WATERSHED PRIORITIZATION - UPPER SALMON

The following is a brief summary of the prioritization process of watersheds for the USS. A full discussion will be included in the final project document.

The process for prioritizing watersheds began by having each resource specialist select variables that could be used in prioritizing the 15 watersheds. The variables selected were based on the issues developed for each resource. Examples of this would be:

Resource: Fisheries **Variables**: Habitat Fragmentation
Watershed Class
Number of Listed Species

Resource: Human Uses **Variables**: Recreation
Livestock grazing

There was a total of nine resources and 28 resource variables. The variables were rated by using a system of high, moderate, and low. A high rating indicates that the present condition of the watershed does not meet the DRFC and management opportunities exist that would benefit the ecosystem. A low ranking indicates that conditions are in line with the DRFC and immediate actions are not needed in the watershed to correct the current situation. A matrix was built depicting each of the 15 watersheds, the 28 variables, and the rating for each variable. A variable with a dashed line or blank space indicates a data gap (see attached **Resource Variables Matrices 1, 2, & 3**). After a watershed was rated by individual resource variables, each resource was given a composite rating for all of its variables. A second matrix was built depicting the 15 watersheds and the composite rating for the nine resources (see attached **Composite Integrity Rating Matrix**). A tenth resource, tribal rights, could not be rated due to the absence of the tribal team representative.

Ranking Method 1

Once the matrix with the watersheds and resource composite ratings was completed, the team ranked the watersheds by how many high, moderate, and low composite ratings the watershed had. Columns 1, 2, and 3 on the attached **Final USS Prioritization Scores and Ranking Matrix** indicate the ratings for each watershed. Morgan Creek watershed received five high ratings, two moderate, and two low; Challis Creek watershed received four high ratings, three moderate, and two low; and so on for all 15 watersheds. The team than prioritized the watersheds by the number of high composite ratings it had. Squaw/Slate watershed and Yankee Fork watershed tied for the most number of high composite ratings with seven each and were prioritized as a number one concern within the subbasin. This ranking can be found in column 4 of the matrix. There were three watersheds that had the second highest number of high composite ratings so to break that tie, the team looked at the number of moderate ratings those watersheds had. Valley Creek had the most moderate ratings so that became the third highest priority. This process continued until all 15 watersheds were ranked. Using this system, the priority list is:

1. Squaw/Slate
1. Yankee Fork
3. Valley
4. Morgan Creek
5. Lower East Fork
6. Casino/Basin
7. Challis Creek
8. Bayhorse
9. Redfish Lake
10. Grandview
11. Warm Springs
12. Headwaters Salmon
13. Big Lake/Boulder
14. Alturas Lake
15. Upper East Fork

Ranking Method 2

After the first ranking, the team was comfortable with the first five priorities but thought that maybe the lower ones weren't reflecting the true conditions on the ground. The team went back to the composite integrity rating matrix and discussed at further length the ratings that had double asterisks. Though these ratings did not change, the team believed they carried more weight than the first ranking method indicated. This led to a second ranking system, this time using a point system for the composite ratings. Each high rating would be valued at three points, moderate would equal two points, and a low rating would receive one point. This ranking can be followed in columns 5, 6, and 7 of the **Final USS Prioritization Scores and Ranking Matrix** with the total points found in column 8. Using this method, Squaw/Slate and Yankee Fork watersheds again tied for the highest priority with 21 points each. Valley watershed had the next highest number of points and became the next highest priority. The final ranking of the watersheds based on this point system are found in column 9. Using this system, the priority list is:

1. Squaw/Slate	6. Lower East Fork	11. Grandview
1. Yankee Fork	7. Challis Creek	11. Alturas Lake
3. Valley	7. Redfish Lake	13. Big Lake/Boulder
4. Morgan Creek	9. Bayhorse	14. Upper East Fork
4. Casino/Basin	9. Headwaters Salmon	15. Warm Springs

Though the second priority list shows only subtle changes, it is a better indication of the conditions of the watershed. This second ranking is the final ranking for watershed assessment at the broad scale.

