NOTES:

This workbook contains **habitat functions** data downloaded directly from the Taurus database. Functions include those documented during the **Look Back** process covering the **2012-2015** work window for steelhead.

ESU	Population	Code		2012 Standardized Limiting Factor	LF Weight	Low Bookend	Original 2018 Estimate	Updated 2018 Estimate	High 2018 Bookend	Original 2033 Estimate	•	LF Weight and Bookends Comments	Estimates Comments
Snake River Steelhead	Imnaha River	IRS1		7.2: Sediment Conditions: Increased Sediment Quantity		80.05	80.05	80.25	80.05	80.05	85	by upstream effects.	As per Chinook assessment unit IRC1: 1 project evaluated for benefits, using a denominator of 36.4 miles results in an uplift of 0.2 %. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS1	Lower Imnaha R.	8.1: Water Quality: Temperature	30.00%	70	70	70	80	70	85	by naturally hot	As per Chinook assessment unit IRC1 one project was evaluated for benefits in 2016, but prorated at 0%, so no measurable uplift was recorded. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS1		8.2: Water Quality: Oxygen	5.00%	80	80	80	90	80	90		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS1	Imnaha R.	9.2: Water Quantity: Decreased Water Quantity	35.00%	70	70	70	80	70	80		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS2	Imnaha Tribs	1.1: Habitat Quantity: Anthropogenic Barriers	20.00%	70	70	70	100	95	100		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS2		4.1: Riparian Condition: Riparian Vegetation	25.00%	50	50	50	51	50	70		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.

Snake	Population Imnaha River	Code IRS2	Assessment Unit Lower Imnaha Tribs	2012 Standardized Limiting Factor 7.2: Sediment Conditions: Increased Sediment Quantity	LF Weight 25.00%	Low Bookend 50	Original 2018 Estimate 50	Updated 2018 Estimate 50	High 2018 Bookend		_	LF Weight and Bookends Comments	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this
Cooks	Lucy of the	IDC3		O. d. Western Overline	25.000/	50			54	50	70		assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS2	Lower Imnaha Tribs	8.1: Water Quality: Temperature	25.00%	50	50	50	51	50	70		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS2	Lower Imnaha Tribs	8.2: Water Quality: Oxygen	5.00%	80	80	80	90	80	95		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS3	Cow, Lightning, & Horse Creeks	1.1: Habitat Quantity: Anthropogenic Barriers	25.00%							Bookend estimates have not been established for this limiting factor. Comment entered RM 6/10/2016.	EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS3	Cow, Lightning, & Horse Creeks	6.1: Channel Structure and Form: Bed and Channel Form	25.00%							Bookend estimates have not been established for this limiting factor. Comment entered RM 6/10/2016.	EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.

Snake	•	Code IRS3	Unit Cow, Lightning, & Horse	7.2: Sediment	LF Weight 25.00%	Low Bookend	2018		High 2018 Bookend		Bookend	LF Weight and Bookends Comments Bookend estimates have not been established for this limiting factor. Comments entered RM 6/10/2016.	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS3	•	8.1: Water Quality: Temperature	25.00%							Bookend estimates have not been established for this limiting factor. Comments entered RM 6/10/2016.	EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS4	River	1.1: Habitat Quantity: Anthropogenic Barriers	10.00%	85	85	85	100	85	100		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS4	Imnaha River	6.1: Channel Structure and Form: Bed and Channel Form	30.00%	85	85	85	86	85	90		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS4	River	7.2: Sediment Conditions: Increased Sediment Quantity		80.01	80.01	80.01	82	80.01	85		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.

Snake	•	Code IRS4	Unit	2012 Standardized Limiting Factor 8.1: Water Quality: Temperature	LF Weight	Low Bookend 80	Original 2018 Estimate 80				-	LF Weight and Bookends Comments	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS4	1	8.2: Water Quality: Oxygen	5.00%	90	90	90	95	90	96		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
	Imnaha River	IRS5	Tributaries	1.1: Habitat Quantity: Anthropogenic Barriers	15.00%	70	70	70	100	80	100		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS5		4.1: Riparian Condition: Riparian Vegetation	20.00%	60	60	60	62	60	65		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	River	IRS5	Imnaha R.	6.1: Channel Structure and Form: Bed and Channel Form	20.00%	50	50	50	55	50	70		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.

Snake	•	Code IRS5	Unit Upper Imnaha R. Tributaries	2012 Standardized Limiting Factor 7.2: Sediment Conditions: Increased Sediment Quantity	LF Weight 15.00%	Low Bookend 65	Original 2018 Estimate 65		High 2018 Bookend 70		_	LF Weight and Bookends Comments	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS5	Upper Imnaha R. Tributaries	8.1: Water Quality: Temperature	15.00%	80	80	80	82	80	85		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
	Imnaha River	IRS5	1	8.2: Water Quality: Oxygen	5.00%	80	80	80	82	80	85		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS5	1	9.1: Water Quantity: Increased Water Quantity	0.00%	70	70	70	72	70	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	River	IRS5	Imnaha R. Tributaries	9.2: Water Quantity: Decreased Water Quantity	10.00%	65	65	65	70	65	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.

							Original	Updated		Original			
			Assessment	2012 Standardized		Low	2018	2018	High 2018	_	High 2033	LF Weight and	
ESU	Population	Code			LF Weight		Estimate		Bookend		_	_	Estimates Comments
Snake	•	IRS6	Lower Big Sheep Mainstem	1.1: Habitat Quantity: Anthropogenic Barriers	15.00%	70	75	80.6		75	90	weir; 3900 rd culvert; 020 road culvert; little sheep diversion; Buehler barrier (addressed in 2010); all partial barriers -	2012: Estimate assumes that still have the Litte Sheep satellite facility & double culverts on county road. In 2016 the panel evaluated the same project and proration considered for Chinook in BSC1 (Big Sheep Buhler Diversion). The action opened 17 miles of steelhead habitat. Denominator based on 53.1 Streamnet steelhead miles, resulting
River Steelhead	River	IRS6		4.1: Riparian Condition: Riparian Vegetation	10.00%	40	40	40		40	70		in 10.6% uplift. Comments entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
	Imnaha River	IRS6	Sheep	6.1: Channel Structure and Form: Bed and Channel Form	5.00%	40.1	40.1	40.1	55	40.1	55		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
	Imnaha River	IRS6	Sheep	7.2: Sediment Conditions: Increased Sediment Quantity		60	60	60	70	60	80		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
	Imnaha River	IRS6	Lower Big Sheep Mainstem	8.1: Water Quality: Temperature	10.00%	50	50	50	55	50	60		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.

			Assessment	2012 Standardized		Low	Original 2018	Updated 2018	High 2018	Original 2033	High 2033	LF Weight and	
ESU	Population	Code	Unit	Limiting Factor	LF Weight	Bookend	Estimate	Estimate	Bookend	Estimate	Bookend	Bookends Comments	Estimates Comments
Snake River Steelhead Snake	Imnaha River	IRS6	Lower Big Sheep Mainstem Lower Big Sheep	8.2: Water Quality: Oxygen 9.2: Water Quantity: Decreased Water	5.00%	80 30	30	80	85	80	85 80	bookends Comments	EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed
	Leave be	1057		Quantity	F 000/	90	05	00.4	100	0.5	100		within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Steelhead	River	IRS7	Sheep and Little Sheep Cr. Tributaries	1.1: Habitat Quantity: Anthropogenic Barriers		80	85	88.4		85	100		2012: All naturally produced steelhead are passed above weir; provide volitional passage for juveniles. In 2016 the expert panel evaluated actions from IRS6 that were determined to benefit upstream assessment units. Although StreamNet includes 51.1 miles for steelhead not all tributaries would be affected by the action. Based on treatment affect of 13 miles, uplift was estimated at 8.4%. Only one barrier remains in this assessment unit on Camp Creek. Comments entered RM 6/10/2016.
Snake River Steelhead	River	IRS7	_	4.1: Riparian Condition: Riparian Vegetation	20.00%	70	70	70	71	70	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.

