



COLORADO

Parks and Wildlife

Department of Natural Resources

Northeast Regional Office
6060 Broadway
Denver, CO 80216
P 303.291.7227 | F 303.291.7114

DATE: April 18, 2023

TO: CPW Commission

FROM: Karlyn Armstrong, Sr. Water Resource Engineer and Water Project Mitigation Coordinator
Jason Surface, Area Wildlife Manager, Area 4
Jeff Spohn, Hatchery Chief and former Northeast Region Senior Aquatic Biologist
Lance Carpenter, Northeast Region Senior Terrestrial Biologist

SUBJECT: Halligan Water Supply Project Fish and Wildlife Mitigation and Enhancement Plan: CPW Staff Memo

Summary

The Halligan Fish and Wildlife Mitigation and Enhancement Plan (Halligan FWMEP), developed by the City of Fort Collins (Fort Collins) for its Halligan Water Supply Project (Halligan Project or Project), has been submitted to the CPW commission for its review and consideration. The Halligan FWMEP Staff Memo has been prepared for the CPW commission to supplement the commission's review of the Halligan FWMEP and the development of the commission's recommendation regarding the position of the State of Colorado on mitigation of impacts to fish and wildlife resources related to the Halligan Project.

Background

Fort Collins has been formally working with CPW staff since May of 2020 to develop a Fish and Wildlife Mitigation Plan for the Halligan Project, as required by CRS 37-60-122.2, along with a Fish and Wildlife Enhancement Plan - which is not required by state statute. Over the course of this time, Fort Collins and CPW staff have worked together closely to understand project operations, to further analyze project impacts that were not clearly identified in the Halligan Draft Environmental Impact Statement, and to develop a fish and wildlife mitigation package that balances the need to develop water in Colorado with the protection of the state's fish and wildlife resources.

The Halligan FWMEP submitted by Fort Collins on April 19, 2023 is the proposed mitigation package for the Halligan Project. It will be up to the CPW commission to determine if the commission will recommend the Halligan FWMEP become Colorado's position regarding the



mitigation of fish and wildlife impacts from the development of Halligan Project (Recommendation), or if the commission will submit an alternate recommendation.

As a part of the May commission meeting, commissioners will have the opportunity to request that Fort Collins make changes to the Halligan FWMEP. Any requested changes that Fort Collins chooses to adopt will be reflected in a revised Halligan FWMEP which will be submitted to the commission prior to the June meeting. At the June commission meeting, the commission is statutorily obligated to make its final Recommendation by either adopting the Halligan FWMEP as proposed or to have an alternate recommendation ready for a decision. For additional information regarding the Fish and Wildlife Mitigation Plan process, please see the staff memo from the March 2023 commission meeting (attached).

CPW Staff position

CPW staff have worked closely with Fort Collins to negotiate meaningful fish and wildlife mitigation for the Halligan Project. Though there are several areas where CPW staff continue to work with Fort Collins to fine tune language in the Halligan FWMEP, CPW staff are generally satisfied that the Halligan FWMEP “maintains a balance between the development of the state’s water resources and the protection of the state’s fish and wildlife resources” (§37-60-122.2, C.R.S.).

One notable exception to this is the impact analysis and mitigation of the construction of new transmission lines associated with the Halligan Project. CPW staff were only recently made aware of this construction and have not yet had an opportunity to discuss appropriate mitigation with Fort Collins. CPW Staff expect this issue will be resolved prior to the submission of the final Halligan FWMEP for the June commission meeting. Areas where CPW staff continue to fine-tune language with Fort Collins are discussed in the attached staff analysis.

Conclusion

The development of the Halligan FWMEP has been a multi-year long process and CPW staff are appreciative of Fort Collins and its consultants in working with the agency to ensure this project is constructed and operated in a way that avoids, minimizes, and mitigates for adverse project impacts, develop several enhancement measures, and maintain a balance between the development of the state’s water resources and the protection of the state’s fish and wildlife resources. Staff believe that, if the transmission line impacts are addressed, the Halligan FWMEP would substantially and appropriately address impacts to aquatic and water resources, terrestrial resources, and recreation as a result of the Halligan Water Supply Project proposed by the City of Fort Collins.

Attachments

CPW Staff Analysis of the Halligan FWMEP, April 18, 2023
Overview of Fish and Wildlife Mitigation Plan process, March 2, 2023



COLORADO

Parks and Wildlife

Department of Natural Resources

Northeast Regional Office
6060 Broadway
Denver, CO 80216
P 303.291.7227 | F 303.291.7114

DATE: April 18, 2023

TO: CPW Commission

FROM: Karlyn Armstrong, Sr. Water Resource Engineer and Water Project Mitigation Coordinator
Jason Surface, Area Wildlife Manager, Area 4
Jeff Spohn, Hatchery Chief and former Northeast Region Senior Aquatic Biologist
Lance Carpenter, Northeast Region Senior Terrestrial Biologist
Melynda May, Water Quality Coordinator
Ed Perkins, Water Rights Coordinator

SUBJECT: Halligan Water Supply Project Fish and Wildlife Mitigation and Enhancement Plan: CPW Staff Analysis

Introduction

CPW staff have worked closely with Fort Collins on the development of the Halligan FWMEP with the goal that Fort Collins might submit a FWMEP that the CPW commission can adopt as the commission's Recommendation in its entirety, without any changes. Overall, and even though not all CPW recommendations were incorporated into the Halligan FWMEP, CPW staff are satisfied the Halligan FWMEP appropriately "maintains a balance between the development of the state's water resources and the protection of the state's fish and wildlife resources" (§ 37-60-122.2, C.R.S.). This report covers three main topic areas in which CPW staff were actively engaged: aquatic and water resources, terrestrial resources, and recreation. Areas where CPW Staff continue to fine-tune language with Fort Collins are described below.