FINAL UPPER SALMON SUBBASIN WATERSHED PRIORITIZATION SCORES AND RANKINGS

		1	2	3	4	5	6	7	8	9
		FIRST ROUND SCORES AND RANKS				SECOND ROUND SCORES AND RANKS				
WATERSHED NUMBER	WATERSHED NAME	# HIGH	# MOD	# LOW	RANK	# HIGH x 3	# MOD x 2	# LOW x 1	TOTAL	RANK
1	MORGAN CR	5	2	2	4	15	4	2	21	4 (TIE)
2	CHALLIS CR	4	3	2	7	12	6	2	20	7 (TIE)
3	GRANDVIEW	2	4	3	10	6	8	3	17	11 (TIE)
4	BAYHORSE	3	4	2	8	9	8	2	19	9 (TIE)
5	LOWER EAST FORK	5	1	3	5	15	2	3	20	6
6	BIG LAKE / BOULDER	1	5	3	13	3	10	3	16	13
7	UPPER EAST FORK	1	4	4	15	3	8	4	15	14
8	SQUAW / SLATE	7	1	1	1 (TIE)	21	2	1	24	1 (TIE)
9	WARM SPRINGS	2	1	6	11	6	2	6	14	15
10	CASINO / BASIN	4	4	1	6	12	8	1	21	4 (TIE)
11	REFISH LAKE CR	2	7	0	9	6	14	0	20	7 (TIE)
12	HEADWATERS SALMON	1	8	0	12	3	16	0	19	9 (TIE)
13	ALTURAS LAKE CR	0	8	1	14	0	16	1	17	11 (TIE)
14	VALLEY CR	5	4	0	3	15	8	0	23	3
15	YANKEE FORK	7	1	1	1 (TIE)	21	2	1	24	1 (TIE)

COMPOSITE INTEGRITY RATING MATRIX

WATERSHED NUMBER	WATERSHED NAME	FORESTED VEGETATION	TERRESTRIAL VEGETATION	NON-FORESTED VEGETATION	SOILS	HUMAN USES	FISHERIES	HYDROLOGY	RURAL WILDLAND INTERFACE	ROAD RISK	TRIBAL RIGHTS	WATERSHED NAME
1	**MORGAN CR**	L	H	H	H	H	H	M *	L	M		**MORGAN CR**
2	**CHALLIS CR**	L	H	M	H	M	H	H *	L	M		**CHALLIS CR**
3	**GRANDVIEW**	L	M	H	M	H	L	M *	L	M		**GRANDVIEW**
4	**BAYHORSE**	L	M *	H	M	M	M	L * **	L	H		**BAYHORSE**
5	**LOWER EAST FORK**	L	H	M	H	H *	H	L * **	L	H		**LOWER EAST FORK**
6	**BIG LAKE / BOULDER**	L	M	M	M	M	M	L *	L	H		**BIG LAKE / BOULDER**
7	**UPPER EAST FORK**	M	H	L	M	L	M	L *	L	M		**UPPER EAST FORK**
8	**SQUAW / SLATE**	H	H	M	H	H	H	H *	L	H		**SQUAW / SLATE**
9	**WARM SPRINGS**	L	H	M *	M	L	H	L *	L	L		**WARM SPRINGS**
10	**CASINO / BASIN**	H	H	M	H	M	M	M *	L	H		**CASINO / BASIN**
11	**REFISH LAKE CR**	M	M	M *	M	H	H	M *	M	M		**REFISH LAKE CR**
12	**HEADWATERS SALMON**	M	M	M *	M	M	M	M *	H	M		**HEADWATERS SALMON**
13	**ALTURAS LAKE CR**	M	M	M *	M	M	M	L *	M	M		**ALTURAS LAKE CR**
14	**VALLEY CR**	H	H	M *	M	M	H	H *	H	M		**VALLEY CR**
15	**YANKEE FORK**	H	H	M	H	H	H	H *	L	H		**YANKEE FORK**