Snake	•	Code IRS7	Unit Lower Big Sheep and Little Sheep	2012 Standardized Limiting Factor 7.2: Sediment Conditions: Increased Sediment Quantity	LF Weight 25.00%	Low Bookend 50	Original 2018 Estimate 50		High 2018 Bookend 55		_	LF Weight and Bookends Comments	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS7	_	8.1: Water Quality: Temperature	22.00%	50	50	50	55	50	65		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
	Imnaha River	IRS7		8.2: Water Quality: Oxygen	5.00%	75	75	75	80	75	85		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS7	Sheep and	9.1: Water Quantity: Increased Water Quantity		80	80	80	80	80	82		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS7	Sheep and Little Sheep	9.2: Water Quantity: Decreased Water Quantity	20.00%	65	65	65	70	70	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.

Snake River Steelhead River Rive	Estimates Comments Limiting factor 1.1 action from IRS6 benefits upstream assessment units. Buhler Diversion project benefited 11.9 miles in this assessment unit (entire steelhead mileage), which yields 33% uplift. However, panel decreased proration to 10% to account for distance upstream, resulting in 10% uplift. Comments entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable
Snake River Steelhead Imaha River Snake River Snake River Steelhead Imaha River Steelhead Imaha River Steelhead Imaha River Imaha Ri	Limiting factor 1.1 action from IRS6 benefits upstream assessment units. Buhler Diversion project benefited 11.9 miles in this assessment unit (entire steelhead mileage), which yields 33% uplift. However, panel decreased proration to 10% to account for distance upstream, resulting in 10% uplift. Comments entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable
Snake River River River Steelhead Sheep & Little Sheep Mainstems Anthropogenic Barriers Snake Imnaha IRS8 Upper Big Shake Imnaha IRS8 Upper Big Sheep & Conditions: In Sheep Mainstems I	Limiting factor 1.1 action from IRS6 benefits upstream assessment units. Buhler Diversion project benefited 11.9 miles in this assessment unit (entire steelhead mileage), which yields 33% uplift. However, panel decreased proration to 10% to account for distance upstream, resulting in 10% uplift. Comments entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable
River Steelhead River Sheep & Little Sheep Mainstems Sheep & Little Sheep Mainstems Barriers Shake Imnaha River River River River River Sheep & Conditions:	benefits upstream assessment units. Buhler Diversion project benefited 11.9 miles in this assessment unit (entire steelhead mileage), which yields 33% uplift. However, panel decreased proration to 10% to account for distance upstream, resulting in 10% uplift. Comments entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable
Steelhead Little Sheep Anthropogenic Barriers Little Sheep Mainstems Barriers Little Sheep Mainstems Barriers Little Sheep Anthropogenic Barriers Little Sheep L	Buhler Diversion project benefited 11.9 miles in this assessment unit (entire steelhead mileage), which yields 33% uplift. However, panel decreased proration to 10% to account for distance upstream, resulting in 10% uplift. Comments entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable
Mainstems Barriers 1.1 (e yi dot	11.9 miles in this assessment unit (entire steelhead mileage), which yields 33% uplift. However, panel decreased proration to 10% to account for distance upstream, resulting in 10% uplift. Comments entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable
Conditions: Conditions Co	(entire steelhead mileage), which yields 33% uplift. However, panel decreased proration to 10% to account for distance upstream, resulting in 10% uplift. Comments entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable
Snake Imnaha IRS8 Upper Big 7.2: Sediment 10.00% 80.05 80.05 85 80.05 85 El River River Sheep & Conditions: N	yields 33% uplift. However, panel decreased proration to 10% to account for distance upstream, resulting in 10% uplift. Comments entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable
Snake Imnaha IRS8 Upper Big 7.2: Sediment 10.00% 80.05 80.05 85 80.05 85 El River Sheep & Conditions:	decreased proration to 10% to account for distance upstream, resulting in 10% uplift. Comments entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable
Snake Imnaha IRS8 Upper Big 7.2: Sediment 10.00% 80.05 80.05 85 80.05 85 El River River Sheep & Conditions:	account for distance upstream, resulting in 10% uplift. Comments entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable
Snake Imnaha IRS8 Upper Big 7.2: Sediment 10.00% 80.05 80.05 85 80.05 85 El River Sheep & Conditions: M	resulting in 10% uplift. Comments entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable
Snake Imnaha IRS8 Upper Big 7.2: Sediment 10.00% 80.05 80.05 85 80.05 85 El River River Sheep & Conditions: M	entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable
Snake Imnaha IRS8 Upper Big 7.2: Sediment 10.00% 80.05 80.05 85 80.05 85 El River River Sheep & Conditions: Conditions: M	EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable
River River Conditions:	MAH.4.5.2016. No actions applicable
Steelhead	
Sicellead Initia sice Initia ascu sedinicity	to this limiting factor were performed
Mainstems Quantity w	within 2012-2015 period in this
	assessment unit. Therefore, there is
	no change in function percentage.
	Comments entered RM 6/10/2016.
Snake Imnaha IRS8 Upper Big 8.1: Water Quality: 10.00% 80 80 85 80 85	EP LB 2015: No actions, no change
River River Sheep & Temperature M	MAH.4.5.2016. No actions applicable
Steelhead Little Sheep to	to this limiting factor were performed
Mainstems	within 2012-2015 period in this
	assessment unit. Therefore, there is
	no change in function percentage.
	Comments entered RM 6/10/2016.
Snake Imnaha IRS8 Upper Big 9.2: Water 70.00% 30 30 80 30 80 80	EP LB 2015: No actions, no change
River River Sheep & Quantity:	MAH.4.5.2016. No actions applicable
Steelhead Little Sheep Decreased Water to	to this limiting factor were performed
Mainstems Quantity	within 2012-2015 period in this
	assessment unit. Therefore, there is
	no change in function percentage.
	Comments entered RM 6/10/2016.

							Original	Updated		Original			I
			Assessment	2012 Standardized		Low	2018	_	High 2018	_	High 2022	LF Weight and	
FSU	Population	Code			LF Weight				•		_	~	Estimates Comments
ESU Snake River Steelhead	Population Imnaha River	Code IRS9	Upper Big Sheep & Little Sheep	Limiting Factor 1.1: Habitat Quantity: Anthropogenic Barriers	LF Weight 20.00%	Bookend 51	Estimate 51	Estimate 53.5	Bookend 100	Fstimate 71	Bookend 100	Bookends Comments	Estimates Comments 2012: Lick Ck. about 5% & WVIC other 15% In 2106 the expert panel evaluated the action for LF1.1 action from IRS6 that was determined to benefit upstream assessment units. Buhler Diversion project benefited 5.5 miles out of 21.8 steelhead miles in this assessment unit. Panel decreased proration to 10% to account for distance upstream, yielding 2.5%
Snake River Steelhead	Imnaha River	IRS9	''	4.1: Riparian Condition: Riparian Vegetation	15.00%	75	75	75	76	75	80		uplift. Comments entered RM 6/10/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS9	Sheep & Little Sheep	7.2: Sediment Conditions: Increased Sediment Quantity	20.00%	50.25	50.25	50.25	60	53.25	65		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS9	Upper Big Sheep & Little Sheep tributaries	8.1: Water Quality: Temperature	10.00%	60	60	60	61	60	70		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS9		8.2: Water Quality: Oxygen	3.00%	85	85	85	90	85	95		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.

