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BOULDER COUNTY STORMWATER QUALITY PERMIT (SWQP) GUIDANCE FOR CONSTRUCTION PROJECTS NEAR WATERWAYS

This guidance is intended to provide pertinent information for construction projects near waterways regardless of disturbance size. Working near waterways requires a high standard of care in order to avoid and minimize damage to waterways, habitat, and aquatic life. Section 1302.1 of the Boulder County Storm Drain Criteria Manual (SDCM, <https://www.bouldercounty.org/transportation/floodplain-management/storm-drainage-criteria-manual/>) is dedicated to this subject and provides some **general principles for working in a waterway** which are listed below:

1. Every effort shall be made to balance the protection of riparian habitat and protection of the stream bed/waterway itself.
2. No construction equipment shall be operated within the waterway or below the existing water surface unless specifically authorized by the Stormwater Quality Permit (SWQP) issued by Boulder County, and any other applicable state or federal license or permit. Applicants are encouraged to create a dry work surface unless this would result in drying out a large section of the waterway and making it uninhabitable by aquatic life.
3. When work takes place within a channel, a temporary water diversion to bypass the work area is generally required to stabilize the work area and control erosion during construction. Diversions typically require an impervious liner to minimize seepage into the work area.
4. Dewatering operations will be required after the diversion is in place to manage seepage and establish a dry work surface. The water level at the work site should be below the subgrade an amount sufficient to provide a solid work surface that resists deformation during subgrade compaction.
5. Access must be planned and obtained to minimize entry into the waterway and disturbance to the channel. An engineered temporary stream crossing may be constructed only with county approval when an actively flowing waterway needs to be crossed regularly by construction vehicles. Design considerations are included in Volume 3 of the USDCM.
6. When possible, perform in-channel work between October 1 and March 31. While flood flows can happen at any time, this window historically provides a lower chance of high flows, excessive dewatering requirements, and failures during construction. Consider historical flow records for the subject waterway and other low-flow periods that may be created by diversions/water deliveries.
7. During cut and fill operations, avoid letting waste or excess material enter waterways or placing it on unstable areas. Excavated material should be carefully moved to areas needing fill or to a stockpile located outside the floodplain.



For any general principle that cannot be followed, briefly describe in the Stormwater Management Plan (SWMP) or notes why the principle is not feasible for the project.

Standard Notes When Working Near Waterways (SDCM Section 1300 Appendix A)

As well as being familiar with the general principals, the standard notes listed below should be included on site plans for all construction near waterways. The coffer dam standard notes may be omitted if there are no coffer dams associated with the project.

General Care of Water Standard Notes

1. No construction equipment shall be operated below the existing water surface unless specifically authorized by the stormwater quality permit issued by Boulder County, and any other applicable local, state or federal license or permit.
2. The Contractor/permittee is responsible for all Care of Water including but not limited to designing, supplying, constructing, operating, and removing all care of water provision including coffer dams and sediment removal systems; designing, supplying, installing, maintaining, and removing protective works for winter operations of care of water systems.
3. The Contractor/permittee shall comply with all USACE 404 permit requirements including any special care requirements issued for this project.
4. When required the Contractor/permittee shall design temporary stream diversions to facilitate upstream fish passage. Instream velocities shall be limited to 7 ft/sec when this provision is required.
5. Care of water shall include provisions for handling groundwater, rainstorm runoff, snow, snowmelt, and ice that may enter the work area.
6. Protective works shall be designed by the Contractor/permittee as necessary to include enclosures, insulation, and heating systems to ensure that dewatering systems operate continuously and do not become frozen during cold weather.
7. The Contractor/permittee shall provide and maintain sediment ponds or other means, remove sediment from waters collected within active construction areas prior to allowing it to enter or return into the watercourse. Contractor/permittee shall dispose of sediments in a suitable offsite waste disposal facility.
8. The Contractor/permittee shall monitor water turbidity during construction activities and shall shut down works at times of excess turbidity in order to allow the water to clear prior to recommencement of in-stream work.
9. Turbidity is expected during placement and removal of water control. If waters become noticeably turbid, Contractor/permittees should promptly halt operations to allow waters to clear prior to resuming operations. Furthermore, shutdowns for silty or turbid water may be specified by the Engineer or the Owner's Representative, at their discretion.
10. In the event of unscheduled construction activity that results in a visually conspicuous plume of sediment, Contractor/permittee shall immediately notify the Engineer and undertake mitigation actions necessary to comply with the specified clean water criteria.



Coffer Dams Standard Notes

1. The Contractor/permittee is responsible for the final layout, configuration, maintenance, and removal in their entirety of all coffer dams to be constructed within the project site.
2. The Contractor/permittee is responsible for the reclamation, to original or better condition, of all areas impacted by the construction of coffer dams. Reclamation may include but is not limited to the restoration of stable slopes typically equal to or less than 3H:1V, installation of approved erosion control fabric, and installation of an approved native seed mix.
3. Cofferdams located in the waterway shall be placed in a manner to prevent their erosion from normal or expected high flows. Furthermore, they should be placed to a sufficient elevation to prevent their overtopping during reasonably anticipated flood events that may compromise the design and performance of the cofferdam.
4. The use of riprap or other protection measures on the surfaces of the cofferdam, including the toe of cofferdam slopes exposed to high velocities, is required.
5. All temporary fills must be removed in their entirety following construction activities and affected areas graded to proposed conditions.
6. Cofferdams shall provide a bypass waterway that is armored and of the minimum dimensions shown in the typical water control channel detail.
7. Any coffer dam failures or other works efforts that cause a plume of turbid water to flow downstream shall be reported to the Engineer.

Heavy Equipment Operations and Maintenance Standard Notes

1. Equipment operated below the ordinary high water mark of the river channel, must be inspected and clean of fuel, lubricant leaks, and invasive aquatic species.
2. To minimize the spread of invasive species, all equipment shall be power-washed and free of weeds prior to its delivery to the project area. If equipment was used in another wet area within 10 days of initiating work, decontamination practices should be employed to minimize the spread of didymosphenia, New Zealand mud snails, whirling disease, zebra mussels, and other aquatic hitchhikers.
3. Equipment operating within or adjacent to any surface waters shall be free of fluid leaks. Biodegradable hydraulic fluids shall be utilized for all equipment operating in surface waters. The Contractor/permittee shall submit a list of equipment operating with certified non-toxic, biodegradable hydraulic fluids to the engineer prior to use. All fueling, oiling, or maintenance of equipment shall be performed in designated upland locations, with adequate BMPs to contain potential spills.

When is a SWQP required?

Stormwater Quality Permits (SWQP) are typically required when working within 100 horizontal feet of a waterway, even when land disturbance is less than once acre and for all construction projects disturbing an acre or more. See the **STORMWATER QUALITY PERMIT (SWQP) GUIDANCE FOR SMALL PROJECTS NEAR WATERWAYS** for additional information on how to determine if a SWQP is required and submittal requirements for small projects near waterways.