

**Guidelines For Senate Bill 40 Wildlife Certification
Developed And Agreed Upon By
Colorado Parks And Wildlife And
The Colorado Department Of Transportation
(January 2022)**

I. Introduction

Senate Bill 40 (33-5-101-107, CRS 1973 as amended) requires any agency of the state to obtain wildlife certification from Colorado Parks and Wildlife (CPW) when the agency plans construction in "...any stream or its bank or tributaries..." Although Senate Bill 40 (SB 40) emphasizes the protection of fishing waters, it does acknowledge the need to protect and preserve all fish and wildlife resources associated with streams in Colorado. The purpose of these guidelines is to clarify when a SB 40 Wildlife Certification is required and to describe the procedures to be followed by the Colorado Department of Transportation (CDOT) in securing this certification.

Since its adoption in 1969, SB 40 has been subject to many interpretations that in some cases have resulted in adverse impacts to fish and wildlife. Today, public awareness of the values of the entire stream ecosystem, including wetlands and riparian areas, demands a more consistent approach and a more efficient procedure in the administration of SB 40. These guidelines are intended to meet these demands while carrying out the legislative intent. They were prepared with the assistance of CDOT for use on state transportation engineering projects and maintenance projects. Once approved, these guidelines will update and replace CDOT and CPW's prior SB 40 guidelines, dated April 1, 2013. Although these guidelines may be useful in developing other agency-specific SB 40 guidelines, they are only intended to apply to CDOT's SB 40 certifications.

The guidelines are divided into eight sections: I) Introduction; II) Definitions; III) SB 40 Jurisdiction; IV) Procedures for Requesting SB 40 Wildlife Certification; V) Programmatic SB 40 Wildlife Certification; VI) General Conditions; VII) Special Conditions; VIII) SB 40 Field Review, and IX) Conclusion. Sections III and IV define which streams are jurisdictional and describe the procedures for requesting SB 40 certification. Section V describes the programmatic certification procedures for project impacts that are relatively minor and easily mitigated. Sections VI and VII list conditions and best management practices (BMPs) that apply to all jurisdictional SB 40 transportation projects and maintenance activities whether they require formal application or are covered under a programmatic certification. Section VIII discusses post-project review procedures. Section IX explains how these guidelines further clarify when General and Special Conditions apply and outlines contact information should questions arise. This section also provides signatory information and an effective implementation date.

II. Definitions .

The following terms shall be construed and interpreted as follows, whether such terms are capitalized or lower case:

Bank stabilization – The placement of materials to reduce or prevent streambank failure or erosion.

Channelization – Any manipulation of a stream channel that alters a stream's course, condition, capacity or location that causes more than minimal interruption of normal stream processes.

Clean water diversion – The temporary, physical diversion of all or part of stream flow outside the existing stream channel, or a similar diversion of the stream flow within the stream channel.

Drainage ditch – A linear excavation or depression constructed for the purpose of conveying surface runoff or groundwater from one area to another. The term drainage ditch does not include drainage systems, which also serve to hold and manage water flow (flood control systems).

Ephemeral stream – A stream that has flowing water only during and a short time after precipitation events in a typical year. Groundwater is not a source of water for ephemeral streams.

Emergency situation - Any situation that would result in unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if action is not taken.

Engineering Projects - A coordinated series of activities related to specific construction sites that are developed by a CDOT engineering residency, managed by an engineer, and include preparation of a plan set and specifications. The development process typically includes the following stages of project development: project scoping, field inspection review (FIR), final office review (FOR), project advertisement, project award, and construction.

Erosion – For the purposes of this document, the wearing away of land surface by wind or water intensified by anthropogenic land clearing practices.

Field Inspection Review (FIR) – A review of preliminary construction plans that signifies the end of the preliminary design. The goal of the FIR is to resolve outstanding issues and establish specific criteria and direction to be used in the final design of the Engineering Project. It is performed when plans are 30% complete.

Final Office Review (FOR) – A final review conducted for all Engineering Projects, of the complete set of construction plan, specifications, and the cost estimate, to ensure completeness and accuracy. It is performed when plans are 60% complete.

Fishery – A specific area of water where fish are present.

Floodplain – The area of land that could be inundated as a result of a flood, including the area of land over which floodwater would flow from the spillway of a reservoir.

Gold Medal trout water – Any river, stream segment, or standing water which is producing: 1) a standing stock of at least 60 pounds per acre; and 2) at least 12 trout 14 inches or longer per acre on a sustained basis.

Important spawning areas – Habitat within water bodies identified as native fish and sport fish management waters by the CPW.