Snake	Population Imnaha River	Code IRS9	Unit Upper Big		LF Weight 2.00%	Low Bookend	Original 2018 Estimate		High 2018 Bookend	Estimate	-	LF Weight and Bookends Comments	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable
Steelhead			· ·	Water Quantity									to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Imnaha River	IRS9	Sheep & Little Sheep	9.2: Water Quantity: Decreased Water Quantity	30.00%	40	40	40	85	40	90		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Joseph Creek	JCS1	Mainstem	6.1: Channel Structure and Form: Bed and Channel Form	15.00%	80	80	80	90	80	95		EP LB 2015: No actions, no change MAH.4.5.No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/10/2016.
Snake River Steelhead	Joseph Creek	JCS1	Mainstem	7.2: Sediment Conditions: Increased Sediment Quantity	35.00%	70	70	70	75	70	80	upstream influence; FS pebble counts indicate sediment not as bad as previously thought; 75 bookend from upstream projects	EP LB 2015: No actions, no change MAH.4.5.2016

							Original	Updated		Original			
			Assassment	2012 Standardized		Low	_	2018	High 2018	_	High 2022	LF Weight and	
FSU	Population	Code			I F Weight				•		_		Estimates Comments
Snake River Steelhead	Joseph Creek	Code JCS1	Joseph Cr. Mainstem	Elimiting Factor 8.1: Water Quality: Temperature	LF Weight 45.00%	66	66	66.1	Bookend 70		Bookend 75	Bookends Comments	In 2016 the expert panel evaluated the Birkmaier lease for 0.8 cfs at the confluence. Base flows are 3-5 cfs (Jul 1 = 5 cfs measured with no irrigation). The flows help maintain temperature, but not thought to produce measurable temperature reduction benefit, so prorated as 0. Or, if 0.8 cfs is divided by 5 cfs base flow, proration is 16%, resulting in 0.3% uplift. Based on forward looking infrared (FLIR) data recorded at RM 9 in late August temperatures were 16 degrees C, warming to 18 degrees C downstream. Panel chose to prorate to 5%, resulting in 0.1% uplift. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS1	Joseph Cr. Mainstem	8.2: Water Quality: Oxygen	5.00%	75	75	75	80	75		some winter feeding areas	EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS2	Cottonwoo d Creek	5.2: Peripheral and Transitional Habitats: Floodplain Condition	15.00%	55	55	55	70	55	80		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS2	Cottonwoo d Creek	7.2: Sediment Conditions: Increased Sediment Quantity	30.00%	55	55	55	65	59	70		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.

Snake	Population Joseph Creek	Code JCS2	Unit	2012 Standardized Limiting Factor 8.1: Water Quality: Temperature	LF Weight	Low Bookend 70	Original 2018 Estimate 70		High 2018 Bookend 72		_	LF Weight and Bookends Comments	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS2		8.2: Water Quality: Oxygen	5.00%	80	80	80	85	80	90		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS2	d Creek	9.2: Water Quantity: Decreased Water Quantity	20.00%	70	70	70	70	70	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS3	Tributaries	1.1: Habitat Quantity: Anthropogenic Barriers	20.00%	90	90	90	100	90	100		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS3	Creek Small Tributaries	6.2: Channel Structure and Form: Instream Structural Complexity	10.00%	75	75	75	80	75	85		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.

ESU Snake River Steelhead	Population Joseph Creek	Code JCS3	Unit Joseph Creek Small Tributaries	2012 Standardized Limiting Factor 7.2: Sediment Conditions: Increased Sediment Quantity	LF Weight 20.00%	Low Bookend 60	Original 2018 Estimate 60		High 2018 Bookend		_	LF Weight and Bookends Comments	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS3		8.1: Water Quality: Temperature	20.00%	60	60	60	62	60	65		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS3	Joseph Creek Small Tributaries	8.2: Water Quality: Oxygen	10.00%	85	85	85	90	85	95		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS3	Creek Small Tributaries	9.2: Water Quantity: Decreased Water Quantity	20.00%	65	65	65	67	65	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS4	1	4.1: Riparian Condition: Riparian Vegetation	50.00%	66	66	66	75	66	85		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.

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				2042 61 11		l.	Original	Updated		Original			
ECLI	Danielatian	0-4-		2012 Standardized		Low	2018	2018	High 2018		•	LF Weight and	5-1:1
ESU	-	Code	Unit	Limiting Factor	LF Weight		Estimate	Estimate	Bookend			Bookends Comments	Estimates Comments
Snake	Joseph	JCS4	Swamp &	7.2: Sediment	25.00%	65	65	65	75	65	85	upstream portions of	EP LB 2015: No actions, no change
River	Creek		Davis	Conditions:								Swamp Ck. has good	MAH.4.5.2016. No actions applicable
Steelhead			Creeks	Increased Sediment								riparian filters	to this limiting factor were performed
				Quantity									within 2012-2015 period in this
													assessment unit. Therefore, there is
													no change in function percentage.
													Comments entered RM 6/13/2016.
Snake	Joseph	JCS4	Swamp &	8.1: Water Quality:	20.00%	70	70	70	80	70	85		EP LB 2015: No actions, no change
River	Creek		Davis	Temperature									MAH.4.5.2016. No actions applicable
Steelhead			Creeks										to this limiting factor were performed
													within 2012-2015 period in this
													assessment unit. Therefore, there is
													no change in function percentage.
													Comments entered RM 6/13/2016.
Snake	Joseph	JCS4	Swamp &	8.2: Water Quality:	5.00%	80	80	80	90	80	95		EP LB 2015: No actions, no change
River	Creek		Davis	Oxygen									MAH.4.5.2016. No actions applicable
Steelhead			Creeks										to this limiting factor were performed
													within 2012-2015 period in this
													assessment unit. Therefore, there is
													no change in function percentage.
													Comments entered RM 6/13/2016.
Snake	Joseph	JCS5	Elk & Crow	4.1: Riparian	14.28%							Bookend estimates	No actions applicable to this limiting
River	Creek		Creeks	Condition: Riparian								have not been	factor were performed within 2012-
Steelhead				Vegetation								established for these	2015 period in this assessment unit.
												limiting factors.	Therefore, there is no change in
												Comment entered RM	function percentage. Comments
												6/13/2016.	entered RM 6/13/2016.
Snake	Joseph	JCS5	Elk & Crow	5.2: Peripheral and	14.28%							Bookend estimates	No actions applicable to this limiting
River	Creek		Creeks	Transitional								have not been	factor were performed within 2012-
Steelhead				Habitats:								determined for this	2015 period in this assessment unit.
				Floodplain								limiting factor.	Therefore, there is no change in
				Condition								Comment entered RM	function percentage. Comments
CI	la a a a l	ICCE	EII. 0. C	C 2: Chair	4.4.2007							6/13/2016.	entered RM 6/13/2016.
Snake	Joseph	JCS5	Elk & Crow	6.2: Channel	14.28%							Bookend estimates	No actions applicable to this limiting
River	Creek		Creeks	Structure and								have not been	factor were performed within 2012-
Steelhead				Form: Instream								determined for this	2015 period in this assessment unit.
				Structural								limiting factor.	Therefore, there is no change in
				Complexity								Comment entered RM	function percentage. Comments
												6/13/2016.	entered RM 6/13/2016.

