NOTES:

This workbook contains **habitat functions** data downloaded directly from the Taurus database. Functions include those documented during the **Look Forward** process covering the **2016-2018** work window for Chinook.

FSU	Population	Code	Assessment	2012	I F Weight	low	Original	Undated	High 2018	Original	High 2033	LE Weight and Bookends	Estimates Comments
200		couc	Unit	Standardized	Li Weight	Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor		Doomenia	Estimate	Estimate		Estimate			
Snake River	East Fork	EFC1	EF Salmon	1.1: Habitat	10.00%	90	90	90		94	95		2016: No actions, therefore no
Spring/Summ	Salmon		River	Quantity:									change to estimate
er Chinook	River			Anthropogenic									_
				Barriers									
Snake River	East Fork	EFC1	EF Salmon	2.3: Injury and	10.00%	70	70	70		85	90		2016: No actions, therefore no
Spring/Summ	Salmon		River	Mortality:									change to estimate
er Chinook	River			Mechanical									
				Injury									
Snake River	East Fork	EFC1	EF Salmon	4.1: Riparian	25.00%	60.03	60.03	60.03		60	90		2016: No actions, therefore no
Spring/Summ	Salmon		River	Condition:									change to estimate
er Chinook	River			Riparian									
				Vegetation									
Snake River	East Fork	EFC1	EF Salmon	6.1: Channel	25.00%	50	50	50		53	65		2016: No actions, therefore no
Spring/Summ	Salmon		River	Structure and									change to estimate
er Chinook	River			Form: Bed and									
				Channel Form									
Snake River	East Fork	EFC1	EF Salmon	7.2: Sediment	15.00%	71	71	71		71	80	No known nutrient problem.	2016: No actions, therefore no
Spring/Summ	Salmon		River	Conditions:									change to estimate
er Chinook	River			Increased									
				Sediment									
				Quantity									
Snake River	East Fork	EFC1	EF Salmon	9.2: Water	15.00%	70	70	70		71	80	cold water, 50 cfs diversions	2016: No actions, therefore no
Spring/Summ	Salmon		River	Quantity:								1/3 of base flow	change to estimate
er Chinook	River			Decreased									
				Water Quantity									
Spake Diver	Salman		Challic Crook	1 1. Habitat	15.00%	00	00	00		00	100		high in drainage, no offect on
Shake River	Bivor lowor	LIVICI			13.00%	50	50	50		50	100		chinaak: affact on staalbaad
or Chinook	mainstom			Quantity.									2016: No actions, therefore no
er Chinook	holow			Parriers									change in estimate
	Podfich			Dalliers									
	l ako												
	Lake												
Snake River	Salmon	LMC1	Challis Creek	2.3: Iniury and	15.00%	50	50	50		50	80	stranding	2016: No actions. therefore no
Spring/Summ	River lower			Mortality:								U U	change in estimate
er Chinook	mainstem			, Mechanical									U
	below			Injury									
	Redfish												
	Lake												

ECU	Donulation	Codo	Accorrent	2012	LE Maight	Low	Original	Undated	Lich 2019	Original	Lich 2022	LE Weight and Pookende	Estimatos Commonto
230	Population	Code	Assessment	2012 Standardized	LF Weight	Rookond	2019	2019	Rookond	Original 2022	Rookond	LF Weight and Bookenus	Estimates comments
				Limiting Eactor		DOOKEIIU	Ectimato	Ectimato	DOOKEIIU	Ectimato	DUOKEIIU	comments	
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC1	Challis Creek	4.1: Riparian Condition: Riparian Vegetation	10.00%	60	60	60		60.5	80		influenced by flow LF action 2016: No actions, therefore no change in estimate
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC1	Challis Creek	7.2: Sediment Conditions: Increased Sediment Quantity	15.00%	60	60	60		60	80		2016: No actions, therefore no change in estimate
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC1	Challis Creek	8.1: Water Quality: Temperature	10.00%	60	60	60		60.1	90		influenced by flow LF action 2016: No actions, therefore no change in estimate
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC1	Challis Creek	9.2: Water Quantity: Decreased Water Quantity	35.00%	22	22	22		23	30		lower challis chinook rearing 2016: No actions, therefore no change in estimate
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC2	Iron Creek	4.1: Riparian Condition: Riparian Vegetation	50.00%	80	80	80		80	90		2016: No actions, therefore no change in estimate
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC2	Iron Creek	9.2: Water Quantity: Decreased Water Quantity	50.00%	70	70	70		70	90		2016: No actions, therefore no change in estimate