Intermittent stream – A stream that has flowing water during certain times of the year when groundwater provides water for streamflow. During dry periods, intermittent streams may not have flowing water. Runoff is a supplemental source of water for intermittent streams.

Irrigation ditch - A linear excavation or depression constructed for the purpose of delivering water on a seasonal basis.

Maintenance Projects – Activities performed by CDOT Maintenance Staff or that use CDOT Maintenance funding. These are small-scale projects, which are typically not routed through a CDOT engineering residency for the purposes of maintaining or repairing existing infrastructure. These projects do not have prepared plan sets, do not follow the project development process of Engineering Projects (i.e., no FIR, FOR, etc.), are short in duration (typically completed within one week), and often need to be completed quickly (within a few weeks from identified need). Examples of Maintenance Projects include, cleaning out of existing culverts, re-grading of existing roadside ditches and gravel highway pullouts, or the replacement of a damaged culvert that is smaller than 48-inches in diameter (replacement of a larger structure would be an Engineering Project).

MOA – The memorandum of agreement dated July 8, 2013 regarding Senate Bill 40 Certification between CPW and CDOT (See Attachment 1).

Native fish water – A river, stream, or standing water that supports endemic fish conservation and/or recovery efforts during all or part of the year.

Ordinary high water mark – The line on the bank established by the fluctuations of water and indicated by physical characteristics such as: 1) a clear, natural line impressed on the bank; 2) shelving; 3) changes in the character of the soil; 4) destruction of terrestrial vegetation; 5) the presence of litter and debris; or 6) other appropriate means that considers the characteristics of the surrounding areas.

Perennial stream - A stream that normally has water in its channel at all times.

Practicable – Available and capable of being done after taking into consideration cost, existing technology, and logistics, in light of overall Project purposes.

Project – Any CDOT Engineering Project or Maintenance Project subject to the MOA or these

guidelines.

RECATa– A region erosion control advisory team inspection, which is conducted by the MS4 Construction Program Manager or designee, at the invitation of the Region Water Pollution Control Manager, to oversee contractor compliance with the Colorado Discharge Permit System– Stormwater Construction Permit. Routine audit findings document the projects strengths and/or weaknesses related to MS4 construction program compliance. A RECAT can be counted as a routine audit.

Riparian – Within the context of this programmatic agreement, “riparian” means that area adjacent to a stream that could reasonably be expected to contribute to the quality of the general stream habitat through shading, water quality filtering, contribution of food items for fish and wildlife, and the contribution of organic matter for stream food chain support. This definition is not a comprehensive definition of riparian in the broadest sense of the term. This definition only applies to the lateral jurisdiction of SB 40.

Sport fishing water – A river, stream, or standing water that supports fish used for recreation during all or part of the year.

Stream encroachment – Activities that change the stream cross-section or other aspects of stream channel geometry and thereby increase the water velocity through the channel, or impacting streambank contour and associated plant community including channel narrowing, straightening, armoring, etc.

Stream length – The distance between two points within a stream as measured down the centerline of that stream. Meanders within the waterway will be included in the measurement (See Figure 1 on Attachment 3).

Stream re-alignment – The temporary or permanent relocation of a stream channel.

Valley length – The shortest distance between two points within a stream without regard for meanders (See Figure 1 on Attachment 3).

Wetland – Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Wildlife – All fauna dependent on streams and/or riparian areas for any portion of their life cycle.

III. SB 40 Jurisdiction

This section lists the criteria CPW and CDOT use in determining: 1) which streams fall under SB 40 jurisdiction; and 2) how much of the stream and the adjacent area area covered.

A. Streams Under SB 40 Jurisdiction

A stream is considered to come under SB 40 jurisdiction if it meets any one or more of the following four criteria:

- 1.e All perennial streams represented by solid blue lines on U.S. Geological Survey 7.5' Quad (<http://libremap.org/data/state/colorado/drg/>) or the National Hydrography Dataset (<http://nhd.usgs.gov>).
2. Segments of ephemeral and intermittent streams providing flowing water beneficial to fish and wildlife.
3. Segments of streams for which 25 percent or more of the vegetation is comprised of riparian vegetation such as cottonwood, willow, alder, sedges, or other plants dependent on groundwater or overbank flooding. Such segments shall be within 300 feet upstream or downstream of the Project. The 300-foot distance shall be measured along the length of the stream by valley length. See Figure 1 on Attachment 2.
4. Segments of streams having wetlands present within 600 feet of the Project footprint. The 600-foot distance shall be measured by valley length. See Figure 1 one Attachment 2.