							Original	Updated		Original			
			Assassment	2012 Standardized		Low	2018	1 '	High 2018	_	 Ligh 2022	LF Weight and	
ESU	Population	Code			LF Weight		Estimate	Estimate	Bookend		-	Bookends Comments	Estimates Comments
Snake	Joseph	JCS5	Elk & Crow	7.2: Sediment	14.28%	DOOKEN	Littliate	Latimate	DOOKEIIG	Littinate	DOOKCIIG	Bookend estimates	No actions applicable to this limiting
River	Creek	1033	Creeks	Conditions:	14.20/0							have not been	factor were performed within 2012-
Steelhead	CIEEK		CIEEKS	Increased Sediment								determined for this	2015 period in this assessment unit.
Steemeau													1
				Quantity								limiting factor.	Therefore, there is no change in
												Comment entered RM	function percentage. Comments
c 1		1005	EII 0 0	0.4.14/	4.4.200/							6/13/2016.	entered RM 6/13/2016.
Snake	Joseph	JCS5		8.1: Water Quality:	14.28%							Bookend estimates	No actions applicable to this limiting
River	Creek		Creeks	Temperature								have not been	factor were performed within 2012-
Steelhead												determined for this	2015 period in this assessment unit.
												limiting factor.	Therefore, there is no change in
												Comment entered RM	function percentage. Comments
												6/13/2016.	entered RM 6/13/2016.
Snake	Joseph	JCS5		8.2: Water Quality:	14.28%							Bookend estimates	No actions applicable to this limiting
River	Creek		Creeks	Oxygen								have not been	factor were performed within 2012-
Steelhead												determined for this	2015 period in this assessment unit.
												limiting factor.	Therefore, there is no change in
												Comment entered RM	function percentage. Comments
												6/13/2016.	entered RM 6/13/2016.
Snake	Joseph	JCS5	Elk & Crow	9.2: Water	14.32%							Bookend estimates	No actions applicable to this limiting
River	Creek		Creeks	Quantity:								have not been	factor were performed within 2012-
Steelhead				Decreased Water								determined for this	2015 period in this assessment unit.
				Quantity								limiting factor.	Therefore, there is no change in
												Comment entered RM	function percentage. Comments
												6/13/2016.	entered RM 6/13/2016.
Snake	Joseph	JCS6	Lower	1.1: Habitat	12.50%							Bookend estimates	No actions applicable to this limiting
River	Creek		Chesnimnus	Quantity:								have not been	factor were performed within 2012-
Steelhead			Creek and	Anthropogenic								determined for this	2015 period in this assessment unit.
			Prairie	Barriers								limiting factor.	Therefore, there is no change in
			Tributaries									Comment entered RM	function percentage. Comments
												6/13/2016.	entered RM 6/13/2016.
Snake	Joseph	JCS6	Lower	4.1: Riparian	12.50%							Bookend estimates	No actions applicable to this limiting
River	Creek		Chesnimnus	Condition: Riparian								have not been	factor were performed within 2012-
Steelhead			Creek and	Vegetation								determined for this	2015 period in this assessment unit.
			Prairie									limiting factor.	Therefore, there is no change in
			Tributaries									Comment entered RM	function percentage. Comments
			1									6/13/2016.	entered RM 6/13/2016.
Snake	Joseph	JCS6	Lower	5.2: Peripheral and	12.50%						<u> </u>	Bookend estimates not	No actions applicable to this limiting
River	Creek		Chesnimnus	·								determined for this	factor were performed within 2012-
Steelhead				Habitats:								limiting factor.	2015 period in this assessment unit.
			Prairie	Floodplain								Comment entered RM	Therefore, there is no change in
				Condition								6/13/2016.	function percentage. Comments
												0, 10, 2010.	entered RM 6/13/2016.
							L	l				1	CITICI CU INIVI 0/ 13/ 2010.

ESU	Population	Code		2012 Standardized Limiting Factor	LF Weight	Low Bookend	Original 2018 Estimate		High 2018 Bookend	Original 2033 Estimate	_	LF Weight and Bookends Comments	Estimates Comments
Snake River Steelhead Snake River	Joseph Creek Joseph Creek	JCS6	Lower Chesnimnus Creek and Prairie	6.2: Channel Structure and Form: Instream Structural Complexity 7.2: Sediment	12.50% 12.50%							Bookend estimates have not been established for this limiting factor. Comment entered RM 6/13/12016. Bookend estimates have not been	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016. No actions applicable to this limiting factor were performed within 2012-
Steelhead			Prairie Tributaries	Increased Sediment Quantity								determined for this limiting factor. Comment entered RM 6/13/2016.	2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS6		8.1: Water Quality: Temperature	12.50%							Bookend estimates have not been determined for this limiting factor. Comment entered RM 6/13/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS6	Lower Chesnimnus Creek and Prairie Tributaries	8.2: Water Quality: Oxygen	12.50%							Bookend estimates have not been determined for this limiting factor. Comment entered RM 6/13/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS6	Chesnimnus Creek and	9.2: Water Quantity: Decreased Water Quantity	12.50%							Bookend estimates have not been determined for this limiting factor. Comment entered RM 6/13/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS7		1.1: Habitat Quantity: Anthropogenic Barriers	10.00%	80	80	80	100	80	100		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.

Snake	Population Joseph Creek	Code JCS7	Unit Upper Chesnimnus Creek and Forest	2012 Standardized Limiting Factor 6.2: Channel Structure and Form: Instream Structural Complexity	LF Weight	Low Bookend 40	Original 2018 Estimate 40		High 2018		_	LF Weight and Bookends Comments	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS7	Upper Chesnimnus Creek and Forest Tributaries	7.2: Sediment Conditions: Increased Sediment Quantity		40.05	40.05	40.05	65	46.05	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS7	1	8.1: Water Quality: Temperature	25.00%	50	50	50	52	50	60		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS7	Upper Chesnimnus Creek and Forest Tributaries	8.2: Water Quality: Oxygen	5.00%	70	70	70	80	70	85		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.
Snake River Steelhead	Joseph Creek	JCS7	Chesnimnus	9.2: Water Quantity: Decreased Water Quantity	20.00%	65	65	65	67	65	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/13/2016.

ESU	Population	Code		2012 Standardized Limiting Factor	LF Weight	Low Bookend	Original 2018 Estimate	High 2018	_	LF Weight and Bookends Comments	Estimates Comments
Snake River Steelhead	Ronde River	LGS1	Lower Grande Ronde River Mainstem - mouth to Wenaha River	2.1: Injury and Mortality: Predation	20.00%					Bookend values were not established for this limiting factor. Comment entered RM 6/7/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Ronde River	LGS1	Grande Ronde River	6.2: Channel Structure and Form: Instream Structural Complexity	20.00%					Bookend values were not established for this limiting factor. Comment entered RM 6/7/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Ronde River	LGS1		7.2: Sediment Conditions: Increased Sediment Quantity	20.00%					Bookend values were not established for this limiting factor. Comment entered RM 6/7/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
River Steelhead	Ronde River	LGS1	Lower Grande Ronde River Mainstem - mouth to Wenaha River	8.1: Water Quality: Temperature	20.00%					Bookend values not established for this limiting factor. Comment entered RM 6/7/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Ronde River	LGS1	Grande Ronde River	9.2: Water Quantity: Decreased Water Quantity	20.00%					Bookend values not established for this limiting factor. Comment entered 6/7/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.

							Original	Updated		Original			
			Assessment	2012 Standardized		Low	2018	1 -	High 2018	_	High 2033	LF Weight and	
ESU	Population	Code			LF Weight		Estimate	1	•		1		Estimates Comments
Snake River Steelhead	Grande Ronde River	LGS2	Lower tributaries to the	1.1: Habitat Quantity: Anthropogenic Barriers	14.28%	Bookend	Estimate	Estimate	Bookend	Estimate		Bookend values not established for this limiting factor. Comment entered RM 6/7/2016. Grouse Ck.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Grande Ronde River Iower mainstem tributaries	LGS2		4.1: Riparian Condition: Riparian Vegetation	14.28%							established for this limiting factor. Comment entered RM 6/7/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Grande Ronde River lower mainstem tributaries	LGS2	tributaries to the Lower	6.2: Channel Structure and Form: Instream Structural Complexity	14.28%							established for this limiting factor. Comment entered RM	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Grande Ronde River lower mainstem tributaries	LGS2	to the	7.2: Sediment Conditions: Increased Sediment Quantity	14.28%							limiting factor. Comment entered RM 6/7/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Grande Ronde River lower mainstem tributaries	LGS2	Lower tributaries to the Lower Grande Ronde River	8.1: Water Quality: Temperature	14.28%							established for this limiting factor. Comment entered RM 6/7/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.

