

GUIDELINES FOR SENATE BILL 40 WILDLIFE CERTIFICATION  
DEVELOPED AND AGREED UPON BY  
COLORADO PARKS AND WILDLIFE AND  
THE COLORADO DEPARTMENT OF TRANSPORTATION  
(April 1, 2013; links updated 6/6/2018)

## 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 (SB40) 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 SB40 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, SB40 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 SB40. 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 construction projects and maintenance activities. However, other state agencies may find them useful in developing their own SB40 guidelines.

The guidelines are divided into eight sections: 1) Introduction; II) Jurisdiction of SB40; III) Procedures for Requesting SB40 Wildlife Certification; IV) Programmatic SB40 Wildlife Certification; V) General Conditions; VI) Special Conditions; VII) SB40 Field Review, and VIII) Conclusion. Sections II and III define which streams are jurisdictional and describe the procedures for requesting certification. Section IV describes the programmatic certification procedures for project impacts that are relatively minor and easily mitigated. Sections V and VI list conditions and best management practices (BMPs) that apply to all jurisdictional SB40 transportation projects and maintenance activities whether they require formal application or are covered under a programmatic certification. Section VII discusses post-project review procedures. Section VIII 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

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.

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

Important spawning areas – Water bodies identified as native fish and wild trout 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.

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.

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 construction project or maintenance activity subject to this memorandum of agreement.

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 SB40.

Sport fishing water – A stream or waterway 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 center line of that stream. Meanders within the waterway will be included in the measurement (See Figure 1).

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).

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.

### III. JURISDICTION OF SB40

This section lists the criteria to be used in determining: 1) which streams fall under SB40 jurisdiction; and 2) how much of the stream and the adjacent area are covered.

#### A. Streams Under the Jurisdiction of SB40

A stream is considered to come under the jurisdiction of SB40 if it meets any one or more of the following four criteria:

1. 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 at 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.
4. Segments of streams having wetlands present within 600 feet upstream or downstream of the project. The 600-foot distance shall be measured by valley length. See figure 1.
5. Drainage ditches do NOT fall under the jurisdiction of SB40.

## B. Extent of SB40 Jurisdiction on the Stream, Its Banks or Riparian Area

When a project or maintenance activity encroaches on a jurisdictional stream, the extent of the jurisdictional area covered under SB40 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.

## IV. PROCEDURES FOR REQUESTING SB40 WILDLIFE CERTIFICATION

This section identifies the criteria to be used to determine when impacts from CDOT construction projects or maintenance activities will require application for SB40 Wildlife Certification, and describes the procedures to be followed in filing the application and issuing the certification.

### A. Application Criteria

An application for SB40 Wildlife Certification shall be submitted for projects 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 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. If federally listed threatened, endangered, proposed, or candidate species or their habitat may be affected by a project; or if Colorado state-listed species or their habitat may be affected; or known populations of state species of special concern or their habitat will be affected. (see <http://cpw.state.co.us/learn/Pages/SOC-ThreatenedEndangeredList.aspx>)

8. If designated Gold Medal fisheries may be impacted by a project. Information and updates on these special waters can be obtained from CPW.
9. If a project on a 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.
10. Any permanent stream re-alignment 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 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 SB40 Wildlife Certification shall be made by the CDOT Region Planning and Environmental Manager (RPEM) using the appropriate CPW application form (see Attachment A to these guidelines). CPW shall complete its review of the application within 30 days and issue SB40 Wildlife Certification or request additional information or mitigation commitments. CDOT's application must be made at least 60 days prior to planned construction or maintenance activities to allow for CPW review of the submitted documents and for follow-up coordination, if required. If further coordination is required prior to certification, the CPW Regional Manager and the CDOT RPEM shall make the necessary arrangements.