B. Special Rules Governing SB40 Jurisdiction

1. Irrigation ditches are generally excluded from jurisdiction except when they are mapped or listed as a fishery by CPW. CPW will provide this map or list to CDOT regional and headquarter biologists at a minimum annually, or as requested by CDOT. Standard CDOT water quality best management practices will apply to all irrigation ditches containing water.
2. Local government projects are excluded from SB 40 jurisdiction unless the Project is on a state or federal highway, the Project meets at least one of the four criteria outlined in Section III.A or Section III.B1 applies, and the CDOT regional biologist determines that SB 40 certification is warranted based upon the Project's potential impacts to a stream.
3. Roadside drainage ditches do NOT fall under SB 40 jurisdiction.

C. Extent of SB 40 Jurisdiction on the Stream, Its Banks or Riparian Area

When a Project encroaches on a jurisdictional stream, the extent of the area covered under SB 40 jurisdiction shall include the stream bed proper, its immediate banks, and as much of the bankside (riparian) areas as could reasonably be expected to contribute to the quality of the general stream habitat through shading, water quality filtering, contribution of food items for fish and wildlife, and the contribution of organic matter for stream food chain support. The jurisdictional distance from the stream may vary with the type and size of the stream and its floodplain. Where determination of a jurisdictional line is uncertain, CDOT shall contact CPW for a determination.

IV. Procedures for requesting SB 40 wildlife certification

This section identifies the criteria to be used to determine when impacts from CDOT Projects in SB 40 jurisdictional areas will require application for SB 40 Wildlife Certification, and describes the procedures to be followed in filing the application and issuing the certification.

A. Application Criteria

An application for SB 40 Wildlife Certification shall be submitted for Projects in SB 40 jurisdictional areas that meet any one or more of the following criteria:

1. If stream-associated wetland acreage to be permanently filled at a single location is greater than 0.25 acre.
2. If more than 0.5 acre of riparian area is permanently impacted by fill or excavation.
3. If wetland acreage to be temporarily filled at a single location is greater than 0.5 acre.
4. If more than 1.0 acre of riparian area is temporarily impacted by fill or excavation.
5. If a Project, such as highway corridor widening, results in any combination of a temporary and permanent fill in stream-associated wetlands that is greater than 1.0 acre.
6. If the Project results in more than 2.0 acres of combined temporary and permanent impacts to riparian areas.
7. Within the area of SB 40 jurisdiction (see Section III.), if federally listed threatened, endangered, proposed, or candidate species dependent on any streams or riparian habitats may be affected by a Project as defined in these guidelines; or if a Colorado State-listed species dependent on any streams or riparian habitats may be affected; or if known populations of state species of special concern dependent on any streams or riparian habitats may be affected; or if known populations of fish species of greatest conservation need dependent on any stream or riparian habitats may be affected as identified in Colorado's State Wildlife Action Plan (2015). (see <https://cpw.state.co.us/learn/Pages/SOC-ThreatenedEndangeredList.asp> and also Action Plan <https://cpw.state.co.us/aboutus/Pages/StateWildlifeActionPlan.aspx>).
8. If designated Gold Medal trout waters may be impacted by a Project. Information and updates on these special waters can be obtained from CPW. If a Project on a native fish or sport fishing water would adversely affect a fish spawning area by damaging spawning habitat, permanent obstruction of fish movement or by substantially altering the surrounding habitat during the spawning or incubation period. Fisheries information specific to these situations can be obtained from CPW to assist in determining level of impact.

10. Any permanent stream realignment associated with a Project.
11. Projects involving new stream crossings.
12. Projects involving replacement of existing structures over streams if the impacts extend 100 feet or more upstream and/or downstream of the Project as measured along the valley length.
13. For any Project or series of related Projects resulting in bank stabilization or stream encroachment greater than 500 feet of stream length as measured at the valley length.

B. Application Procedures

Application for SB 40 Wildlife Certification shall be made by the CDOT Region Planning and Environmental Manager (RPEM), or their designee, using the appropriate CPW application form (see Attachment 1 to these guidelines) to the CPW Regional Manager or their designee. CPW shall complete its review of the application within 30 days and issue SB 40 Wildlife Certification or request additional information or mitigation commitments. CDOT's initiation of consultation, defined as initial contact, should be made between FIR and FOR and as close to FIR as practicable. If further coordination is required upon CPW's receipt of an application from CDOT, the CPW Regional Manager and the CDOT RPEM, or their respective designees, shall make the necessary arrangements. CDOT shall obtain SB 40 Wildlife Certification from CPW prior to CDOT's advertisement for construction of the Project.