ESU	Population	Code	Assessment Unit	2012 Standardized Limiting Factor	LF Weight	Low Bookend	Original 2018 Estimate	Updated 2018 Estimate	High 2018 Bookend		1	LF Weight and Bookends Comments	Estimates Comments
Snake River Steelhead	Ronde River	LGS2	Lower tributaries to the Lower Grande Ronde River	9.1: Water Quantity: Increased Water Quantity	14.28%							Bookend values not established for this limiting factor. Comment entered RM 6/7/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Grande Ronde River Iower mainstem tributaries	LGS2	Lower tributaries to the Lower Grande Ronde River	9.2: Water Quantity: Decreased Water Quantity	14.32%							Bookend values not established for this limiting factor. Comment entered RM 6/7/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Ronde River	LGS3	Wenaha River Mainstem	6.2: Channel Structure and Form: Instream Structural Complexity	100.00%							Bookend values not established for this limiting factor. Comment entered RM 6/7/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Steelhead	Ronde River	LGS5	Lower Grande Ronde River Mainstem - Wenaha River to Wallowa River	Condition: Riparian	5.00%	90.05	90.05	90.05	95	90.05	95	AU includes extensive wild & scenic and roadless area designations and receives some but little use of the lower AU.	EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Ronde River	LGS5		6.2: Channel Structure and Form: Instream Structural Complexity	5.00%	90	90	90	95	90	95		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.

							Original	Updated		Original			
			Assessment	2012 Standardized		Low	2018	1 -	 High 2018	_	High 2033	LF Weight and	
ESU	Population	Code			LF Weight		Estimate	Estimate	_	Estimate		_	Estimates Comments
Snake River Steelhead	Grande Ronde River	LGS5	Lower Grande Ronde River	7.2: Sediment Conditions: Increased Sediment Quantity		60	60	60	70	60	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Grande Ronde River Iower mainstem tributaries	LGS5	Lower Grande Ronde River Mainstem - Wenaha River to Wallowa River	8.1: Water Quality: Temperature	40.00%	60	60	60	70	60	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Grande Ronde River lower mainstem tributaries	LGS5	Grande Ronde River	9.2: Water Quantity: Decreased Water Quantity	40.00%	60	60	60	80	60		Grande Ronde valley	EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Grande Ronde River Iower mainstem tributaries	LGS6		1.1: Habitat Quantity: Anthropogenic Barriers	2.00%	85	90	85	100	90	100		2012:about 8 miles improved access. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Grande Ronde River Iower mainstem tributaries	LGS6	Mud,	4.1: Riparian Condition: Riparian Vegetation	30.00%	50	50	50	51	50	60		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.

Snake	Ronde River	LGS6	Unit Courtney, Mud, Grossman, and Wildcat	6.2: Channel Structure and Form: Instream	LF Weight	Low Bookend 60	2018		High 2018 Bookend		_	LF Weight and Bookends Comments	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Ronde River	LGS6	Mud,	7.2: Sediment Conditions: Increased Sediment Quantity	20.00%	55	55	55	60	57	65		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Ronde River	LGS6	Courtney, Mud, Grossman, and Wildcat Creeks	8.1: Water Quality: Temperature	30.00%	50	50	50	51	50	55		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
River Steelhead	Ronde River	LGS6	Mud,	9.1: Water Quantity: Increased Water Quantity		70	70	70	70	70	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.
Snake River Steelhead	Ronde River		Mud,	9.2: Water Quantity: Decreased Water Quantity	10.00%	70	70	70	70	70	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/7/2016.

			1				Original	Updated	.	Original			
			Assassment	2012 Standardized		Low	Original 2018	2018	 High 2018	Original	High 2022	LF Weight and	
ESU	Population	Code	Unit		LF Weight		Estimate	Estimate	Bookend		1	Bookends Comments	Estimates Comments
Snake	Grande	LGS7	Upper	6.2: Channel	50.00%	DOOKEIIU	Littliace	Lotimate	DOOKEHU	Littliace	DOORCHA	Bookend values not	No actions applicable to this limiting
River	Ronde River	LUST	Tributaries	Structure and	30.00%							established for this	factor were performed within 2012-
	lower		of the	Form: Instream								limiting factor.	2015 period in this assessment unit.
Steemieaa	mainstem		Lower	Structural								Comment entered RM	Therefore, there is no change in
	tributaries		Grande	Complexity								6/7/2016.	function percentage. Comments
			Ronde River	Joseph Sandy								10,1,1 = 0 = 0.	entered RM 6/7/2016.
Snake	Grande	LGS7	Upper	7.2: Sediment	50.00%							Bookend values not	No actions applicable to this limiting
River	Ronde River	LU37	Tributaries	Conditions:	30.00%							established for this	factor were performed within 2012-
Steelhead	lower		of the	Increased Sediment								limiting factor.	2015 period in this assessment unit.
J. C. C. I. C. G.	mainstem		Lower	Quantity								Comment entered RM	Therefore, there is no change in
	tributaries		Grande									6/7/2016.	function percentage. Comments
			Ronde River										entered RM 6/7/2016.
Snake	Wallowa	WRS1	Lower	7.2: Sediment	50.00%							The expert panel did	No actions applicable to this limiting
River	River	WIGH	Wallowa	Conditions:	30.00%							not established	factor were performed within 2012-
Steelhead	1.1761		River	Increased Sediment								bookends for this	2015 period in this assessment unit.
				Quantity								limiting factor.	Therefore, there is no change in
												Comment entered RM	function percentage. Comments
												6/30/2016.	entered RM 6/30/2016.
Snake	Wallowa	WRS1	Lower	8.1: Water Quality:	50.00%							The expert panel did	No actions applicable to this limiting
River	River		Wallowa	Temperature								not established	factor were performed within 2012-
Steelhead			River									bookends for this	2015 period in this assessment unit.
												limiting factor.	Therefore, there is no change in
												Comment entered RM	function percentage. Comments
												6/30/2016.	entered RM 6/30/2016.
Snake		WRS2	Lower		33.40%							The expert panel did	No actions applicable to this limiting
River	River		Wallowa	Structure and								not establish bookends	factor were performed within 2012-
Steelhead			Tributaries -	Form: Instream								for this limiting factor.	2015 period in this assessment unit.
			Howard,	Structural								Comment entered RM	Therefore, there is no change in
			Wise, and	Complexity								6/20/2016,	function percentage. Comments
			Fisher Creeks										entered RM 6/30/2016.
Snake	Wallowa	WRS2	Lower	7.2: Sediment	33.30%							The expert panel did	No actions applicable to this limiting
River	River		Wallowa	Conditions:								not establish bookends	factor were performed within 2012-
Steelhead			Tributaries -	Increased Sediment								for this limiting factor.	2015 period in this assessment unit.
			Howard,	Quantity								Comment entered RM	Therefore, there is no change in
			Wise, and									6/30/2016.	function percentage. Comments
			Fisher										entered RM 6/30/2016.
			Creeks										

