CWCB Staff Recommendation Letter Guidelines

The recommending entities are asked to provide the following information in their recommendation letter for each recommended reach.

Contact Information

1. Recommending agency, entity or individual
2. Contact person
3. Mailing address, phone number and email address

Stream Reach and Location Information

1. Name of stream or natural lake
2. Upper terminus (i.e. headwaters, confluence with 'ABC' Creek, etc.)
3. Lower terminus
4. Approximate segment length in miles
5. County
6. Water division and water district
7. Major drainage basin
8. Name of USGS quad maps

Natural Environment

Please provide as much information about the natural environment as possible. Below are examples of some, but not all, stream characteristics that could be included.

1. Physical Information
   - Location: headwaters, plains, mountain, transition
   - Channel pattern: single thread, multiple thread
   - Valley type: unconfined, confined,
   - Size: typical width, slope, etc
   - Bed sediment: sand, gravel, boulders, bedrock
   - Stream condition: degraded, eroding banks, pristine, etc.
   - Habitat Description: discussion of pools, riffles, cover, temperature, etc
2. Ecological/Biological Information
   - Fish species: common name, scientific name, age classes, sizes, status, etc.
   - Macro invertebrates: name, condition, status, etc
   - Riparian community: species, condition,
   - Other species: for example northern leopard frogs

ISF Quantification

It is the recommenders' responsibility to quantify the amount of water necessary to preserve the environment to a reasonable degree. Please provide the following information:

1. Results

   Most ISF recommendations use R2Cross to quantify the amount of water. Provide R2Cross results for each cross-section and analysis. See the example for a table that can be used to submit data for each cross-section.

   PHABSIM and other methodologies may be appropriate, especially in larger river systems. Please contact Jeff Baessler for more information.

2. Final Recommendation

   Provide a description of the final recommended streamflow rates and the timing. If possible, use the following guidelines for the number of significant digits for the streamflow recommendations:

   If streamflow is >= 10, then no decimal places, for example: 10
   If streamflow is <10 and >1, then 1 decimal place, for example: 9.5
   If streamflow is < 1, then two decimal places, for example: 0.35.

   If recommended streamflows were reduced due to issues with water availability, provide justification for how the available flows protect the natural environment.

Water Availability Information

CWCB staff will conduct a water availability analysis. Please provide any of the following, if known:

1. Water rights in the proposed reach
2. Major diversions or features, such as reservoirs or transbasin import or exports that alter hydrology
3. Relevant streamflow gages

Additional Information

Please provide any additional information that should be considered, such as:

1. Federal cooperators
2. Community support
3. Unique characteristics of the stream
4. Resource threats

Supporting Data

Please submit the following data with your recommendation:

1. Biological survey data
2. Photos
3. R2Cross field notes for each cross-section
4. R2Cross models for each cross-section
5. Other quantification method data and model results if used

Example:

Contact Information

Bureau of Streamflow
John Doe,
555 River Dr.
Stream, Colorado 80555
(303) 555-5555
John.Doe.@BOS.gov

Stream Reach and Location Information

The Bureau of Streamflow recommends Example Creek for an ISF appropriation. The proposed upper terminus is the confluence with No Name Creek and the proposed lower terminus is the headgate of Diversion Ditch. The proposed reach is approximately 3.4 miles in length. Example Creek is located in Routt County, Water Division 6, water district 57, and drains into the White River. This creek can be found on the USGS Example Creek quarter quad map.

Natural Environment

Example Creek is a cool-water, moderate gradient stream in a narrow canyon confined by bedrock. Some portions of the stream are directly adjacent to a major state highway, but most parts of the stream typically have good bank stability and good vegetative cover. Most portions of the stream have recovered from historic overgrazing, and typically have a good mix of riffle and run habitat with large substrate. In areas that have not fully recovered from historic overgrazing, the stream is wider, and has less cover, and less bank stability.

Fishery surveys indicate that Example Creek supports a self-sustaining population of speckled dace in the upper parts of this reach, and a spawning population of flannelmouth sucker, bluehead sucker, and white sucker in the lower parts of the reach. BLM believes that the stream provides an important spawning area for sensitive native fishes that reside in the Gunnison River. The creek also supports a population of northern leopard frog, which is found on BLM's sensitive species list.

The riparian community along Example Creek is robust, providing cover and shading for the stream. The riparian community is comprised mainly of Narrowleaf cottonwood, Rio Grande cottonwood, Lanced Leaf Cottonwood and various species of willow.

Table 1. List of species identified in Example Creek.

Species Name	Scientific Name	Status
Speckled dace	*Rhinichthyus osculus*	none
Flannelmouth sucker	*Catostomus latipinnis*	none, part of 3 species agreement
Bluehead sucker	*Catostomus sdiscubulus*	none, part of 3 species agreement
White sucker	*Platygobio gracilus*	none
Northern leopard frog	*Lithobates pipiens*	BLM sensitive species list State Special Concern

ISF Quantification

R2Cross Results

R2Cross data was collected at two transects for this proposed ISF reach (Table 2). The R2Cross model results in a summer flow of 1.65 cfs, which meets 3 of 3 criteria and is within the accuracy range of the R2CROSS model. The R2Cross model results in a winter flow of 1.73 cfs, which meets 2 of 3 criteria and is within the accuracy range of the R2Cross model.

Table 2. Summary of R2Cross transect measurements and results for Example Creek.

Entity	Date Measured	Streamflow (cfs)	Accuracy Range (cfs)	Winter Rate (cfs)	Summer Rate (cfs)
BLM	5/15/2012	0.94	0.4 – 2.3	1.97	Out of range
BLM	5/15/2012	0.78	0.3 – 1.9	1.49	1.65
			Mean	**1.73**	**1.65**

ISF recommendation

The Bureau of Streamflow's analysis of this data indicates that the following flows are needed to protect the fishery and natural environment to a reasonable degree.

1.65 cubic feet per second is recommended for the snowmelt runoff period from March 15 through June 30. This recommendation is driven by the average depth criteria. The goal of this recommendation is to provide as much spawning habitat as possible during snowmelt runoff, meeting the depth criteria ensures that a sufficient amount of usable habitat is available.

0.25 cubic feet per second is recommended for the base flow period from July 1 to March 14. This flow rate should maintain pools and prevent icing, which is important for the fish that inhabit the creek on a year-round basis.

Water Availability

Creek Ditch is the first diversion structure on the system. There are no known gages on Example Creek.