In order to facilitate Project review and this SB 40 Wildlife Certification process, CPW should consult CDOT's current "Statewide Transportation Improvement Program" (STIP) available on CDOT's website, ([Control-Click for CDOT's STIP](#)). The STIP is a four-year plan of roadway projects scheduled for construction. This affords CPW the opportunity to review all projects and comment on those with potential impacts to state waters. Please be aware that routine maintenance activities, including road repairs and resurfacing, are usually excluded from the STIP.

C. Emergency Situations - Exceptions to SB 40 Wildlife Certification Application

Projects shall be exempt from the requirements of these guidelines in the event of an emergency situation. CDOT will notify CPW in writing as soon as practicable in the event of an emergency. Once the emergency has ended, defined as having a stabilized road safe and open for public travel, CDOT and CPW personnel shall consult regarding: 1) the impacts to the stream and riparian area where activities were conducted to address the emergency; 2) what measures might be pursued to address any undesirable impacts from those activities; and 3) if there are any additional SB 40 Wildlife Certification applications needed.

V. Programmatic SB 40 Wildlife Certification

Projects that meet any one or more of the criteria listed under Section IV.A of these

guidelines shall apply for Formal SB 40 Wildlife Certification under Section IV.B. All other Projects that are under SB 40 jurisdiction may seek Programmatic SB 40 Wildlife Certification (Programmatic Certification). Projects that qualify for Programmatic Certification are normally small Projects that have little or no impact on fish and wildlife or their habitats. The purpose of having a Programmatic Certification is to expedite the SB 40 Wildlife Certification process and to eliminate unnecessary work. Any questions should be referred to the appropriate CPW Regional Manager. Regional offices' phone numbers and addresses can be found at: <https://cpw.state.co.us/aboutus/Pages/ContactUs.aspx>.

Programmatic Certification gives CDOT authority to proceed with a Project after CDOT sends written notice to the appropriate CPW Regional staff pursuant to letter or email (Written Notice) and one of the following occurs: 1) CDOT receives a written reply (letter or email) within 15 days of the Written Notice from CPW staff concurring that the Project qualifies for Programmatic Certification; or 2) CPW does not provide a written reply to CDOT pursuant to letter or email within 15 days of the Written Notice, which shall be deemed to be CPW's approval of the Project for Programmatic Certification (collectively, the "15-Day CPW Review"). Alternatively, within 15 days from the date of CDOT's Written Notice, CPW staff may submit a written request (letter or email) to CDOT for a 30-day review period commencing from the date of CDOT's Written Notice. Maintenance Projects will require internal documentation and notification to CPW, but the 15-Day CPW Review will not be required.

VI. General Conditions _____

Sections III and IV provide guidance for determining when SB 40 Wildlife Certification is necessary and when the application should be made. This section lists general conditions, or BMPs, that apply to all SB 40 jurisdiction Projects whether those Projects require SB 40 Wildlife Certification or Programmatic Certification. These general conditions are designed to minimize or avoid potential negative impacts from Projects in the vicinity of aquatic systems and riparian areas. Efforts to control erosion and to avoid impacts to aquatic resources and riparian areas, including wetlands, should be commensurate with the size of the Project, site conditions, the quality of the natural resource, and the potential for off-site damage. Some of the practices discussed below are intended to be in conformance with guidelines specified in the following CDOT documents: Erosion Control and Stormwater Quality Guide; Standard Specifications for Road and Bridge Construction; CDOT's Municipal Separate Storm Sewer System (MS-4) permit from CDPHE (Stormwater Permit); and *Drainage Design Manual*. Information described below that is extrapolated from the above mentioned documents or other relevant materials, i.e. CPW Equipment Disinfection Procedures, etc., may require updating to be consistent with changes made to the referenced documents/materials.

- A. Temporary fills, such as coffer dams and temporary road crossings, using imported material shall utilize clean, chemically-free fill to avoid increasing suspended solids or pollution. Fill material shall not be obtained from the live water area in the stream unless approved by CPW.
- B. Discharge of water directly into the stream from coffer dams or new channel construction shall be in accordance with applicable Colorado Department of Public Health and Environment (CDPHE) guidelines and permits as well as Clean Water Act Sections 401,

402, and 404 regulations and permits. In some instances, such water must be treated prior to discharge.

