing the existing high water level in the ravine and the large southern wetlands. In addition, the flow volume through the culvert under TH 36 was compared and found to increase by 0.8 ac-ft for proposed conditions. To confirm no impacts to downstream Long Lake, the applicant used the hydroCAD model results as inflows into the BCWD H&H model to compare the peak water levels on Long Lake and found the HWL to be 894.76 for both existing and proposed conditions.

Rule 8.0—FEES

As Washington County is a government entity, the applicant is exempt from permit fees.

Rule 9.0—FINANCIAL ASSURANCES

As Washington County is a government entity, the applicant is exempt from financial assurances.

Rule 10.0—VARIANCES

According to BCWD Rule 10.0, the Board of Managers may hear requests for variances from the literal provisions of these Rules in instances where their strict enforcement would cause undue hardship because of the circumstances unique to the property under consideration. The Board of Managers may grant variances where it is demonstrated that such action will be keeping with the spirit and intent of these rules. Variance approval may be conditioned on an applicant's preventing or mitigating adverse impacts from the activity.

The Permit Applicant has submitted a request for a variance from the following rule provision:

1. *BCWD Rule 7.3.1 states, "Floodplain filling must be accompanied by a replacement of flood volume between the ordinary water level and the 100-year flood elevation. The floodplain mitigation area must be calculated by a professional engineer registered in the State of Minnesota or by a qualified hydrologist."*

Although the replacement of floodplain storage is not between the ordinary water level and the 100-year flood elevation (as defined in Rule 7.3.1) for the Central Commons wetlands or the ravine wetlands, the replacement flood storage exceeds the volume of floodplain fill as noted in Table 1. The variance will meet the intent of the rule by providing the same volume of storage and will not result in negative upstream or downstream impacts as noted above under Rule 7.0. The BCWD engineer determines that there is sufficient technical support for the managers' approval of the requested variance.

RECOMMENDED CONDITIONS OF THE PERMIT:

The following is a summary of the remaining tasks necessary to bring the project into compliance with the BCWD Rules in all respects other than where variances are requested as discussed above:

1. Provide final right-of-way easement documentation from all non-county landowners (BCWD Rule 1.3).
2. Demonstrate that the plan has received Wetland Conservation Act approval (BCWD Rule 1.3).
3. Address all erosion control requirements (Condition 3-1).

STIPULATIONS OF APPROVAL:

1. Note that the permit, if issued, will require that the applicant notify the District in writing at least three business days prior to commencing land disturbance. (BCWD Rule 3.3.1)
2. Provide the District with As-built record drawings showing that the completed grading and stormwater facilities conform to the grading plan.
3. Provide the District with proof, such as photographic documentation, of de-compaction and incorporation of compost for all disturbed soils.