Aquatic and Water Resources

CPW staff has evaluated the Halligan FWMEP and assessed potential project impacts related to aquatic and water resources as part of the Halligan Project. As described in detail in the subsequent sections, these topics include the assessment of impacts related to the hydrology and stream habitat changes, water quality, and aquatic life.

Hydrology and Stream Impacts: The Halligan Project will inundate approximately 0.75 miles of the North Fork of the Poudre River. Once enlarged, the reservoir will be filled by diverting water from the North Fork primarily during spring runoff; this operation will take up to 4



percent off the peak of the hydrograph. At times, the project will also reduce flows on the North Fork during other parts of the year when Fort Collins is diverting its changed ditch shares. Another impacted reach will be the Mainstem of the Poudre River in the stretch between Fort Collins' diversion structures and the confluence of the Main Stem and North Forks of the Poudre River. Fort Collins' operations will deplete flows in this stretch that, at times, already experiences low flows and temperature exceedance issues.

To address the predicted changes in hydrology that will result from the Halligan Project, Fort Collins has developed several flow-related operational measures that may limit the project's impacts to this portion of the North Fork and Mainstem of the Poudre River (Halligan FWMEP Section 4.2.1). These flow-related features described below will be included as part of the Halligan Project as proposed by Fort Collins and will be part of the project's routine operations, except in times of water restrictions as described in section 4.2.1.7 of the Halligan FWMEP.

- **Peak Flow Bypass Program:** Fort Collins will pass the forecasted peak flow of the North Fork for three days when Fort Collins could otherwise, legally, store water (Halligan FWMEP Section 4.2.1.5).
- **Winter Flow Program:** From October 1st through April 30th, Fort Collins will make a continuous release of 3 cfs from Halligan Reservoir to be delivered to its diversion structure on the Main Stem of the Poudre River (Halligan FWMEP Section 4.2.1.1).
- **Summer Flow Program:** From May 1st through September 30th, Fort Collins will monitor three gages (locations described in section 4.2.1.2 of the Halligan FWMEP) and will release water if necessary to ensure there is at least 5 cfs of water in the North Fork at these gages. Fort Collins will also forgo diverting the Summer Flow Program releases at its normal diversion location from July 1st to September 30th to limit project impacts to Main Stem of the Poudre River upstream of its confluence with the North Fork (Halligan FWMEP Section 4.2.1.2).

As a part of the FWMEP development process, CPW staff worked with Fort Collins to understand Project operations and impacts in more detail, understand when operational flow commitments would cease due to drought conditions, ensure a successful Peak Bypass program, and develop a ramping rate schedule. CPW and Fort Collins continue to work through operational parameters for ramping rates to ensure protection of aquatic life.

While CPW staff are comfortable with the operational flow measures as proposed, there is concern that there will not be measurable data collected to adequately ensure the benefits of these programs extend to the full 22 miles of river that Fort Collins is claiming. The Halligan Project's Summer and Winter Low Flow programs will benefit the river, especially in the 7 miles immediately downstream of Halligan Reservoir. As stated above under the Summer Flow Program bullet, Fort Collins will collect flow data from the three gage locations as identified in Section 4.2.1.2 of the Halligan FWMEP. However, there will be no flow measurement device located between the Livermore gage and Seaman Reservoir, which represents an approximately 7.8 mile stretch of river. Without this data point, it cannot be stated with

confidence that the flow related operational measures will provide the full benefits attributed to all 22 miles of river.

The flow measures presented above are the cornerstone of the Halligan FWMEP. These operations will provide value to aquatic life so long as the flows remain in the river. Fort Collins has committed to attempt to protect these flows from diversion out of the river by other parties through a flow protection program in water court.

Water Quality: Evaluating the impacts to water quality as a result of the Halligan Project was a challenge for CPW staff as there is limited data and no water quality models to review at the time the Halligan FWMEP was developed. With the information available, CPW staff identified two impacts that require mitigation: 1) increased summer water temperatures in the North Fork and Mainstem Poudre River, and 2) likely increases in total iron and iron deposits immediately downstream of Halligan Reservoir.

Mitigation for temperature impacts includes limiting exchanges on the Main Stem during the summer months and \$200,000 of funding provided by Fort Collins for stream restoration or fish passage (Halligan FWMEP Section 4.3.4). To address total iron and iron deposits, Fort Collins and CPW staff developed an end of summer flushing event in which Fort Collins will provide 30 acre/feet of water to be released from Halligan dam in late summer to flush any iron accumulations downstream of the reservoir (Halligan FWMEP Section 4.2.1.6). CPW staff find the proposed mitigation actions reasonable and acceptable to address impacts to water quality as a result of the Halligan Project. CPW staff expect that, as additional water quality modeling is developed for the Colorado Department of Public Health and Environment's (CDPHE) 401 Certification program, additional impacts will be identified and mitigated. CPW staff will re-engage with Fort Collins and CDPHE when the 401 Certification process is initiated by Fort Collins.