* = DATA GAP

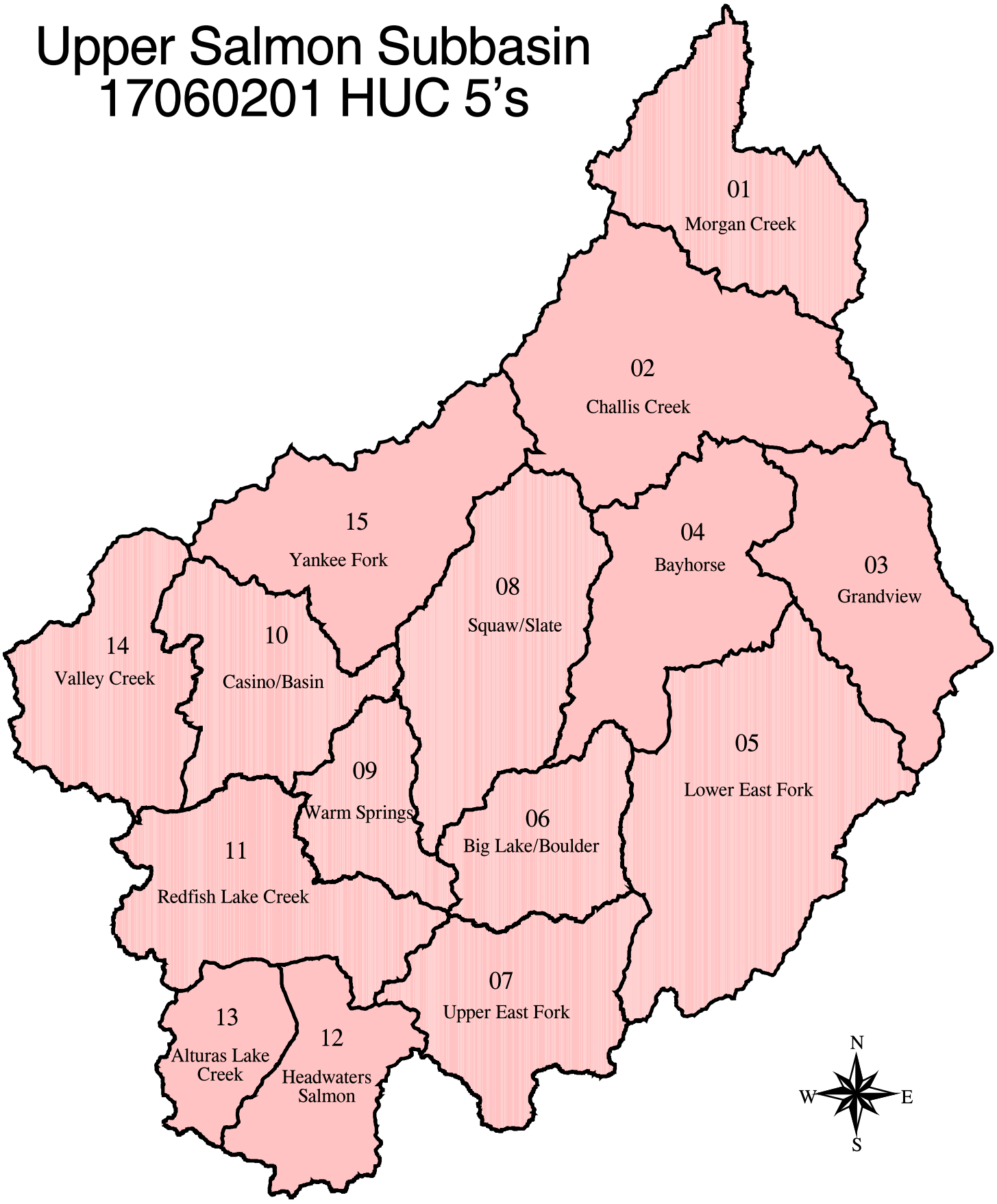
** = RANKING MAY CHANGE BASED UPON TEAM DISCUSSION

RESOURCE VARIABLES MATRIX #1										
WATERSHED NUMBER	WATERSHED NAME	FORESTED VEGETATION			TERRESTRIAL WILDLIFE					
		HEALTH	TIMBER	FIRE	TES SPECIES	LATE SERAL / LARGE	MOSAIC FOREST / SHRUB HABITAT	SAGEBRUSH STEPPE	RIPARIAN HABITAT	BIG GAME POPULATIONS
1	MORGAN CR	M	L	L	M	H	H	H	H	H
2	CHALLIS CR	M	L	L	M	M	M	H	H	H
3	GRANDVIEW	-	-	L	M	L	L	H	L	H
4	BAYHORSE	M	-	L	M	M	M	H	M	M
5	LOWER EAST FORK	-	-	L	M	H	H	H	H	H
6	BIG LAKE / BOULDER	L	-	L	M	H	M	M	H	H
7	UPPER EAST FORK	-	-	M	H	H	M	M	M	H
8	SQUAW / SLATE	H	M	H	M	H	H	M	H	H
9	WARM SPRINGS	L	-	M	M	H	M	M	M	H
10	CASINO / BASIN	H	H	H	M	H	M	M	M	H
11	REFISH LAKE CR	M	M	H	M	M	M	M	M	M
12	HEADWATERS SALMON	L	M	H	M	M	M	L	M	M
13	ALTURAS LAKE CR	-	-	-	M	M	M	L	M	M
14	VALLEY CR	H	H	H	H	H	M	M	M	H
15	YANKEE FORK	H	H	H	H	H	M	M	M	H