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comments
			Unit	Standardized	_	Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC3	Mainstem Salmon River (including Basin Creek)	4.1: Riparian Condition: Riparian Vegetation	30.00%	50.3	50.3	50.3		50	80		Remember to update 2015 look- back w/any 12-mi reach easements/projects implemented after 2012 2016: No actions, therefore no change in estimate
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC3	Mainstem Salmon River (including Basin Creek)	5.2: Peripheral and Transitional Habitats: Floodplain Condition	40.00%	50	50	50		50	65		Remember to update 2015 look- back w/any 12-mi reach easements/projects implemented after 2012 2016: No actions, therefore no change in estimate
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC3	Mainstem Salmon River (including Basin Creek)	7.2: Sediment Conditions: Increased Sediment Quantity	15.00%	40.3	40.3	40.3		40	50		Remember to update 2015 look- back w/any 12-mi reach easements/projects implemented after 2012 2016: No actions, therefore no change in estimate
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC3	Mainstem Salmon River (including Basin Creek)	8.1: Water Quality: Temperature	15.00%	50	50	50		50	80		Remember to update 2015 look- back w/any 12-mi reach easements/projects implemented after 2012 2016: No actions, therefore no change in estimate
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC4	Morgan Creek	1.1: Habitat Quantity: Anthropogenic Barriers	15.00%	60	60	60		60	100		assess improvement in 2015 2016: No actions, therefore no change in estimate
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC4	Morgan Creek	2.3: Injury and Mortality: Mechanical Injury	10.00%	50	50	50		50	80		2016: No actions, therefore no change in estimate

5011	Dec. 1. it			2012					11-1-0040		111-1-0000		
ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comments
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
Cualua Di van	Calman		Manage Creat	Limiting Factor	45.000/	50	Estimate	Estimate		Estimate	70		
Shake River	Salmon	LIVIC4	Norgan Creek	4.1: Riparian	15.00%	58	58	58		58	70		2016: No actions, therefore no
Spring/Summ	River lower			Condition:									change in estimate
er Chinook	mainstem			Riparian									
	DelOW			vegetation									
	Lako												
	Lake												
Snake River	Salmon	LMC4	Morgan Creek	7.2: Sediment	15.00%	60	60	60		60	75		2016: No actions, therefore no
Spring/Summ	<b>River</b> lower			Conditions:									change in estimate
er Chinook	mainstem			Increased									
	below			Sediment									
	Redfish			Quantity									
	Lake												
Snake River	Salmon	LMC4	Morgan Creek	8.1: Water	15.00%	62.2	62.2	65.2		60	90		2016: Given interdependence of
Spring/Summ	River lower			Quality:			0						temperature and on flow
er Chinook	mainstem			Temperature									(limiting factor 9.2),
	below												temperature benefits
	Redfish												considered flow projects
	Lake												(including those carried forward
													from pre-2016).
													2016 riparian improvements = 0
													Flow improvements = 3%
													Therefore, temperature
													improvement = 3%
Snake River	Salmon	LMC4	Morgan Creek	9.2: Water	30.00%	67.2	67.2	70.2		65	85		2016: Included Flow
Spring/Summ	River lower			Quantity:									improvements pre-2016 that
er Chinook	mainstem			Decreased									extend in time through 2018.
	below			Water Quantity									1.3 cfs relative to the sum of
	Redfish												diversions in the assessment
	Lake												unit (44.8 cfs) = 3%
Snake River	Salmon	LMC5	Sanam Crook	4 1. Rinarian	20.00%	30	30	30		30	60		2016: No actions therefore no
Spring/Summ	River lower	LIVICS	Squaw creek	Condition:	20.0070	50	50	50		50	00		change to estimate
er Chinook	mainstem			Riparian									enange to commute
	below			Vegetation									
	Redfish												
	Lake												