Aquatic Life: As a result of the Halligan Project there will be permanent inundation of approximately 200' of river downstream of the existing dam and intermittent inundation of 0.75 miles of river upstream of Halligan Reservoir (Halligan FWMEP Section 3.3.2.1). The portions that will be inundated are considered fully functional stream reaches with habitat to complete all life stages of fish. Coupled with the reduced stream flows as a result of additional storage in Halligan Reservoir by Fort Collins, CPW staff determined that the primary impacts the project will have on aquatic wildlife include loss of spawning habitat and species displacement (Halligan FWMEP Section 3.5.2).

As a part of the mitigation package, Fort Collins is proposing to construct fish passage at Fort Collins' intake at Gateway Park. This will help in a broader effort to reconnect fish habitat along the Poudre River. The flow related operational measures are expected to help offset unavoidable impacts to aquatic wildlife resulting from the inundation and loss of stream habitat. However, as discussed previously, the exclusion of a fourth stream gage above Seaman Reservoir makes it difficult for CPW staff to confirm how much of the mitigation

flows will reach the 7.8 mile stretch of river between the Livermore gage and above Seaman Reservoir. Without this information CPW cannot verify Fort Collins' claimed stream benefits.

Fort Collins has also proposed enhancement measures aimed at improving the aquatic resources in relation to the project. These measures include fish passage at the reconstructed North Poudre Canal Diversion, channel improvement and the modification of the Calloway Diversion, and the commitment of \$200,000 towards stream restoration on the North Fork (Halligan FWMEP Section 5.1.1.3 - 5.1.1.6). The Temporary Environmental Pool (TEP) is also a proposed enhancement measure, however, this will be a short-term operation and will not provide permanent aquatic enhancements, nor does CPW have control over when TEP releases will be made to the North Fork (Halligan FWMEP Section

Terrestrial Resources

CPW staff has assessed the information within the Halligan FWMEP related to terrestrial resources and finds the information presented regarding current conditions for big game, other wildlife, and special status species to be accurate (Halligan FWMEP Section 3.6). CPW staff also concurs with terrestrial resource project impacts Fort Collins has identified as a result of the project. However, CPW staff did identify adverse indirect impacts to the bighorn sheep residing in the project area as a result of the Halligan Project that requires mitigation. Also, it has recently come to CPW's attention that Fort Collins will need to relocate and/or upgrade approximately 5,500 feet of power lines in support of the Project. The impacts of this construction have not been assessed nor is there a proposal for how this construction will be mitigated.

Wildlife: CPW staff generally concur with terrestrial resource project impacts Fort Collins has identified as a result of the project. CPW and Fort Collins continue to determine the appropriateness of using Fort Collins' Roberts Ranch conservation easement to mitigate impacts to terrestrial resources. Also, the power line replacement project referenced above has not yet been assessed and will need to be addressed by Fort Collins in the Halligan FWMEP.

Bighorn Sheep: Over the last two years, CPW and Fort Collins worked closely to accurately describe current conditions of bighorn sheep in the project area, the project impacts, and to develop a mitigation plan for bighorn sheep that is supported by CPW staff.

The Halligan Project will occur within the known range and habitat use area of the S40 bighorn sheep herd. The current population in S40 has declined from an estimated 35-40 bighorn sheep in 2016 to 12-15 in 2020 (Halligan FWMEP Section 3.7.1). The cause of the population decline is unknown. A challenge in managing this bighorn sheep herd is the close proximity to grazing domestic sheep. Domestic sheep grazing has been occurring seasonally, from late April thru mid-July, on private land within S40 since 2016. There is concern about disease transmission between the bighorns and domestic sheep. The habits of this herd, including home range, habitat use, production areas, and natural migration routes, have yet to be thoroughly studied. Furthermore, over the past decade, invasive cheatgrass has

diminished the bighorn sheep habitat in the Cherokee State Wildlife Area. Cheatgrass has created a monoculture landscape where once high-value bighorn sheep habitat occurred.

Bighorn sheep may be impacted by disturbances associated with the expansion of Halligan Reservoir, particularly at the North Poudre and Calloway Diversions. Both of these diversions are slated to be modified or replaced as part of the Project. The primary concern is that the construction activities will push the bighorn sheep closer to the areas where domestic sheep/goats graze, increasing the likelihood of commingling and possible disease transmission to the bighorn sheep herd. CPW recommended that Fort Collins provide sufficient funding to study the bighorn sheep herd and complete habitat restoration on Cherokee SWA. The goal of these actions is to potentially mitigate adverse effects on the resident bighorn sheep herd while evaluating the project's impacts and results of the mitigation measures described in the Halligan FWMEP (Halligan FWMEP Section 4.2.3.17 and 4.2.3.18).

Mitigation measures in the Fish and Wildlife Mitigation Plan includes: restoring bighorn sheep habitat at Cherokee SWA in the two years prior to construction, evaluating bighorn sheep movements before, during, and after construction with GPS collars, disease testing of bighorn sheep, tracking interactions/disease transmission between domestic sheep/goats and bighorn sheep, addressing potential all-age die-offs, and compensation of bighorn sheep mortalities related to construction activities (Halligan FWMEP Section 4.2.3). The mitigation plan for S40 and the data collected will address the mitigation scenarios discussed in the Halligan FWMEP.