In order to facilitate project review and this certification process, CPW should consult CDOT's "Statewide Transportation Improvement Program" (STIP) on the department's web site, [www.dot.state.co.us](http://www.dot.state.co.us). The STIP is a six-year plan of roadway projects scheduled for construction. This affords CPW the opportunity to review all projects and comment on those with potential impacts of 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 Application

Projects shall be exempt from the requirements of this agreement in emergency situations. "Emergency situation" refers to 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. CDOT will notify CPW as soon as practicable of an emergency. Once the emergency has ended, defined as having a stabilized road safe and open for public travel, CDOT and CPW personnel should 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 applications needed.

## V. PROGRAMMATIC SB40 WILDLIFE CERTIFICATION

CDOT projects that meet any one or more of the criteria under Section IV A of these guidelines shall apply for Formal SB40 Wildlife Certification under Section IV B. All other projects that meet the criteria listed in Section III A but not the criteria in Section IV A remain under the jurisdiction of SB40, but are granted used of a Programmatic SB40 Wildlife Certification.

Programmatic certification gives CDOT authority to proceed with a transportation project after written notification of the appropriate CPW Regional Manager. Projects that qualify for programmatic certification are normally small construction projects or maintenance activities that have little or no impact on fish and wildlife or their habitats. The purpose of having a programmatic certification is to expedite the SB40 Wildlife Certification process and to eliminate unnecessary work. Any questions should be referred to the appropriate regional CPW Manager. Regional offices' phone numbers and addresses can be found at:  
<http://cpw.state.co.us/learn/Maps/Regions.pdf>

## VI. GENERAL CONDITIONS

Sections II and III provide guidance for determining when SB40 wildlife certification is necessary and when application should be made. This section lists general conditions, or BMPs, that apply to all jurisdictional SB40 transportation projects whether those projects require formal or programmatic certification. These general conditions are designed to minimize or avoid potential negative impacts from CDOT 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. 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*; Municipal Separate Storm Sewer System (MS-4) permit; and *Drainage Design Manual*.

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 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 saw 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. Project construction activities that result in land disturbance of equal to or greater than one acre require a stormwater construction permit. 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 per permit requirements.

H. All practicable efforts shall be expended to avoid and minimize instream work. 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. Except for authorized instream work, fording streams will be allowed only as authorized by the U.S. Army Corps of Engineers Section 404 Permit.

I. Under current CDOT policies and the General Conditions of the Section 404 permit, 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 shall be fenced 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.

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 which requires a 12-month Landscape Establishment period beginning at the spring planting season. 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 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 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

and Staff Biologist. Given these site considerations, it may be appropriate to replace trees with shrubs under certain circumstances.

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 on site all wetlands and riparian areas impacted by the project.

N. Riprap above the ordinary high water mark shall be covered with topsoil and revegetated as specified by the CDOT Landscape Architect. 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 method of planting native riparian species. Supplemental watering may be needed until the plantings have become established.

O. Waste concrete is not acceptable for CDOT projects, and shall not be used to stabilize channel banks for new construction. Such material does not meet current CDOT specifications for riprap material and it 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 ground level, 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 site once work is completed.

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 SB40 certification, consideration shall be given to eradication of 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. This guidance is also intended to fulfill requirements set forth under General Condition 11 (Invasive Aquatic Species) for Nationwide Permits under Section 404 of the Clean Water Act.

If heavy equipment is used that was previously working in another stream, river, lake, pond, or wetland one of the following procedures is necessary to prevent the spread of Aquatic Nuisance Species and other pathogens:

- Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.)
- Spray/soak equipment with a solution of commercial grade quaternary ammonium disinfectant compound containing at least 8.0% active ingredient diluted in solution to achieve at least 0.8% concentration (roughly 12 ounces of product per gallon of water). Specifically, a 1:15 solution of Quat 4 or Super HDQ Neutral institutional cleaner and water, could be used for effective treatment.
- Treated equipment should be kept moist for a least 10 minutes, managing rinsate as a solid waste in accordance with local, county, state, or federal regulations, OR
  
- Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.)
- Spray/soak equipment with water hotter than 140 degrees Fahrenheit for at least 10 minutes.
  
- Clean hand tools, boots, and any other equipment that will be used in the water with one of the above options as well.
  
- Do not move water from one water body to another.
  
- Be sure equipment is dry before use.