							Out of the o	ا المحاجة - ا		Onicia - I			
				2012 Character die			Original	Updated		Original	Ui-h 2022	LE Mainht and	
ECIT	Damulatian	Cada		2012 Standardized		Low	2018		High 2018		_	LF Weight and	Estimates Community
	-	Code			LF Weight	воокепа	Estimate	Estimate	Bookend	Estimate	воокепа		Estimates Comments
		WRS2		8.1: Water Quality:	33.30%							The expert panel did	No actions applicable to this limiting
	River		Wallowa	Temperature									factor were performed within 2012-
Steelhead			Tributaries -									for this limiting factor.	2015 period in this assessment unit.
			Howard,									Comment entered RM 6/30/2016.	Therefore, there is no change in function percentage. Comments
			Wise, and Fisher									0/30/2010.	entered RM 6/30/2016.
			Creeks										lentered kivi 0/30/2010.
Snake	Wallowa	WRS3		1.1: Habitat	5.00%	90	90	90	100	95	100		EP LB 2015: No actions, no change
	River	VVIVOO		Quantity:	3.00%	30	30	30	100	33	100		MAH.4.5.2016. No actions applicable
Steelhead	Mivei			Anthropogenic									to this limiting factor were performed
Steemeda			1	Barriers									within 2012-2015 period in this
			River to Dry	Burriers									assessment unit. Therefore, there is
			Creek - and										no change in function percentage.
			Tributaries										Comments entered RM 6/30/2016.
													,,,,,
Snake	Wallowa	WRS3	Wallowa	4.1: Riparian	20.00%	80	80	80	82	80	85		EP LB 2015: No actions, no change
	River			Condition: Riparian									MAH.4.5.2016. No actions applicable
Steelhead			Canyon -	Vegetation									to this limiting factor were performed
			Minam										within 2012-2015 period in this
			River to Dry										assessment unit. Therefore, there is
			Creek - and										no change in function percentage.
			Tributaries										Comments entered RM 6/30/2016.
		WRS3		5.2: Peripheral and	15.00%	95	95	95	95	95	95		EP LB 2015: No actions, no change
	River		River	Transitional									MAH.4.5.2016. No actions applicable
Steelhead				Habitats:									to this limiting factor were performed
				Floodplain									within 2012-2015 period in this
			River to Dry	Condition									assessment unit. Therefore, there is
			Creek - and										no change in function percentage.
			Tributaries										Comments entered RM 6/30/2016.
Snake	Wallowa	WRS3	Wallowa	6.2: Channel	20.00%	80	80	80	85	80	85		EP LB 2015: No actions, no change
	River			Structure and	_0.00/0								MAH.4.5.2016. No actions applicable
Steelhead				Form: Instream									to this limiting factor were performed
			1	Structural									within 2012-2015 period in this
			River to Dry										assessment unit. Therefore, there is
			Creek - and	' '									no change in function percentage.
			Tributaries										Comments entered RM 6/30/2016.

Snake	•	Code WRS3	Unit Wallowa River Canyon - Minam River to Dry	2012 Standardized Limiting Factor 7.2: Sediment Conditions: Increased Sediment Quantity	LF Weight 30.00%	Low Bookend 70	Original 2018 Estimate 70		High 2018		1	LF Weight and Bookends Comments	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is
Snake River Steelhead	Wallowa River	WRS3		8.2: Water Quality: Oxygen	10.00%	90	90	90	92	90	95		no change in function percentage. Comments entered RM 6/30/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS4	Minam		33.40%							The expert panel did not establish bookends for this limiting factor. Comment entered RM 6/30/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS4	Lower Minam River (downstrea m of Cougar Creek) and Tributaries	7.2: Sediment Conditions: Increased Sediment Quantity	33.30%							for this limiting factor.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS4	Lower Minam River (downstrea m of Cougar Creek) and Tributaries	8.1: Water Quality: Temperature	33.30%							The expert panel did not establish bookends for this limiting factor. Comment entered RM 6/30/2016.	No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.

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			l			_	Original	Updated		Original		l	
				2012 Standardized		Low	2018		High 2018		_	LF Weight and	
		Code	Unit		LF Weight	Bookend	Estimate	Estimate	Bookend	Estimate	Bookend		Estimates Comments
Snake		WRS5	Upper	6.2: Channel	100.00%							The expert panel did	No actions applicable to this limiting
	River		Minam	Structure and									factor were performed within 2012-
Steelhead			River and	Form: Instream								for this limiting factor.	2015 period in this assessment unit.
			Tributaries	Structural								Comment entered RM	Therefore, there is no change in
			(Cougar,	Complexity								6/30/2016.	function percentage. Comments
			Trout,										entered RM 6/30/2016.
			Murphy,										
			and Elk										
			Creeks,										
			Little										
			Minam and										
			North										
			Minam										
			Rivers										
Snake	Wallowa	WRS6	Mid-	4.1: Riparian	25.00%	40	40	40	45	40	60		EP LB 2015: No actions, no change
	River		Wallowa	Condition: Riparian									MAH.4.5.2016. No actions applicable
Steelhead			River - Dry	Vegetation									to this limiting factor were performed
			Creek to										within 2012-2015 period in this
			Lostine										assessment unit. Therefore, there is
			River										no change in function percentage.
			INIVE										Comments entered RM 6/30/2016.
													Comments entered KW 0/30/2010.
Snake	Wallowa	WRS6	Mid-	6.1: Channel	50.00%	40	40	40	60	40	75		EP LB 2015: No actions, no change
River	River		Wallowa	Structure and	30.0070	.0		"			, ,		MAH.4.5.2016. No actions applicable
Steelhead	THIVE!		River - Dry	Form: Bed and									to this limiting factor were performed
Steemeaa			Creek to	Channel Form									within 2012-2015 period in this
			Lostine	Chamilerronn									assessment unit. Therefore, there is
			River										no change in function percentage.
			INIVE										Comments entered RM 6/30/2016.
													Comments entered KW 0/30/2010.
Snake	Wallowa	WRS6	Mid-	6.2: Channel	15.00%	40	40	40	60	40	75		EP LB 2015: No actions, no change
	River		Wallowa	Structure and	13.00/0	"	1,0	"		'	, ,		MAH.4.5.2016. No actions applicable
Steelhead			River - Dry	Form: Instream									to this limiting factor were performed
Steemeau			Creek to	Structural									within 2012-2015 period in this
													· · · · · · · · · · · · · · · · · · ·
			Lostine	Complexity									assessment unit. Therefore, there is
			River										no change in function percentage.
													Comments entered RM 6/30/2016.

Snake	•	Code WRS6	Unit	2012 Standardized Limiting Factor 8.1: Water Quality: Temperature	LF Weight	Low Bookend 75	Original 2018 Estimate 75		High 2018 Bookend 85		_	LF Weight and Bookends Comments	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS7	Tributaries	1.1: Habitat Quantity: Anthropogenic Barriers	5.00%	80	80	80	90	80	90		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS7	and	4.1: Riparian Condition: Riparian Vegetation	40.00%	40	40	40	60	40	65	Reagan Gulch Promise road	EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS7		7.2: Sediment Conditions: Increased Sediment Quantity		40	40	40	60	40	65		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
	Wallowa River	WRS7	Dry Creek and Tributaries	8.1: Water Quality: Temperature	25.00%	50	50	50	70	50	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.

Snake	•	Code WRS7	Unit Dry Creek and Tributaries	2012 Standardized Limiting Factor 9.2: Water Quantity: Decreased Water Quantity	LF Weight	Low Bookend 70	Original 2018 Estimate 70		High 2018 Bookend 75		_	no diversions known; tied more to poor riparian condition,	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this
												etc. Ag ground - Dry Ck. charged in lower reaches from Wallowa River diversions	assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
	Wallowa River	WRS8	and Tributaries	1.1: Habitat Quantity: Anthropogenic Barriers	10.00%	55	55	55	90	65	90		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
	Wallowa River	WRS8	and	4.1: Riparian Condition: Riparian Vegetation	10.00%	80	80	80	85	80	90		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS8	and Tributaries	6.2: Channel Structure and Form: Instream Structural Complexity	20.00%	60	60	60	70	60	80		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
	Wallowa River	WRS8	and Tributaries	7.2: Sediment Conditions: Increased Sediment Quantity	4.00%	70	70	70	75	70	80		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.

Snake	•	Code WRS8	Unit	-	LF Weight	Low Bookend 60	Original 2018 Estimate 60		High 2018 Bookend		_	LF Weight and Bookends Comments	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is
Snake River Steelhead	Wallowa River	WRS8		8.2: Water Quality: Oxygen	1.00%	80	80	80	80	80	80		no change in function percentage. Comments entered RM 6/30/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS8	and Tributaries	9.2: Water Quantity: Decreased Water Quantity	45.00%	45	45	45	70	45	70	Little Bear diversion; flow not limiting upstream adults but does limit juvenile rearing	EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS9		1.1: Habitat Quantity: Anthropogenic Barriers	25.00%	60	60	60	80	70	80		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS9	1 '	4.1: Riparian Condition: Riparian Vegetation	20.00%	50	50	50	60	50	65		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.