- C. All reasonable measures shall be taken to avoid excess application and introduction of chemicals into aquatic ecosystems and adjacent riparian areas, including wetlands. The use of chemicals such as soil stabilizers, dust palliatives, herbicides, sterilants, growth inhibitors, fertilizers, deicing salts, etc., during construction and maintenance operations shall be in accordance with the manufacturer's recommended application rates, frequency, and instructions. These chemicals shall not be used, stored, or stockpiled within 50 horizontal feet of the ordinary high water mark of any state waters, including wetlands, except when otherwise specified in the Project contract.
- D. Construction staging areas, including construction and waste material, fill material, equipment, fuel, etc., shall be located outside of the area adjacent to streams, including wetlands and riparian areas. At a minimum, such staging areas and materials shall not be located within 50 horizontal feet of the ordinary high water mark or within the wetland/riparian habitat zone of any water. A greater buffer shall be considered as space permits. Equipment refueling and servicing shall occur only within approved designated areas.
- E. All equipment shall be free of noxious weed seed and reproductive vegetative plant parts prior to use of that equipment in aquatic ecosystems and riparian areas, including wetlands. Such equipment shall be maintained in good working order to avoid unnecessary discharge of harmful materials used in the operation of that equipment, including petroleum products, radiator fluid, hydraulic fluid, etc.
- F. No wet concrete from placement of forms, washing of trucks or equipment, or concrete sawe water shall be allowed in aquatic ecosystems and riparian areas, including wetlands. Concrete washout activities may occur only within approved, designated areas per CDOT specifications.
- G. Erosion control is required on all Projects. Erosion control is particularly important around aquatic ecosystems and riparian areas, including wetlands, because of their sensitivity to sediments and pollution in roadway runoff. Temporary and permanent erosion and sediment control measures shall be installed at the earliest practicable time consistent with permit requirements and good construction practices. Such measures shall be properly monitored and maintained throughout the operation of the Project.
- H. All practicable efforts shall be expended to avoid and minimize instream work and stream crossings with equipment/vehicles. Where practical, equipment shall be operated from banks or shoulders above riparian and wetland areas. In those instances where instream work is required, such work shall be performed during low- or no-flow periods, and the use of heavy equipment in streambeds, especially in live or flowing water, shall be minimized. The equipment used shall be of such a type that will produce minimal environmental damage, including damage to the stream bottom.
- I. Under current CDOT policies, instream work is limited to specific periods in order to avoid disruption of fish migration and spawning seasons. Under certain circumstances, instream

work during such periods may be allowed. Special construction techniques are required during such situations and shall be pursued in consultation with CPW staff. The timing of such activities shall be based on the species, elevation, and location of the Project after consultation with CPW staff.

- J. During the planning and construction of a Project, all practicable measures shall be taken to avoid disturbance to existing vegetation. The length of time that disturbed areas are left exposed shall be as short as practicable and the extent of such disturbed areas shall be as small as practicable. Limitations on the duration and extent of disturbed areas lessen the potential for erosion and runoff of sediments into adjacent areas. Sensitive areas requiring avoidance shall be fenced off as necessary. Particular attention shall be paid to protecting aquatic ecosystems, riparian areas, wetlands, and habitats for threatened and endangered species from such impacts and unnecessary disturbance. Once earthwork has begun on a section, it shall be pursued until complete. Final stabilization shall begin within 48 hours after topsoil placement, soil conditioning, or combination thereof starts and shall be pursued to completion. Disturbed areas where work is temporarily halted shall be temporarily stabilized immediately after the activity ceases for the day. Disturbed surfaces outside the pavement limits slope shall be left in a surface roughened or vertically tracked condition at the end of each shift.
- K. All disturbed areas above the ordinary high water mark shall be revegetated with appropriate native plant species to provide bank stabilization, erosion control, and habitat replacement. These activities shall be conducted according to specifications approved by the CDOT Landscape Architect or CDOT Biologist. The opportunity will be given to CPW for review of the seed mix. Temporary seeding shall be done where necessary and all practicable efforts shall be expended to control the spread of weeds. Only certified weed-free hay and straw shall be used. Locations under bridges where vegetation will not grow are exempt as long as an alternate bank stabilizing material (e.g., rip rap) is used. The use of alternative bank stabilizing material shall be evaluated to determine if there is the potential to impact habitat or impede wildlife movement under the structure.
- L. All practicable effort shall be expended to avoid unnecessary destruction of trees and shrubs in the vicinity of streams and in riparian areas. Trees removed should be considered for use on-site in a manner that improves riparian and instream habitat and for bank stabilization purposes. Trees removed during construction, whether native or non-native, shall be replaced with a goal of 1:1 replacement based on a stem count of all trees with diameter at breast height of 2 inches or greater. Tree replacements shall be considered successful as per CDOT Specification 214 (available at [2019-division-200 \(codot.gov\)](#) pgs 2-66). If the Notice of Substantial Landscape Completion is issued at any other time, the landscape establishment period begins at the start of the next spring planting season. Additional trees may need to be planted to replace any unsuccessful plantings and are subject to the same criteria until a 1:1 ratio has been successfully achieved. Shrubs removed during construction, whether native or non-native, shall be replaced based on their pre-construction areal coverage. Shrub replacements shall be considered successful as per CDOT Specification 214 and subject to the same criteria as the trees. In all cases, all such trees and shrubs shall be replaced with native species. Where lack of sufficient right-of-way space limits full replacement on-site, or in locations where reestablishment of mature shrubs may increase the chance of wildlife-vehicle collisions or enhanced safety concerns for people and wildlife, consideration should be given