Recreation

CPW and Fort Collins have been in discussions for several years regarding mitigation for the loss of recreational opportunities on the Cherokee SWA due to the Halligan Project. The initial discussions were centered on the expansion of the reservoir resulting in the inundation of CPW property, including a popular angling stretch of the North Fork of the Cache la Poudre River. This stretch of the river falls in the Middle Unit of the Cherokee SWA and has been accessed by the public for approximately fifty years. The discussions were difficult as CPW and Fort Collins have different views on recreation and public access. For instance, CPW would likely incorporate Halligan Reservoir into the existing Cherokee SWA regulations that have closures in place preventing general public use from September 1st to May 1st, with access during that time limited only to hunting and fishing while Fort Collins would prefer a more open recreation policy. Also, CPW is cautious to increase visitation since the only access road to the reservoir is undeveloped and does not lend itself to heavy usage; Fort Collins agreed that access to the lake would be very challenging and the road would need to be improved greatly. Ultimately, both parties agreed that the development of recreation at this site would require more detailed analysis and discussion between parties that is outside the scope of the Halligan FWMEP (Halligan FWMEP Section 3.9.3).

Land Ownership Developments: Fort Collins discovered and informed CPW that the part of Section 29, where most of the Halligan Project inundation will take place, does not belong to CPW and instead belongs to the Kluver-Moore Trust (Halligan FWMEP Section 3.9.1.1). CPW

has not contested Fort Collins' findings, based on the documentation provided to CPW by Fort Collins. More recently, Fort Collins informed CPW that part of Section 32 that was also believed to be part of the Cherokee SWA belongs to Fort Collins and the Kluver-Moore Trust (Halligan FWMEP Section 3.9.1.1). Here too, CPW has not contested Fort Collins' findings, based on the documentation provided to CPW by Fort Collins.

These developments have caused Fort Collins to reconsider its obligation to mitigate for recreation in the Halligan FWMEP. Fort Collins recognizes the loss to recreation, but because CPW does not actually own the affected land, Fort Collins does not consider itself legally bound to mitigate for the loss as there are technically no legal impacts to (loss of) public recreation from the Halligan Project.

Recreation Mitigation as Part of the FWMEP: CPW and Fort Collins have negotiated the following recreational mitigation in response to the loss of recreation that has occurred, on the lands to be inundated, for the last fifty years when the land was understood to be part of the Cherokee SWA. These mitigation measures include:

- Fort Collins has agreed to pay \$135,000 towards funding an access agreement on the Krause Fields parcel of the Robert's Ranch (Halligan FWMEP Section 4.3.7.2). This is a 2,200 acre parcel that is directly above the inundation sight and will give the public access to the land for remote hunting as well as access to one mile of the North Fork of the Cache la Poudre River along with access to Dale Creek and Bull Creek for angling. CPW has already secured this lease for ten years effective in 2023 for \$45,000 and Fort Collins will reimburse that plus put the additional funds towards extending the lease.
- Fort Collins is working to secure the Kluver-Moore Trust property in Sections 29 and 32 and originally thought they would transfer fee title to CPW but were advised they cannot due to Dam Safety rules. However, Fort Collins has agreed to give CPW access agreements to the lands (Halligan FWMEP Section 4.3.7.1). This does not include access to the surface water of the Halligan Reservoir.
- Fort Collins has agreed to pay CPW \$35,000 to construct a new primitive parking lot since the expansion will inundate the existing parking lot (Halligan FWMEP Section 4.3.7.3).

Future Recreation: CPW and Fort Collins agreed to remove recreation on Halligan Reservoir from the Halligan FWMEP with the caveat that it may be pursued in the future outside of this plan. This decision was made because Fort Collins is not technically accountable for recreation mitigation due to the recent discoveries of land ownership. CPW also has concerns over how recreation would be managed on Halligan Reservoir and is considering the best approach to work collaboratively with Fort Collins to develop a sustainable recreation plan.

Mitigation Package Valuation

C.R.S. 92-60-122.2 limits the mitigation costs that can be attributed as a part of the mitigation package value calculation for a state fish and wildlife mitigation plan. As such, the state mitigation package value for the Halligan FWMEP appears relatively small compared to the total value of the mitigation measures Fort Collins has committed to as a part of the Halligan Project. CPW staff appreciates Fort Collins' efforts to develop a project that avoids and minimizes impacts to fish and wildlife resources through robust project design and operations and wants to highlight to the commission the value the Halligan Project's broader mitigation package brings to Colorado's fish and wildlife resources, even if that valuation is outside of the state FWMEP Recommendation.

References:

Fish and wildlife resources - legislative declaration - fish and wildlife resources fund - authorization. C.R.S. 37-60-122.2 (1987)

City of Fort Collins. Halligan Water Supply Project Fish and Wildlife Mitigation and Enhancement Plan (FWMEP). April 19, 2023, 1-143.