Snake	•	Code WRS9	Unit Whisky Creek	2012 Standardized Limiting Factor 5.2: Peripheral and Transitional Habitats: Floodplain Condition	LF Weight	Low Bookend 60	Original 2018 Estimate 60		High 2018 Bookend 70		_	LF Weight and Bookends Comments	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage.
Snake River Steelhead	Wallowa River	WRS9	Creek	6.1: Channel Structure and Form: Bed and Channel Form	10.00%	60	60	60	70	60	75		Comments entered RM 6/30/2016. EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS9	Creek	6.2: Channel Structure and Form: Instream Structural Complexity	10.00%	60	60	60	70	60	75		EP LB 2015: No actions, no change MAH.4.5.2016
Snake River Steelhead	Wallowa River	WRS9	Whisky Creek	7.2: Sediment Conditions: Increased Sediment Quantity	5.00%	50	50	50	60	50	65		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS9	Whisky Creek	8.1: Water Quality: Temperature	10.00%	60	60	60	70	60	75		EP LB 2015: No actions, no change MAH.4.5.2016
	Wallowa River	WRS9	1 '	8.2: Water Quality: Oxygen	5.00%	70	70	70	80	70	85		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.

							Original	Updated		Original			
			Assessment	2012 Standardized		Low	2018	_	High 2018		High 2033	LF Weight and	
ESU	Population	Code			LF Weight		Estimate		_		1	Bookends Comments	Estimates Comments
Snake River Steelhead	Wallowa River	WRS9	Whisky Creek	9.2: Water Quantity: Decreased Water Quantity		60	60	60		60	70		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS10		1.1: Habitat Quantity: Anthropogenic Barriers	15.00%	85	95	95.6	100	95	100		In 2015 the expert panel evaluated the benefit of actions implemented for Chinook as contributing to steelhead in this assessment unit that yielded a 10.6% uplift. The StreamNet miles for the Chinook denominator were applied to steelhead. The expert panel made a note to revise the bookend for this limiting factor in the look forward. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS10	River	3.1: Food: Altered Primary Productivity	5.00%	70	70	70	70	70	70		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS10	River	5.2: Peripheral and Transitional Habitats: Floodplain Condition	10.00%	65	65	65	70	65	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS10	River	6.2: Channel Structure and Form: Instream Structural Complexity	20.00%	65	65	65.04	70	65	75		In 2015 the expert panel evaluated the benefit of actions implemented for Chinook as contributing to steelhead in this assessment unit that yielded a 0.04% uplift. The StreamNet miles for the Chinook denominator were applied to steelhead. Comments entered RM 6/30/2016.

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				2012 Chandandinad			Original	Updated	 	Original	U:-b 2022	LE Maiabband	
ESU	Population	Code	Unit	2012 Standardized Limiting Factor	LF Weight	Low		2018 Estimate	High 2018 Bookend		_	LF Weight and Bookends Comments	Estimates Comments
Snake	-	WRS10		7.2: Sediment	10.00%	60	60	60	75		80	bookerius comments	
		MK210	Lostine	Conditions:	10.00%	00	60	00	/5	00	80		EP LB 2015: No actions, no change.
	River		River										MAH.4.5.2016. No actions applicable
Steelhead				Increased Sediment									to this limiting factor were performed
				Quantity									within 2012-2015 period in this
													assessment unit. Therefore, there is
													no change in function percentage.
													Comments entered RM 6/30/2016.
Snake	Wallowa	WRS10	Lostine	8.1: Water Quality:	10.00%	75	75	75.7	77	75	80		In 2015 the expert panel evaluated
River	River		River	Temperature									the benefit of actions implemented
Steelhead													for Chinook as contributing to
													steelhead in this assessment unit that
													yielded a 0.7% uplift. The StreamNet
													miles for the Chinook denominator
													were applied to steelhead. Comments
													entered RM 6/30/2016.
Snake	Wallowa	WRS10	Lostine	8.2: Water Quality:	0.00%	75	75	75	80	75	90		EP LB 2015: No actions, no change
	River	WINSIO	River	Oxygen	0.0070		, ,			,3			MAH.4.5.2016. No actions applicable
Steelhead	1			oxygen.									to this limiting factor were performed
													within 2012-2015 period in this
													assessment unit. Therefore, there is
													no change in function percentage.
													Comments entered RM 6/30/2016.
Snake	Wallowa	WRS10	Lostine	9.2: Water	30.00%	50	50	81.3	80	50	80		In 2015 the expert panel evaluated
	River		River	Quantity:	30.00%	30	30	01.5	80	30	00		the benefit of actions implemented
Steelhead	Tuve:		Triver	Decreased Water									for Chinook as contributing to
Steemeda				Quantity									steelhead in this assessment unit that
				Quantity									yielded a 31.3% uplift. The StreamNet
													miles for the Chinook denominator
													were applied to steelhead.
													Comments entered RM 6/30/2016.
													,,,,,
Snake	Wallowa	WRS11	Hurricane	1.1: Habitat	15.00%	50	50	50	100	50	100		EP LB 2015: No actions, no change
River	River		Creek	Quantity:									MAH.4.5.2016. No actions applicable
Steelhead				Anthropogenic									to this limiting factor were performed
				Barriers									within 2012-2015 period in this
													assessment unit. Therefore, there is
													no change in function percentage.
													Comments entered RM 6/30/2016.

Snake	•		Unit Hurricane	2012 Standardized Limiting Factor 4.1: Riparian Condition: Riparian Vegetation	LF Weight	Low Bookend 30	Original 2018 Estimate 30		High 2018		_	LF Weight and Bookends Comments	Estimates Comments EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS11	Creek	5.2: Peripheral and Transitional Habitats: Floodplain Condition	15.00%	30	30	30	50	30	60		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS11	Creek	6.2: Channel Structure and Form: Instream Structural Complexity	15.00%	30	30	30	50	38	60		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS11	Creek	7.2: Sediment Conditions: Increased Sediment Quantity		60	60	60	70	60	80		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.
Snake River Steelhead	Wallowa River	WRS11	Hurricane Creek	8.1: Water Quality: Temperature	15.00%	70	70	70	72	70	75		EP LB 2015: No actions, no change MAH.4.5.2016. No actions applicable to this limiting factor were performed within 2012-2015 period in this assessment unit. Therefore, there is no change in function percentage. Comments entered RM 6/30/2016.

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							Original	Updated		Original			
				2012 Standardized		Low	2018		High 2018		_	LF Weight and	
	•	Code		-	LF Weight		Estimate			<u> </u>		Bookends Comments	Estimates Comments
Snake	Wallowa	WRS11	Hurricane	8.2: Water Quality:	1.00%	70	70	70	80	70	80		EP LB 2015: No actions, no change
River	River		Creek	Oxygen									MAH.4.5.2016. No actions applicable
Steelhead													to this limiting factor were performed
													within 2012-2015 period in this
													assessment unit. Therefore, there is
													no change in function percentage.
													Comments entered RM 6/30/2016.
Snake	Wallowa	WRS11	Hurricane	9.2: Water	20.00%	40	40	40	90	40	95		EP LB 2015: No actions, no change
River	River		Creek	Quantity:									MAH.4.5.2016. No actions applicable
Steelhead				Decreased Water									to this limiting factor were performed
				Quantity									within 2012-2015 period in this
													assessment unit. Therefore, there is
													no change in function percentage.
													Comments entered RM 6/30/2016.
Snake	Wallowa	WRS12	Prairie	1.1: Habitat	12.50%							The expert panel did	No actions applicable to this limiting
River	River		Creek	Quantity:								not establish bookends	factor were performed within 2012-
Steelhead				Anthropogenic								for this limiting factor.	2015 period in this assessment unit.
				Barriers								Comment entered RM	Therefore, there is no change in
												6/30/2016.	function percentage. Comments
													entered RM 6/30/2016.
Snake		WRS12		4.1: Riparian	12.50%							The expert panel did	No actions applicable to this limiting
	River		Creek	Condition: Riparian								l .	factor were performed within 2012-
Steelhead				Vegetation								for this limiting factor.	2015 period in this assessment unit.
												Comment entered RM	Therefore, there is no change in
												6/30/2016.	function percentage. Comments
			<u> </u>										entered RM 6/30/2016.
		WRS12		5.2: Peripheral and	12.50%							The expert panel did	No actions applicable to this limiting
River	River		Creek	Transitional								l .	factor were performed within 2012-
Steelhead				Habitats:								for this limiting factor.	2015 period in this assessment unit.
				Floodplain								Comment entered RM	Therefore, there is no change in
				Condition								6/30/2016.	function percentage. Comments
C I	VA / = II = :	WDC43	Dura turi	C 4: Chan	42.500/	-			-	-		The surrent 1991	entered RM 6/30/2016.
Snake		WRS12		6.1: Channel	12.50%							The expert panel did	No actions applicable to this limiting
	River			Structure and								l .	factor were performed within 2012-
Steelhead				Form: Bed and								for this limiting factor.	2015 period in this assessment unit.
				Channel Form								Comment entered RM	Therefore, there is no change in
												6/30/2016.	function percentage. Comments
													entered RM 6/30/2016.