to placement of the remaining stock in other areas that serve similar stream functions. Additional considerations should include the existence of appropriate growing conditions, consistency with existing natural conditions, what is best for the natural resource, and input from the CDOT Landscape Architect or CDOT Biologist. Given these site considerations, it may be appropriate to replace trees with shrubs under certain circumstances. Variations to these mitigation ratios will be considered in consultation with CPW.

- M. All practicable efforts shall be expended to avoid and minimize impacts to streams, riparian areas, and wetlands. Because of their importance to wildlife and the environment, all practicable efforts shall be made to replace all wetlands and riparian areas that are impacted by the Project.
- N. Voids within the bank stabilizing material (e.g., rip rap) above the ordinary high water mark shall be filled and revegetated as specified by the CDOT Landscape Architect and in compliance with the Stormwater Permit. Where appropriate, streamside areas at the ordinary high water mark should be revegetated with brush layer cuttings and/or containerized plantings or other acceptable bioengineering methods of planting native riparian species. Supplemental watering may be needed until the plantings have become established. Locations under bridges where vegetation will not grow are exempt only from revegetation.
- O. Waste concrete is not acceptable for Projects, and shall not be used to stabilize channel banks for new construction. Such material does not meet current CDOT specifications for rip rap material and may cause water quality problems. Preference shall be given to bioengineering solutions for stream stabilization projects and for improving stream and riparian habitat values. Use of such techniques, however, should be mindful that appropriate growing conditions exist. Bioengineering techniques, such as native riparian shrub plantings, are required for all bank protection activities that exceed 50 linear feet in important spawning areas.
- P. During Project design and construction, consideration should be given to ways to improve instream habitat and riparian areas in the vicinity of such Projects. Where necessary, appropriate instream structures shall be used to dissipate water velocity, reduce erosion, and improve fish habitat. CPW shall be consulted regarding the means and methods being considered to improve instream habitat and riparian areas.
- Q. Stream crossing structures shall not degrade the stream or fish habitat or block fish movement, including constricting stream flows that increase water velocities, nor shall such structures unnecessarily widen streams and thereby decrease water velocities and increase sediment deposition.
- R. Highway runoff shall be diverted away from the stream channel and associated wetlands to avoid siltation and other pollution problems. Such runoff shall be treated with the most appropriate temporary and permanent BMPs.
- S. When temporary crossing or work areas occur in wetlands and riparian areas, it may be possible to prepare the area such that construction impacts are limited and temporary. This is especially true of willow thickets. In such cases, the area is cut down to a 2-inch stubble height, geotextile fabric is laid down and a layer of certified weed-free hay or straw is laid

on top. Thereafter, a layer of soil at least two feet thick is applied on which construction equipment can move. After construction is complete, the layer of dirt is removed until the layer of hay or straw is encountered. This layer signifies that the geotextile fabric layer is near and more careful excavation is necessary. Last, the layer of geotextile fabric is removed. Such areas should recover within one or two growing seasons. Note: this technique may not be appropriate for extremely wet areas or on soils with a high percentage of organic matter. All materials shall be removed from the work site once work is completed. Other methods, such as the use of temporary construction mats for wetland protection, which result in fewer or lesser environmental impacts, may be acceptable upon approval from CDOT's Project Engineer and the point of contact at CPW who provided the SB 40 Wildlife Certification.

T. In terms of mitigating unavoidable impacts to wetlands and riparian areas, restoration and creation of such areas should be conducted as close as practicable to the impact site in order to preserve the local functions and values of such areas. Consideration of the various mitigation options available should involve evaluation of what is best for the aquatic resource as a whole. Completion of the required mitigation should also occur as quickly as possible. Substantial delays in the replacement of wetlands may result in increased mitigation requirements.