MEMORANDUM

TO: Colorado Parks and Wildlife Commissioners
FROM: Ed Perkins, for Karlyn Armstrong, Sr. Water Resource Engineer and Water Project Mitigation Coordinator
DATE: March 2, 2023
RE: Overview of Fish and Wildlife Mitigation Plan process

The provided video and powerpoint slides (the slides are also reviewed in the video), are intended to provide commissioners with an understanding of the Fish and Wildlife Mitigation Plan as described in the 122.2 state statute. While this video was initially presented to the Parks and Wildlife Commission (PWC) during the May 7, 2020 meeting, the information is relevant to the discussions around the Halligan Water Supply Project's Fish and Wildlife Mitigation Plan that will be presented to commissioners during the May and June 2023 PWC meetings.

In the next few months, the PWC will be asked to evaluate and provide a recommendation regarding the Halligan Water Supply Project Fish and Wildlife Mitigation Plan. This memo provides a brief explanation of what a Fish and Wildlife Mitigation Plan (FWMP or "plan") is intended to accomplish, why the PWC will be asked to review it, and what criteria the PWC might use to evaluate it.

CPW staff are currently tracking many water storage projects across the state, including the Halligan Water Supply Project. In addition to obtaining various federal, state, and local permits, certifications, and other authorizations, proponents of these projects must develop a state-level FWMP and seek recommendation of the plan from both the PWC and the Colorado Water Conservation Board (CWCB). CPW staff's engagement in this process, and review and recommendation of the plan by the PWC, are crucial to the protection of state fish and wildlife resources.

Under Colorado law, fish and wildlife resources impacted by water development projects are a matter of statewide concern, and proponents of water diversion, delivery, or storage projects are expected to mitigate the future impacts of their projects on such resources. (37-60-122.2 C.R.S., attached). To do so, project proponents must develop a FWMP whenever they seek a permit, license, or other approval from the federal government for any water diversion, delivery, or storage facility in the state (with some exceptions as noted in the statute). Prior to the plan being finalized, the FWMP must be submitted to both the PWC and the CWCB.

Project proponents are largely in control of this process and must develop the proposed FWMP. Before the plan is submitted, project proponents are encouraged to discuss and develop consensus on the proposed mitigation with CPW and CWCB staff.

Following the project proponent's submission of (and public release of) the proposed FWMP to the PWC, the PWC has 60 days to respond, unless extended in writing by the project proponent. If the project proponent and the PWC reach a mutual agreement regarding the FWMP, the PWC forwards the plan to the CWCB for review and approval; if approved by the CWCB it becomes the official state position on fish and wildlife resource mitigation actions required of the applicant.

When reviewing a proposed FWMP, the PWC is guided by the criteria set out in its implementing regulations (2 CCR 406-16:1604.B.3, attached). Using these criteria, the PWC can evaluate future impacts from the proposed project, including cumulative and indirect impacts, in order to determine whether the proposed mitigation adequately protects fish and wildlife from project impacts. The PWC's evaluations may be guided by, but are not necessarily limited to, impacts identified in a draft Environmental Impact Statement (EIS) or other federal scoping documents. Statute requires that mitigation measures must be "economically reasonable" and "maintain a balance between the development of the state's water resources and the protection of the state's fish and wildlife resources." (37-60-122.2(1)(a), C.R.S). Statute does not set a minimum or maximum expenditure for mitigation costs. However, if the cost of implementing the PWC's mitigation recommendations exceeds five percent of the project's construction costs, the applicant may qualify for CWCB grant funding.

In the event that the PWC and the project proponent cannot agree on a proposed FWMP, the plan still moves forward to the CWCB with recommendations from the PWC. If the CWCB agrees with the FWMP as recommended by the PWC, the FWMP becomes the official state position on fish and wildlife resource mitigation. If the CWCB makes modifications to the FWMP as recommended by the PWC, the FWMP is sent to the governor, who has 60 days to affirm or modify mitigation recommendations. The governor's decision becomes the official state position regarding the FWMP.

Once the state has adopted its position on the FWMP, the FWMP is distributed to every governmental agency (federal and state) from which the project applicant must obtain a permit, license, or other project approval, as the state's recommended fish and wildlife resource mitigation for the proposed project. These agencies may, but are not required to, incorporate aspects of the state FWMP into the record of decision or as a term or condition of a permit, license, or approval, at which point those conditions become enforceable as permit conditions. The FWMP is not independently enforceable under state law. However, the plan, or components of it, typically become enforceable through a separate agreement such as a memorandum of understanding or intergovernmental agreement between the proponent and CPW. While not required, most proponents see such voluntary agreements as being beneficial to their securing necessary federal, state, or other governmental agency approvals.

In addition to proposing a FWMP for the water project, project proponents may also choose to develop a Fish and Wildlife Enhancement Plan (FWEP). Whereas FWMPs mitigate project impacts,

FWEPs improve the environment beyond its existing condition. Though the creation of FWEPs are encouraged, they are not required by state law. Any such enhancement grant will be shared equally by the Colorado water conservation board's fish and wildlife resources fund and the division of parks and wildlife's wildlife cash funds and other funds available to the division.

