

Henrys Fork Basin Study

Sensitivity Analysis of the Ranked Alternatives based on the Draft Attribute and Information Summary Tables

Attached are the results of a simple sensitivity analysis designed to determine the effect on alternative ranking as a result of changing the relative impacts or benefits of some of the attributes in Tables B through D of the Draft Attribute and Information Summary Tables, e.g. change red to yellow or green to red. **In general, the results show that the same sites are generally “floating” to the top of the list following changes to the relative “score” (e.g., change red to yellow). These results make sense given that the “ratings” are all relative to each other.**

Table 1 presents the results of the Base Case scenario as well as four scenarios that were evaluated during the sensitivity analysis.

Base Case:

- 1) Ratings as shown with current delineation of "high/moderate/low" on the 4/1/11 Draft Attribute and Information Summary Tables B through D.

Scenario 1:

- 1) Under State Species of Special Concern (see Table C) change the “red vs. yellow” designation so that all segments where Yellowstone cutthroat trout are present are red (relative value of 3). Under the Base Case scenario only segments where core conservation populations exist are red, while segments where conservation and sport populations are yellow (relative value of 2).

Scenario 2:

- 1) Under Special Designations (see Table C) change the “red vs. yellow” designation so that all segments with State protected river designations and eligible Federal wild and scenic river designations red (relative value of 3). Under the Base Case scenario only segments with Federal protections are red, while segments with State protections and Federal eligible designations are yellow (relative value of 2).

Scenario 3:

- 1) Under State Species of Special Concern (see Table C) change the “red vs. yellow” designation so that all segments where Yellowstone cutthroat trout are present are red (relative value of 3). Same as Scenario 1.
- 2) Under Special Designations (see Table C) change the “red vs. yellow” designation so that all segments with State protected river designations and eligible Federal wild and scenic river designations red (relative value of 3). Same as Scenario 2.
- 3) Under Federally Listed Species (see Table C) change the “red vs. yellow” designation so that all segments with ‘At-Risk’ species (terrestrial Federal sensitive species and State Species of Greatest Conservation Need) are red (relative value of 3). Under the Base Case scenario only segments with federally listed aquatic species and Prime Conservation Areas are red, while segments with ‘At-Risk’ species are yellow (relative value of 2).

Scenario 4:

- 1) Under State Species of Special Concern (see Table C) change the “red vs. yellow” designation so that all segments where Yellowstone cutthroat trout are present are red (relative value of 3). Same as Scenario 1.

- 2) Under Special Designations (see Table C) change the “red vs. yellow” designation so that all segments with State protected river designations and eligible Federal wild and scenic river designations red (relative value of 3). Same as Scenario 2.
- 3) Under Federally Listed Species (see Table C) change the “red vs. yellow” designation so that all segments with ‘At-Risk’ species (terrestrial Federal sensitive species and State Species of Greatest Conservation Need) are red (relative value of 3). Same as Scenario 3.
- 4) Under Land Management Data (see Table D) change the “red vs. yellow” designation so that alternatives that would inundate Federal lands are green (relative value of 1) and those alternatives that would inundate private lands are red (relative value 3). Under the Base Case scenario the reverse is true (Federal=3, private=1) meaning that it would be preferable to develop a site located on privately managed lands.

Table 1. Data Table Sensitivity Analysis

	Base Case Rank	Scenario 1 Rank	Scenario 2 Rank	Scenario 3 Rank	Scenario 4 Rank
Ashton Dam Enlargement	2	2	2	2	1
Bitch Creek	12	11	12	11	10
Boone Creek	11	11	10	9	7
Conant Creek	7	7	6	6	8
Driggs	7	7	7	7	8
Generic Reservoir in Flat Land	13	12	13	12	11
Grassy Lake	6	5	5	4	4
Harrops Bridge/Tetonia	10	10	10	10	9
Horseshoe Creek	5	5	4	4	4
Howell Ranch	9	8	9	7	7
Island Park Enlargement	2	2	2	2	1
JY Ranch	8	7	8	7	7
Lane Lake/Teton Lake	1	1	1	1	2
Lower Badger Creek	8	7	8	7	7
Marysville Headworks	8	8	8	7	7
Moody Creek (Webster Dam)	2	3	2	2	3
Moose Creek	4	4	4	3	1
Park Lake	9	9	9	8	6
Robinson Creek	11	10	11	9	7
Spring Creek (Canyon Creek)	7	6	6	5	6
Squirrel Creek	7	7	6	5	4
Squirrel Meadows (Wyoming)	5	5	4	4	2
Teton (rebuild or new site)	8	8	8	8	8
Teton Creek (Wyoming)	3	4	3	3	5
Upper Badger Creek	8	7	7	6	6
Warm River	8	7	8	7	7