U. On Projects involving SB 40 Wildlife Certification, consideration shall be given to eradication of Colorado state-designated noxious weeds in riparian environments. Under some circumstances, it may be possible to use such efforts as a mitigation option in areas where replacement of habitat is limited.

V. Invasive Aquatic Nuisance Species. In order to avoid the spread of invasive aquatic species including, but not limited to, Eurasian watermilfoil, zebra mussel, quagga mussel, and New Zealand mudsnail, the following BMPs shall be practiced:

- I. If tools, construction mats, and/or heavy equipment are to be used for instream work that were previously working in a nother stream, river, lake, pond, or wetland, remove all mud, plants, and organic materials away from water bodies, and apply one of the following procedures to prevent the spread of Aquatic Nuisance Species and other pathogens:
 - a) Immerse tools and/or other equipment in a solution of a quaternary ammonium-based institutional cleaner and clean water (six ounces of Green Solutions High Dilution Disinfectant 256 or Super HDQ Neutral per gallon of clean water) for at least ten minutes prior to, and after, work within a waterway. Rinse with clean water, and dispose of chemicals properly, away from water bodies.
 - b) Spray or soak tools and/or equipment with clean water (must be 140°F or warmer) for at least ten minutes prior to, and after, work within a waterway. Gear and equipment should be sprayed or soaked away from water bodies. All equipment should be completely drained of water and dried. Tools and/or equipment should be completely dried between each use.

If there are questions about these disinfection procedures, please contact CPW's Invasive Species Program at 303-291-7295 or invasive.species@state.co.us.

W. To reduce wildlife entrapment, all erosion control blankets will be biodegradable and will not contain plastic monofilament netting.

VII. Special Conditions

This section lists special conditions that apply specifically to the three primary Project activities in and adjacent to streams – structural crossings, bank stabilization and channel re-alignment/encroachment. These special conditions are to be used in conjunction with the general conditions in Section VI. Like the general conditions, these special conditions apply to all SB 40 jurisdiction Projects whether those Projects require SB 40 Wildlife Certification or Programmatic Certification.

A. Structural Crossings

1. As practicable, stream profile, substrate and habitat values shall be restored to a condition similar to or better than pre-Project conditions. During Project design and construction, consideration should be given to ways to improve instream habitat and riparian areas in the vicinity of such Projects. Where necessary, appropriate instream structures shall be used to dissipate water velocity, reduce erosion, deepen shallow channels, and improve fish habitat. CPW shall be consulted regarding the means and methods used to improve instream habitat and riparian areas.
2. Water diversions shall be minimized. Only when necessary, clean water diversion techniques shall be used to divert water around, or to pipe water through, the active construction site to minimize water quality contamination, siltation, and sedimentation.
3. Unless otherwise stipulated, temporary or permanent culverts shall be embedded and backfilled 12 inches into the channel substrate.

B. Bank Stabilization

1. Where practicable, preference shall be given to bioengineering techniques for bank stabilization and similar activities. Bioengineering techniques, such as native riparian shrub planting, are required for all bank protection activities that exceed 50 linear feet in important spawning areas.
2. Bank stabilizing material (e.g., riprap) used below ordinary high water shall be durable angular rock free of organic material, pollution, and erodible material such as dirt and gravel. Rounded river cobble or stone is not acceptable as bank stabilizing material (e.g., riprap). Use of grouted bank stabilizing material (e.g., riprap) is discouraged except where no other practicable solution exists to address the problem.
3. In streams with less than 20 feet average width at the ordinary high water mark, no more than $\frac{1}{4}$ cubic yard of material per linear foot may be placed below the plane of the ordinary high water mark.

4. Use of gabions is discouraged except where no other practicable solution exists to address the problem. If gabions are used in bank stabilization, the gabions shall be clean, and filled with durable rock material free of organic matter, sand, dirt, and gravel. River cobble is an acceptable material for filler provided it is large enough to stay within the mesh.
5. Waste concrete does not meet current CDOT specifications for bank stabilizing material (e.g., rip rap) and it may cause water quality problems and will not be used.

C. Channel Realignment/Encroachment

1. Stream profiles, substrate and aquatic habitat values shall be restored equal to or better than pre-construction conditions as practicable. All practicable efforts shall be expended to maintain the existing stream length, width, floodplain connectivity, and to establish a low-flow channel in the realigned stream channel. See Figure 1 on Attachment 2 for stream length graphic.
2. Existing or comparable stream bottom material shall be used in the re-aligned stream channel. However, such material shall not be obtained from the live water area in the stream unless approved by CPW.
3. When practicable, a reasonable vegetated buffer area shall be maintained between the stream and the highway.
4. During Project design and construction, consideration should be given to ways to improve instream habitat and riparian areas in the vicinity of such Projects. Where necessary, appropriate instream structures shall be used to improve fish habitat. CPW shall be consulted regarding the means and methods used to improve instream habitat and riparian areas.