Attachments:

1. Examples of water projects with completed FWMPs
2. 37-60-122.2 C.R.S.
3. 2 CCR 406-16:1602-1604

ATTACHMENT 1: Examples of Water Projects with Completed FWMPs

- Southern Delivery System
 - *Project proponent:* Colorado Springs Utilities
 - *Approximate location:* Pueblo and Colorado Springs
 - *Primary infrastructure development:* pipelines, pump stations, and multiple reservoirs
 - *Project yield:* 42,400 acre-feet
- Windy Gap Firming Project
 - *Project proponent:* Northern Colorado Water Conservancy District
 - *Approximate location:* Loveland and Colorado River near Granby
 - *Primary infrastructure development:* construction of Chimney Hollow Reservoir near Loveland
 - *Project yield:* 30,000 acre-feet
- Moffat Collection System Project
 - *Project proponent:* Denver Water
 - *Approximate location:* Boulder and Upper Colorado River system
 - *Primary infrastructure development:* expansion of Gross Reservoir near Boulder
 - *Project yield:* 18,000 acre-feet
- Chatfield Reservoir Reallocation Project
 - *Project Proponent:* Chatfield Reservoir Mitigation Company
 - *Approximate location:* South Denver
 - *Primary infrastructure development:* mitigation of Chatfield State Park facilities
 - *Project yield:* 8,539 acre-feet
- Northern Integrated Supply Project
 - *Project proponent:* Northern Colorado Water Conservancy District
 - *Approximate location:* Fort Collins
 - *Primary infrastructure development:* construction of Glade and Galeton Reservoirs
 - *Project yield:* 40,000 acre-feet
- LEDE Reservoir
 - *Project Proponent:* Town of Gypsum
 - *Approximate location:* Gypsum
 - *Primary infrastructure development:* expansion of LEDE Reservoir
 - *Project yield:* 512 acre-feet

ATTACHMENT 2: 37-60-122.2, C.R.S.

37-60-122.2. Fish and wildlife resources--legislative declaration--fund--authorization

(1)(a) The general assembly hereby recognizes the responsibility of the state for fish and wildlife resources found in and around state waters which are affected by the construction, operation, or maintenance of water diversion, delivery, or storage facilities. The general assembly hereby declares that such fish and wildlife resources are a matter of statewide concern and that impacts on such resources should be mitigated by the project applicants in a reasonable manner. It is the intent of the general assembly that fish and wildlife resources that are affected by the construction, operation, or maintenance of water diversion, delivery, or storage facilities should be mitigated to the extent, and in a manner, that is economically reasonable and maintains a balance between the development of the state's water resources and the protection of the state's fish and wildlife resources.

(b) Except as provided in this paragraph (b), the applicant for any water diversion, delivery, or storage facility which requires an application for a permit, license, or other approval from the United States shall inform the Colorado water conservation board, parks and wildlife commission, and division of parks and wildlife of its application and submit a mitigation proposal pursuant to this section. Exempted from such requirement are the Animas-La Plata project, the Two Forks dam and reservoir project, and the Homestake water project for which definite plan reports and final environmental impact statements have been approved or which are awaiting approval of the same, applicants for site specific dredge and fill permits for operations not requiring construction of a reservoir, and applicants for section 404 federal nationwide permits. If an applicant that is subject to the provisions of this section and the commission agree upon a mitigation plan for the facility, the commission shall forward such agreement to the Colorado water conservation board, and the board shall adopt such agreement at its next meeting as the official state position on the mitigation actions required of the applicant. In all cases the commission shall proceed expeditiously and, no later than sixty days from the applicant's notice, unless extended in writing by the applicant, make its evaluation regarding the probable impact of the proposed facility on fish and wildlife resources and their habitat and to make its recommendation regarding such reasonable mitigation actions as may be needed.

(c) The commission's evaluation and proposed mitigation recommendation shall be transmitted to the Colorado water conservation board. The board within sixty days, unless extended in writing by the applicant, shall either affirm the mitigation recommendation of the commission as the official state position or shall make modifications or additions thereto supported by a memorandum that sets out the basis for any changes made. Whenever modifications or additions are made by the board in the commission's mitigation recommendation, the governor, within sixty days, shall affirm or modify the mitigation recommendation which shall then be the official state position with respect to mitigation. The official state position, established pursuant to this subsection (1) shall be communicated to each federal, state, or other governmental agency from which the applicant must obtain a permit, license, or other approval.

(2)(a) Moneys transferred to the fish and wildlife resources fund pursuant to the provisions of section 37-60-121(6) are hereby continuously appropriated to the Colorado water conservation board for the purpose of making grants pursuant to this subsection (2) and for offsetting the direct and indirect

costs of the board for administering the grants. The interest earned from the investment of the moneys in the fund shall be credited to the fund.

(b) To the extent that the cost of implementing the mitigation recommendation made pursuant to subsection (1) of this section exceeds five percent of the costs of a water diversion, delivery, or storage facility, the board shall, upon the application of the applicant, make a mitigation grant to the applicant. The amount of the grant shall be sufficient to pay for the mitigation recommendation as determined by this section to the extent required above the applicant's five percent share. Any additional enhancement shall be at the discretion and within the means of the board. Under no circumstance shall the total amount of the grant exceed five percent of the construction costs of the project, or be disbursed in installments that exceed seventy percent of the amount of the grant during any fiscal year. Any mitigation cost in excess of ten percent of the construction costs of a project shall be borne by the applicant.

