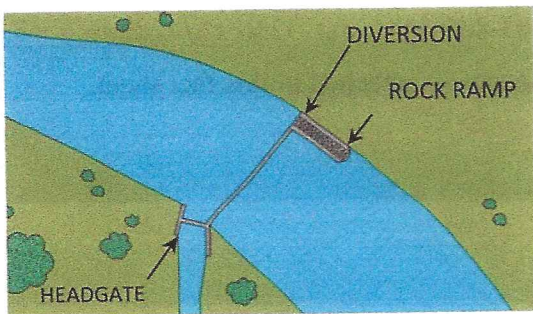


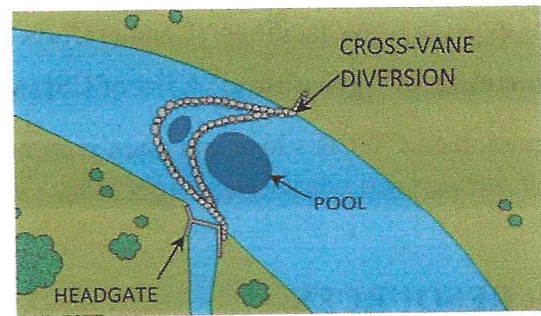


## REBUILDING FLOOD-DAMAGED DIVERSION STRUCTURES TO BENEFIT MULTIPLE USES

Colorado Parks and Wildlife (CPW), the Colorado Water Conservation Board (CWCB), federal agencies and other stakeholders can assist municipalities, ditch and reservoir companies and other water users in reconstructing flood-damaged water diversion structures in a manner that will maintain historical water diversions while providing for fish and boat passage. CPW stream reconstruction specialists and engineers are available to share conceptual designs for structures successfully used throughout Colorado on all sizes of streams. These designs ensure that water users can fully divert under their decreed water rights while allowing fish access to the entire reach of stream, at little to no additional costs. Designs range from the traditional concrete diversion structure with associated rock ramps to stand-alone boulder cross-vanes, or a combination of concrete diversion structures and boulder cross-vanes.



TRADITIONAL DIVERSION WITH ROCK RAMP



BOULDER CROSS-VANE DIVERSION



TRADITIONAL DIVERSION WITH ROCK RAMP



BOULDER CROSS-VANE DIVERSION

Potential benefits of these types of diversion structures include:

- Allowing full diversion of decreed water rights while facilitating fish and boat passage
- Increasing habitat connectivity for fish
- Improving recreational potential and reducing hazards
- Withstanding high flows (boulder cross-vane diversions on Boulder and South Boulder Creek survived the recent flooding, minus a few boulders)
- Serving as a temporary diversion structure during this period of high construction costs, or while the owner pursues additional financial assistance
- Enhancing stream health without impacting ability to fully divert and use water

If you are interested in exploring this approach to rebuilding, please contact:

~~Ken Kehmeier, Colorado Parks and Wildlife  
317 W. Prospect  
Ft. Collins, CO 80526  
[ken.kehmeier@state.co.us](mailto:ken.kehmeier@state.co.us)~~

Jeff Spohn, Colorado Parks & Wildlife  
6060 Broadway  
Denver Co 80216  
[jeff.spohn@state.co.us](mailto:jeff.spohn@state.co.us)

## FUNDING SOURCES INCLUDE:

**CWCB Emergency Loans:** Available to fund repair or replacement of raw water supply structures damaged by flood, including river diversion dams, ditch rehabilitation, and measuring devices; can incorporate design elements to facilitate fish passage. Terms: 3 years of no payment and zero interest + 27 yrs of payments at current CWCB interest rates. (Contact Anna Mauss at 303-866-3441, ext. 3224; [anna.mauss@state.co.us](mailto:anna.mauss@state.co.us)).

**CWCB Fish and Wildlife Resources Fund:** Grants to owners of existing water supply facilities to help balance between development of the state's resources and protection of the state's fish and wildlife resources. Can be used for construction projects designed to directly mitigate or significantly reduce the environmental impacts of existing water facilities. (Contact Chris Sturm at 303-866-3441, ext. 3236; [chris.sturm@state.co.us](mailto:chris.sturm@state.co.us)).

**U.S. Department of Agriculture:** A list of USDA funding sources is attached to this fact sheet.

For information on CWCB's loan and grant programs, see

<http://cwcb.state.co.us/LoansGrants/Pages/LoansGrantsHome.aspx>

## OTHER RESOURCES:

**Trout Unlimited** can provide seed money to help with fish-friendly rebuilding efforts; assist in seeking grants for restoration projects, and provide volunteer support on projects (eligible as match for FEMA). (Contact Stephanie Scott at [sscott@tu.org](mailto:sscott@tu.org)).

**U.S. Fish and Wildlife Service** can provide assistance in project design, hydrologic analysis and some funding towards improving or establishing "fish friendly" passage designs, irrigation diversions, road culverts and bridges and the removal of obsolete dams and instream structures. Projects must have a fish and wildlife tie and focus on state or federal protected species. Funding decisions are based on region-wide needs, USFWS priorities and needs identified by USFWS's various aquatic resource partners. (Contact Scott Roth at [scott\\_roth@fws.gov](mailto:scott_roth@fws.gov) or Pam Sponholtz at [Pamela\\_sponholtz@fws.gov](mailto:Pamela_sponholtz@fws.gov)).