CI. General Procedures under Special Conditions

The following are general procedures to be used during the three primary construction activities discussed above.

1. Water shall be diverted around or piped through the active construction site to minimize water quality contamination, siltation, and sedimentation. These are commonly referred to as clean water diversions. Design and use of such diversions shall be mindful of fish movement requirements.
2. Where possible, all work shall be done from above, not in the stream.
3. In clearing trees and shrubs to facilitate work in riparian areas and associated wetlands, plants shall be trimmed above the ground without removing the root mass.

4. All temporary fill shall be removed to an upland site upon completion of wetland or instream construction activities unless otherwise agreed upon by CDOT, the U.S. Army Corps of Engineers, and CPW. Such fill material shall be stabilized and revegetated at its upland site.
5. When temporary crossing or work areas occur in wetlands and riparian areas, the techniques used shall follow those discussed for temporary work areas in General Condition "S" in Section VI above.
6. All practicable efforts shall be expended to avoid channelization of streams. In situations where it is unavoidable, consideration shall be given to installation of non-grouted instream energy-dissipating and grade control structures.

VIII. SB 40 FIELD REVIEWS

On Projects involving SB 40 Wildlife Certifications, CDOT will notify CPW of RECATs for those Projects. This inspection provides an opportunity to review SB 40 related issues.

IX. CONCLUSION

The conditions listed in Sections VI and VII are practices intended to help mitigate the impacts of Projects on fish and wildlife. They apply to all Projects under SB 40 jurisdiction whether certified through SB 40 Wildlife Certification or under a Programmatic Certification. These guidelines were developed collaboratively by CPW and CDOT.


At the request of either agency, CPW and CDOT shall meet to review the effectiveness of the guidelines and make changes as necessary and agreed upon by both parties.

Pursuant to the MOA, these guidelines shall become effective and replace guidelines dated April 1, 2013, when approved by the Director, Colorado Parks and Wildlife, and the Chief Engineer, Colorado Department Transportation. Changes to the guidelines may be approved by the signatories below or their designated representatives provided the terms and conditions of the MOA are upheld (See Attachment 1).

COLORADO PARKS AND WILDLIFE

**COLORADO DEPARTMENT OF
TRANSPORTATION**

By: 
Director

By: 
Chief Engineer

Date: 1-28-22

Date: _____

Digitally signed by Stephen Harelson
Date: 2022.02.07 20:44:22 -07'00'

Attachment 3

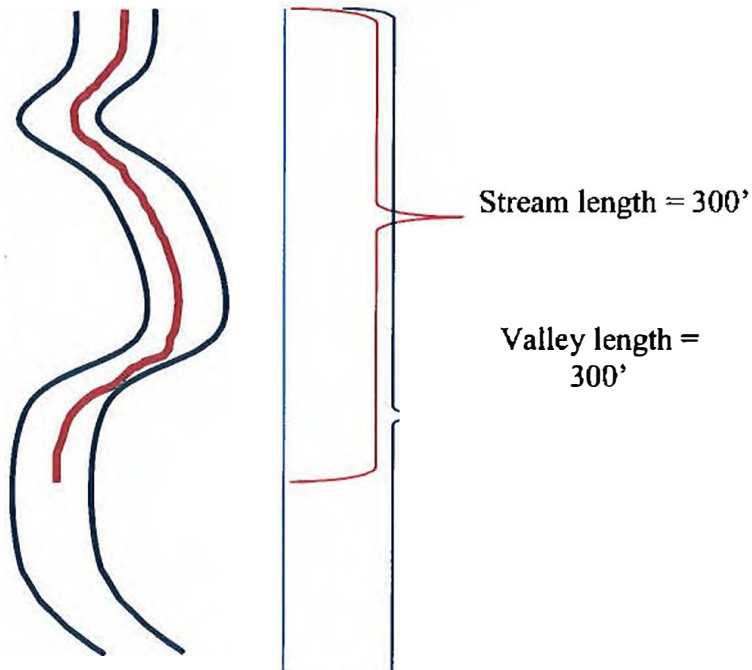


Figure 1.

Valley length is measured by a direct line down a valley occupied by a stream with no regard for the sinuosity of the stream.

Stream length is measured down the centerline of the stream. Sinuosity will be included in the measurement.