(c) An applicant may apply for an enhancement grant by submitting to the commission and the board an enhancement proposal for enhancing fish and wildlife resources over and above the levels existing without such facilities. The commission shall submit its recommendations on the proposal to the board for its consideration. The board, with the concurrence of the commission, may award a grant for fish and wildlife enhancement. Any such enhancement grant will be shared equally by the Colorado water conservation board's fish and wildlife resources fund and the division of parks and wildlife's wildlife cash funds and other funds available to the division.

(d) For the purpose of this subsection (2), construction costs means the best estimate of the physical construction costs as fixed by the Colorado water conservation board as of the date of the grant application. Costs should be limited to design, engineering and physical construction and will not include the costs of planning, financing, and environmental documentation, mitigation costs, legal expenses, site acquisition or water rights.

(e) Species recovery grants from the fish and wildlife resources fund may be made for the purpose of responding to needs of declining native species and to those species protected under the federal "Endangered Species Act of 1973", 16 U.S.C. sec. 1531, et seq., as amended, in a manner that will carry out the state water policy.

(f) Deleted by Laws 2001, Ch. 206, § 28, eff. May 30, 2001.

(3) Decisions relating to the official state mitigation position made pursuant to paragraph (c) of subsection (1) of this section shall not be subject to judicial review.

(4) The board shall distribute mitigation and enhancement grants reasonably and equitably among water basins toward the end that those projects sponsored by beneficiaries east of the continental divide receive fifty percent of the money granted and those projects sponsored by beneficiaries west of the continental divide receive fifty percent of the money granted under this section.

(5) The general assembly hereby recognizes the role instream flows and river restoration projects play in mitigating the effects of the construction, operation, and maintenance of water diversion, delivery, and storage facilities. Therefore, the Colorado water conservation board and the operators of existing water diversion, delivery, or storage facilities projects are hereby authorized to apply directly to the board for moneys for projects to carry out the purposes of this section. The board is authorized to grant such moneys if it finds that such projects will further the purposes of this section.

ATTACHMENT 3: 2 CCR 406-16:1602-1604

2 CCR 406-16:1602. PURPOSE AND SCOPE

These rules govern administrative proceedings pursuant to the Commission's obligations under House Bill 1158 as described by Section 37-60-122.2 CRS and Section 5 of Chapter 266, Session Laws of Colorado 1987. This Act, dated July 13, 1987, directs the Wildlife Commission (Commission) and the Water Conservation Board (Board) or the Governor to determine an official State position on a wildlife mitigation plan submitted by an applicant proposing to construct, operate or maintain a water project requiring federal approval. It also establishes State grants to assist in paying for wildlife mitigation and/or enhancement measures. These rules are written to be compatible with the Board's "Rules and Regulations for the Implementation of Colorado's Fish and Wildlife Mitigation and Enhancement Grant Program."

These rules apply to all actions required by and taken pursuant to Section 37-60-122.2 CRS, (1984 and 1987 Supp.) and Section 5 of Chapter 266, Session Laws of Colorado 1987.

These rules apply to all applicants who file an application for, or receive a permit for, a proposed water project on or after July 13, 1987.

These rules do not apply to the Animas-La Plata Project, the Two Forks Dam and Reservoir Project, the Homestake Water Project or to any project which is eligible for a nationwide permit pursuant to Section 404 of the Federal Clean Water Act or to any project, except reservoirs, which requires an individual permit pursuant to Section 404 of the Federal Clean Water Act unless the applicant elects to submit a wildlife mitigation or enhancement plan.

These rules do not apply to actions concerning or carrying out other statutory responsibility of the Commission.

2CCR 406-16:1603. DEFINITIONS

A. Applicant means any person or entity proposing to construct a water diversion, delivery or storage facility in the state of Colorado requiring an application for a permit, license, or other approval from the United States.

B. Approval means any form of approval which is required from the United States prior to the construction of a project.

C. Board means the Colorado Water Conservation Board.

D. Commission means the Colorado Parks and Wildlife Commission.

E. Construction Costs means the best estimate of the physical construction costs of the project as fixed by the Board as of the date of the grant application. Costs are limited to design, engineering and physical construction and will not include the costs of planning, financing, and environmental documentation, mitigation costs, legal expenses, site acquisition or water rights.

F. Construction Fund means the Board's construction fund as established by Section 37-60-121, CRS.

G. Division means the Colorado Division of Parks and Wildlife and, when necessary, it may be construed as referring to the Commission.

H. Enhancement means the improvement of the total value of fish and wildlife resources affected by the project beyond that required by mitigation and beyond that which would occur without the project.

I. Enhancement Grant means a sum of money or other remuneration awarded to the applicant by the Board, to pay for the State's contribution to the implementation of an enhancement plan.

J. Enhancement Plan means a document describing the measures to be completed by the applicant which will enhance fish and wildlife resources beyond that which would occur without the project. It includes a cost estimate for the implementation of the plan and a schedule for completion.

K. Fish and Wildlife Resources Account means the account established in the Board's Construction Fund to provide funding for mitigation and enhancement grants.

L. License means any license which is required from the United States prior to the construction of a project.

M. Mitigation means any action or measures taken to address undesirable project impacts on fish and wildlife resources which may be accomplished in several ways, including reducing, minimizing, rectifying, compensating, or avoiding impacts.

N. Mitigation Grant means a sum of money or other remuneration awarded to the applicant by the Board to pay for the State's contribution to the implementation of a mitigation plan.