							ا ماندادها	l lo data d		ا مانداد			
			Assassment	2012 Standardized		Low	Original 2018	Updated 2018	High 2018	Original	Uiah 2022	LF Weight and	
ESU	Population	Code			LF Weight	Low	Estimate		•	Estimate	1		Estimates Comments
Snake	Wallowa	WRS12		6.2: Channel	12.50%	DOOKEIIU	Littlate	Littlate	DOOKEIIU	Littlate	DOOKEIIU	The expert panel did	No actions applicable to this limiting
River	River	WKS12		Structure and	12.50%								factor were performed within 2012-
Steelhead	Rivei			Form: Instream									2015 period in this assessment unit.
Steemeau				Structural								Comment entered RM	I
				Complexity									Therefore, there is no change in function percentage. Comments
				Complexity									entered RM 6/30/2016.
Snake	Wallowa	WRS12	Prairie	7.2: Sediment	12.50%							The expert panel did	No actions applicable to this limiting
River	River	VVINSIZ		Conditions:	12.30/0							l ' '	factor were performed within 2012-
Steelhead	Mivei			Increased Sediment								for this limiting factor.	2015 period in this assessment unit.
Steemeau				Quantity								Comment entered RM	Therefore, there is no change in
				Quantity									function percentage. Comments
												0/30/2010.	entered RM 6/30/2016.
Snake	Wallowa	WRS12	Prairie	8.2: Water Quality:	12 50%				 			The expert panel did	No actions applicable to this limiting
River	River	VVIVSIZ		Oxygen	12.50%							' '	factor were performed within 2012-
Steelhead	Mivei		Creek	Охуден								for this limiting factor.	2015 period in this assessment unit.
Steemeau												Comment entered RM	Therefore, there is no change in
													function percentage. Comments
												· · · ·	entered RM 6/30/2016.
Snake	Wallowa	WRS12	Prairie	9.1: Water	12.50%							The expert panel did	No actions applicable to this limiting
River	River	VVIISIZ		Quantity: Increased								· · ·	factor were performed within 2012-
Steelhead	Tarver			Water Quantity								for this limiting factor.	2015 period in this assessment unit.
Steemeaa				Water Quartity								Comment entered RM	Therefore, there is no change in
												6/30/2016.	function percentage. Comments
												0,30,2010.	entered RM 6/30/2016.
Snake	Wallowa	WRS13	Upper	1.1: Habitat	5.00%	50.4	55.4	55.8	100	55.4	100		The expert panel evaluated the
River	River			Quantity:									benefit of actions for Chinook in
Steelhead			River	Anthropogenic									assessment unit WLC3 that they
				Barriers									agreed apply to this limiting factor
			of Lostine										and assessment unit. The steelhead
			River) and										denominator that included 1.9 miles
			Small										of Trout Creek was changed to 36.3
			Tributaries										miles, resulting in 5.4% uplift. The
													panel prorated the estimate of
													benefits for steelhead juvenile use at
													25%. Comments entered RM
													6/30/2016.
Snake	Wallowa	WRS13	Upper	4.1: Riparian	15.00%	40.4	40.4	40.43	45	40.4	60		The expert panel evaluated the
River	River		Wallowa	Condition: Riparian									estimate of benefits from actions
Steelhead			River	Vegetation									evaluated for Chinook for this
			(Upstream										assessment unit that resulted in a
			of Lostine										0.03% uplift. Comment entered RM
			River) and										6/30/2016.
			Small										
			Tributaries										

	l		1				ا ماندندها	l lo do to d		ا مانداد دا			
			A	2012 Stondordinad			Original 2018	Updated 2018	 	Original	 	LF Waisht and	
ESU	Population	Code	Unit	2012 Standardized Limiting Factor	LF Weight	Low	Estimate		High 2018 Bookend		-	LF Weight and Bookends Comments	Estimates Comments
						40.4	40.4	41.2	65	40.4	80	bookenas Comments	
Snake River	River	WRS13	Upper	5.2: Peripheral and Transitional	20.00%	40.4	40.4	41.2	65	40.4	80		The expert panel evaluated the estimate of benefits from the Six
Steelhead	River		Wallowa River	Habitats:									
Steemeau													Ranch project that treated 0.38 miles.
			(Upstream of Lostine	Floodplain Condition									The panel prorated improvements at 75% based on the affect of the action
			River) and	Condition									on floodplain conditions, yielding
			Small										0.8% uplift. Comments entered RM
			Tributaries										6/30/2016.
Snake	Wallowa	WRS13	-	6.2: Channel	25.00%	40.3	40.3	40.8	65	40.3	80		The expert panel evaluated the Six
	River	MV212	Upper Wallowa	Structure and	23.00%	40.5	40.5	40.0	03	40.5	00		Ranch Project that treated 0.38 miles.
Steelhead	Kivei		River	Form: Instream									Using the same proration that was
Steemeau				Structural									used for Chinook the estimated uplift
			of Lostine	Complexity									was 0.5%. Comment entered RM
			River) and	Complexity									6/30/2016.
			Small										0,30,2010.
			Tributaries										
Snake	Wallowa	WRS13	Upper	7.2: Sediment	25.00%	50	50	50.7	60	50	75		The expert panel estimated benefits
	River		Wallowa	Conditions:									of the same actions that were
Steelhead			River	Increased Sediment									evaluated for Chinook in this
			(Upstream	Quantity									assessment unit. Using a denominator
			of Lostine										for steelhead of 36.3 miles the
			River) and										expected uplift is 0.7%.
			Small										
			Tributaries										
Snake	Wallowa	WRS13	Upper	8.2: Water Quality:	5.00%	70	70	70	80	70	85		EP LB 2015: No actions, no change
River	River		Wallowa	Oxygen									MAH.4.5.2016. No actions applicable
Steelhead			River										to this limiting factor were performed
			(Upstream										within 2012-2015 period in this
			of Lostine										assessment unit. Therefore, there is
			River) and										no change in function percentage.
			Small										Comments entered RM 6/30/2016.
			Tributaries										
Snake		WRS13			5.00%	80	80	80.5	85	81	90		See the calculation spreadsheet that
	River			Quantity:									includes the Trout Creek Alpine
Steelhead			River	Decreased Water									Meadows Project that was also
			` '	Quantity									evaluated for Chinook. Using the
			of Lostine River) and										same denominator that was used for Chinook yields a 0.5% uplift. The
			Small Tributaries										expert panel noted that the water right affecting the uplift is held by the
			THOULAITES										city and not subject to forfeiture.
													Comments entered RM 6/30/2016.
													Comments effected file of 30/2010.
			L	I	l	I	l	l	l	l	l		