W. Permanent Fencing. Whenever practicable, permanent fencing shall use designs that accommodate unrestricted movement of wildlife.

X. 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 V. Like the general conditions, these special conditions apply to all jurisdictional SB40 transportation projects whether those projects require formal 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. Riprap materials 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 riprap. Use of grouted rip-rap 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 ¼ cubic yard of material per linear foot may be placed below the plane of the ordinary high

water mark. This requirement is based on Section 404 regional conditions for Colorado. Placement of materials in excess of these limits requires notification to the U.S. Army Corps district office.

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 gabion shall be clean, 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 riprap material and it may cause water quality problems and will not be used on new construction projects.

### C. Channel Re-Alignment/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, and to establish a low-flow channel in the realigned stream channel. See Figure 1 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.

### D. General Procedures under Special Conditions

The following are general procedures to be used during the four 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".
6. All practicable efforts shall be expended to avoid channelization of streams. In situations where channelization is unavoidable, consideration shall be given to installation of non-grouted instream energy-dissipating and grade control structures.

VIII. SB40 FIELD REVIEWS

On CDOT projects involving SB40 certifications, CDOT will notify CPW of region erosion control advisory team (RECAT) inspections on those projects. This inspection provides an opportunity to review SB40-related issues.

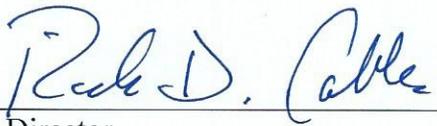
IX. CONCLUSION

The conditions listed in sections V and VI are practices intended to help mitigate the impacts of transportation projects on fish and wildlife. They apply to all projects under SB40 jurisdiction whether certified through application or under a programmatic clearance. If CDOT has any questions about these guidelines they should contact the appropriate regional CPW office.

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.

These guidelines shall become effective when approved by the Director, Colorado Parks and Wildlife, and the Chief Engineer, Colorado Department Transportation, and following the execution of a Memorandum of Agreement (MOA) regarding Senate Bill 40 Certification between the Departments of Natural Resources and 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.

COLORADO PARKS AND WILDLIFE

By:   
Director

Date: 6-21-13

COLORADO DEPARTMENT OF  
TRANSPORTATION

By:   
Chief Engineer

Date: 6/4/13

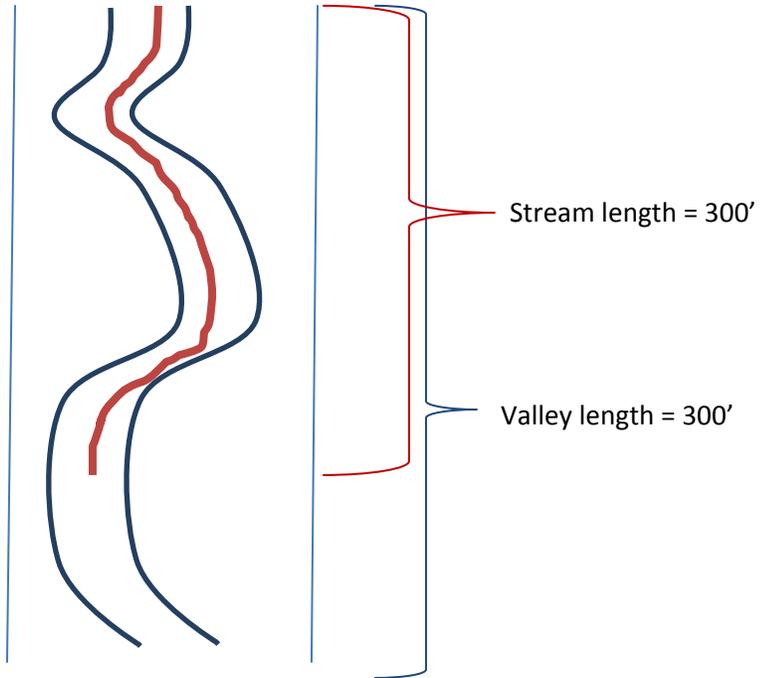


Figure 1.

**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.