O. Mitigation Plan means a document describing the measures to be completed by the applicant which will mitigate losses to fish and wildlife resources resulting from the project. It includes a cost estimate for the implementation of the plan and a time schedule for completion.

P. Notice means the date the Division receives documents required of an applicant for a mitigation plan.

Q. Permit means any permit, other than a nationwide 404 permit, which is required from the United States prior to the construction of a project.

R. Project means a water diversion, delivery, or storage facility or facilities, and any combination thereof, together with all associated and appurtenant project works.

S. Water diversion, delivery or storage facility means any structure or structures built for the purpose of diverting or transporting water from a stream, lake or reservoir, on or off channel, to any type of a supply system, or any structure built for the purpose of storing water for subsequent application to beneficial use.

2 CCR 406-16:1604. PROCEDURES FOR ARRIVING AT AN OFFICIAL STATE POSITION ON MITIGATION

A. Requirement of Applicants

1. An applicant proposing to construct a water project requiring an application for a federal permit, license, or other approval as described in #1602 shall advise the Division and the Board, in writing, within five working days of submission of an application for federal permit, license or other approval, and provide each agency with a copy of the application and all materials cited in, referenced in, or submitted with the application.

2. When the applicant has prepared a wildlife mitigation plan which is ready for Commission evaluation, the applicant shall give notice to the Commission by submitting 15 copies of the plan to the Division, five of which are to be submitted to the appropriate Division Regional office and ten to the Denver headquarters office; and 15 copies to the Board. The following information shall be prepared within the time sequence and framework of established federal environmental impact review requirements. The mitigation plan shall include:

a. A description of the project.

b. An estimate of construction costs.

c. An assessment of the fish and wildlife resources impacted by the project, measures to mitigate the losses to fish and wildlife resources, a time schedule, and the costs and benefits of the plan.

1) A wildlife impact assessment identifies, predicts the direction and magnitude of, and evaluates and communicates the significance of a project as it affects wildlife. The assessment is dependent upon baseline data that provides an overview of the wildlife resources and related conditions as they currently exist in the area. It also provides a basis for analyzing and determining the extent and scope of project impacts, or its alternatives, to wildlife. The assessment is an integral part of the environmental impact assessment process and is not intended to be separate from or beyond the scope of that process.

2) Decisions regarding such things as study design, period of study, and responsibility for data collection and costs should be approached on a case by case basis and agreed to through interagency review at the initiation of the environmental assessment process.

3) The wildlife impact assessment and recommendations for mitigating losses will be based upon a systematic evaluation of fish and wildlife resources and habitats using the best available scientific information and professional judgment. The plan will contain an estimated cost and assignment of development, operation and maintenance of the mitigation measures and a monitoring plan.

4) Where possible, impacts to wildlife and habitat will be separated into the following categories: direct and indirect; on-site and off-site; public lands and private lands; and cumulative impacts. In the disclosure of predicted impacts, each category may have separate mitigation measures associated with it, which when assembled make up a mitigation plan.

5) Normally, mitigation should occur concurrently with or prior to project development, be proportional to impacts, and last for the entire period in which impacts to wildlife resources persist as federal, state and local laws and regulations provide.

B. Commission Action

1. Upon receipt of all the information required in #1604.A.2. the Division will respond, within ten working days, to the applicant with a written acknowledgment that the necessary documents have been received. The date of receipt by the Division is the official date of notice to the Division and the 60 calendar day review period will be initiated culminating in a Commission recommendation for a State position.

2. Within 60 calendar days after an applicant gives notice by submitting a mitigation plan to the Division, unless extended in writing by the applicant, the Commission will make its evaluation of the project's impact on fish and wildlife resources and submit its recommendation to the Board.

3. The Commission will make its evaluation regarding the probable impact of the proposed project on fish and wildlife resources and their habitat based on the information submitted pursuant to #1604.A.2. The Commission may consider the following criteria in making their recommendation that the mitigation plan is economically reasonable and reflects a balance between protecting the fish and wildlife resources and the need to develop the state's water resources:

- a. The value and significance of the affected wildlife resource.
- b. The potential impacts of the project and its alternatives to wildlife.
- c. The availability of best existing technology to implement and monitor the success of the mitigation plan.
- d. The degree to which the identified impacts are mitigated and the permanence of desired effects of the mitigation measures.
- e. The cost of the planned mitigation in comparison to the benefits to the affected wildlife resource.
- f. The net benefits of the project and its mitigation plan to the state's wildlife resources.
- g. The consistency of wildlife mitigation with other environmental and conservation goals.
- h. The legal ramifications of state water law on implementing the proposed mitigation measures.

4. If the Commission and the applicant agree upon a mitigation plan, the Commission shall recommend that the Board adopt the plan at its next meeting as the official state position on the mitigation action required of the applicant.

5. When the Commission and the applicant do not agree upon a mitigation plan, the Commission shall transmit to the Board 15 copies of its report which shall include (1) its evaluation of the project's impact on fish and wildlife, (2) its mitigation recommendations, including an estimate of the costs and benefits of its plan, and (3) its analysis of the applicant's mitigation plan. Documentation will include the significance of the fish and wildlife resources impacted by the project and a comparison of the impacts to the fish and wildlife resources resulting from both plans.