U.S. Department of Agriculture Programs – Potential uses for Colorado Flood Recovery

NRCS Program	Relevance to Flood Recovery	Time Frame	Who Is Eligible	How To Apply	What is Provided	Comments
<a href="#">Emergency Watershed Protection Program (EWPP)</a>	Financial and technical assistance for sediment and debris removal, stream bank and channel stabilization, or dike/levee repairs. Some limited potential to assist with stream channel repairs associated with irrigation structures.	Predominantly short term.	Public and private landowners are eligible for assistance but must be represented by a project sponsor. Sponsors are a local unit of government.	The Sponsor applies for NRCS assistance via a letter to the NRCS State Conservationist within 60 days of the flood. Sponsor and NRCS work with affected land owners to identify and prioritize recovery funding needs.	EWPP provides varying amounts of technical assistance and 75% of cost for installing eligible recovery measures. Recovery measures may be temporary or permanent measures.	Project eligibility limits. Funding availability is subject to congressional appropriation.  NRCS EWPP Program Contact: John Andrews 720-544-2834
<a href="#">Emergency Watershed Protection Flood Plain Easements (EWP-FPE)</a>	Financial and technical assistance to purchase a permanent easement and restore the floodplain to natural conditions where it is a more economical and prudent approach to reducing a threat to life or property.	Long term.	Private landowners within the floodplain.  A project sponsor is required for projects involving the conversion of residential or other developed land uses from the floodplain. The Sponsor is required to purchase the remaining property after structures are removed.	Agricultural landowners apply directly to NRCS local offices.  For properties with residential or other land use requiring removal of structures the landowners work with a local EWP Sponsor to make an application to NRCS.	NRCS will pay up to 100% of the easement value and up to 100% of the costs for easement restoration.  For residential housing, NRCS will pay up to 100% of the easement value and up to 100% of the structure's value if the landowner chooses to have it demolished or relocated.	Project eligibility limits. Funding availability is subject to congressional appropriation.  NRCS EWP-FP Program Contact: John Andrews. 720-544-2834
<a href="#">Environmental Quality Incentive Program (EQIP)</a>	Financial and technical assistance for Repair replacement of on farm irrigation systems. Some limited potential for off farm irrigation systems. Potential for land reclamation of ag land damaged by overland flood flows.	Long Term. Competitive grant process.	Assistance provided to individuals for use on agricultural land.	Individual submit an application for EQIP assistance through their local NRCS office.	EQIP provides 100% of needed technical assistance and an incentive payment of typically 50%-75% of cost to construct required conservation practices.	Program availability for new contracts may be altered by pending legislation to reauthorize the Farm Bill.  NRCS EQIP Program Contact: Dawn Jackson. 720-544-2805
<a href="#">Wildlife Habitat Incentive Program (WHIP)</a>	Potential use for bank stabilization, channel modification, and vegetation establishment to develop and improve wildlife habitat.	Long Term. Competitive grant process	Assistance provided to individuals for use on agricultural and nonindustrial private forest land.	Individual submit an application for WHIP assistance through their local NRCS office.	WHIP provides 100% of technical assistance and an incentive payment typically in range of 50%-75% of cost to construct habitat improvement measures.	Applications for new projects are on hold pending legislation to reauthorize the Farm Bill.  WHIP fund availability is aligned to National & State priorities. Preble's Mouse habitat is a priority issue in the flooded areas.  NRCS WHIP Program Contact: Dawn Jackson. 720-544-2805
<a href="#">Wetland Reserve Program (WRP)</a>	Potential use in flood plains to convert damaged property from agricultural use to permanent wetlands.	Long Term. Competitive grant process requiring submittal of application for EQIP assistance through local NRCS office.	Assistance provided to individuals for use on agricultural* land.		NRCS purchases 30 year or perpetual easement and shares cost of constructing measures necessary to restore wetland functions.	Program availability for new contracts may be subject to pending legislation.  NRCS WRP Program Contact: Dawn Jackson. 720-544-2805

FSA Program	Relevance to Flood Recovery	Time Frame	Who Is Eligible	How To Apply	What Is Provided	Comments
Emergency Conservation Program (ECP)	Financial assistance for debris removal, fence restoration, grading, shaping and releveling ag land, and restoring conservation structures.	Predominantly short term.	Assistance provided to individuals for use on agricultural lands.	Individuals submit an application for assistance through their local FSA Office.	ECP provides financial assistance up to 75% of cost for installing eligible recovery measures, or up to 90% for Limited Resource producers.	FSA ECP Program Contact: Jenny Peterson 720-544-2895
Emergency Loan Program	Provides emergency loans to help producers recover from production and physical losses due to drought, flooding, other natural disasters or quarantine.	Must apply within 8 months of the county's disaster or quarantine designation.	Owners or operators of land located in a county declared by the President or designated by the Secretary of Agriculture as a primary disaster area or quarantine area who suffered at least a 30% loss.	Individuals submit a loan application through their local FSA Office.	Producers can borrow up to 100% of actual production or physical losses, to a maximum amount of \$500,000. Interest rates vary with a loan term of one to twenty years.	FSA Emergency Loan Program Contact: Gary Wall 720-544-2892