RESOURCE VARIABLES MATRIX #2											
WATERSHED NUMBER	WATERSHED NAME	NON-FORESTED VEGETATION			SOILS	HUMAN USES			ROAD RISK		
		HERPETO FAUNA	RANGELAND	RIPARIAN	EROSION (ACCELERATED)	RECREATION	LIVESTOCK GRAZING	MINING	ROAD DENSITY	ROAD PARENT MATERIAL	PERCENT OF ROADS WITHIN 300 FT OF LIVE WATER
1	MORGAN CR	H	H	M	H	L	H	L	M	H	M
2	CHALLIS CR	H	H	L	H	M	M	L	M	H	M
3	GRANDVIEW	H	H	H	M	L	H	L	M	H	L
4	BAYHORSE	H	M	H	M	M	M	M	M	H	H
5	LOWER EAST FORK	H	M	M	H	M	H	M	L	H	H
6	BIG LAKE / BOULDER	M	M	M	M	H	L	L	L	H	H
7	UPPER EAST FORK	M	M	L	M	L	L	L	L	L	H
8	SQUAW / SLATE	M	M	M	H	M	M	H	M	H	H
9	WARM SPRINGS	M	M	L	M	L	L	L	L	M	L
10	CASINO / BASIN	M	M	M	H	M	M	L	H	M	H
11	REFISH LAKE CR	H	M	L	M	H	L	L	M	M	M
12	HEADWATERS SALMON	L	M	L	M	M	M	L	M	M	H
13	ALTURAS LAKE CR	L	M	L	M	H	L	L	L	M	M
14	VALLEY CR	M	M	L	M	H	M	L	M	M	M
15	YANKEE FORK	M	M	M	H	H	L	H	M	H	H

RESOURCE VARIABLES MATRIX #3												
WATERSHED NUMBER	WATERSHED NAME	FISHERIES						HYDROLOGY				
		HABITAT ALTERATION	WATERSHED CLASS (CONS / REST)	NUMBER OF NATIVES	NUMBER OF EXOTICS	NUMBER OF LISTED SPECIES	ABILITY TO ACCOMPLISH RESTORATION GOALS	WATER QUALITY	PERCENT RESPONSE REACHES	STREAM DENSITY	RURAL WILDLAND INTERFACE	COMPOSITE ROAD RISK
1	MORGAN CR	M	M	H	H	H	H	M			L	M
2	CHALLIS CR	M	M	H	H	H	H	H			L	M
3	GRANDVIEW	M	H	L	H	L	L	M			L	M
4	BAYHORSE	M	M	H	H	H	M	L			L	H
5	LOWER EAST FORK	M	M	M	L	H	H	L			L	H
6	BIG LAKE / BOULDER	M	M	M	L	M	M	L			L	H
7	UPPER EAST FORK	M	L	M	L	H	M	L			L	M
8	SQUAW / SLATE	H	L	H	H	H	M	H			L	H
9	WARM SPRINGS	L	H	L	L	H	H	L			L	L
10	CASINO / BASIN	L	M	H	H	H	M	M			L	H
11	REFISH LAKE CR	L	H	M	H	H	H	M			M	M
12	HEADWATERS SALMON	H	H	M	H	M	L	M			H	M
13	ALTURAS LAKE CR	L	L	M	H	H	H	L			M	M
14	VALLEY CR	H	H	H	H	H	M	H			H	M
15	YANKEE FORK	H	H	M	L	H	H	H			L	H

Upper Salmon Subbasin
17060201 HUC 5's



Final Ranking