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comments
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC5	Squaw Creek	7.2: Sediment Conditions: Increased Sediment Quantity	10.00%	60	60	60		60	80		2016: No actions, therefore no change to estimate
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC5	Squaw Creek	8.1: Water Quality: Temperature	20.00%	20	20	20		20	40		2016: No actions, therefore no change to low bookend
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC5	Squaw Creek	9.2: Water Quantity: Decreased Water Quantity	50.00%	20	20	20		20	50		2016: No actions, therefore no change to estimate
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC6	Remaining Lower Salmon Tributaries Bayhorse, Mill, Hat, Thompson, Slate, Gordon, Warm Springs Creek	1.1: Habitat Quantity: Anthropogenic Barriers	20.00%	36.8	36.8	38.7		30	80		2016: Two projects, each opening 2 miles of upstream habitat, were prorated (50%) to account for only partial blockage or life stage affected, and seasonality of blockage. Therefore 1 miles of treated stream relative to the 53.3 Chinook bearing stream miles in the assessment unit yields a 1.9% improvement.
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC6	Remaining Lower Salmon Tributaries Bayhorse, Mill, Hat, Thompson, Slate, Gordon, Warm Springs Creek	2.3: Injury and Mortality: Mechanical Injury	20.00%	31.8	31.8	31.8		27.5	80	stranding	rate cow ck in 2015 (completed in 7/12) 2016: No actions, therefore no change to estimate

<b>ESU</b> Snake River Spring/Summ er Chinook	Population Salmon River lower mainstem below Redfish Lake	Code LMC6	Assessment Unit Remaining Lower Salmon Tributaries Bayhorse, Mill, Hat, Thompson, Slate, Gordon, Warm Springs Creek	2012 Standardized Limiting Factor 4.1: Riparian Condition: Riparian Vegetation	LF Weight	Low Bookend 40.03	Original 2018 Estimate 40.03	Updated 2018 Estimate 40.03	High 2018 Bookend	Original 2033 Estimate 41	High 2033 Bookend	LF Weight and Bookends Comments	Estimates Comments 2016: No actions, therefore no change to estimate
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC6	Remaining Lower Salmon Tributaries Bayhorse, Mill, Hat, Thompson, Slate, Gordon, Warm Springs Creek	7.2: Sediment Conditions: Increased Sediment Quantity	10.00%	50.04	50.04	50.04		50.2	65		Influenced by riparian LF actions 2016: No actions, therefore no change to estimate
Snake River Spring/Summ er Chinook	Salmon River lower mainstem below Redfish Lake	LMC6	Remaining Lower Salmon Tributaries Bayhorse, Mill, Hat, Thompson, Slate, Gordon, Warm Springs Creek	9.2: Water Quantity: Decreased Water Quantity	40.00%	25.1	25.1	30.5		20.5	45		influenced by cow ck consolidation (screen LF) 2016: Flow projects from 2012- 2015 extending into the 2016- 2018 period were considered during the look Forward when calculating improvement to 2018. 15.9 cfs from lease acquisitions relative to 291 cfs leased across the assessment unit yields 5.4% improvement

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	<b>Estimates</b> Comm
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River Spring/Summ er Chinook	Lemhi River	LRC1	Lemhi tributaries and Carmen Creek	1.1: Habitat Quantity: Anthropogenic Barriers	20.00%	30	30	56.2		30	50	2016: low bookend values modified by panel during look forward	56.9 mi of access actions improve a upstream barrier way to 50% high projects at lower value), some mid value). Still mud done 2016: Prorations intervals) were b vs. full and adult blockage and sea blockage. Panel t account whether previously assign upstream or dow projects to avoid counting. Canyon be treated measu Cruikshank Creek predicted to be d will open up 10 n at 50% to accoun seasonality of bar Mile Beyeler push from intercept. L always a barrier: Highway 29 Bridge
Snake River Spring/Summ er Chinook	Lemhi River	LRC1	Lemhi tributaries and Carmen Creek	2.3: Injury and Mortality: Mechanical Injury	15.00%	25	25	32.9		23	50	2016: low bookend values modified by panel during look forward	need to treat mai unscreened diver Big Timber, Freer Fourth of July, Te 2016: 74.63 cfs d to 950 cfs in the a unit yields 7.9% in

s; most of these access to next r; not quite haf bookend; Some r end (high d- (slightly less uch more to be

s (25% based on partial t vs. juvenile asonality of took into r credit was ned for any vnstream double-Creek miles to sured up to k. Carey Act done by 2018; miles, but rated nt for arrier. Eighteen sh-up: measured LHaC-02: not : Eighteenmile lge measured up ----any more ersion in Hawley, eman, Carmen, exas 18-mile; diverted relative assessment improvement

ESU	Population	Code	Assessment	2012	<b>LF Weight</b>	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comments
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River Spring/Summ er Chinook	Lemhi River	LRC1	Lemhi tributaries and Carmen Creek	4.1: Riparian Condition: Riparian Vegetation	5.00%	50	50	50.6		83	90	changed from 40/65% to reflect current function for entire AU, 8/8/12 2016: low bookend values modified by panel during look forward	included value from the water quantity projects in 2018 estimate; 2016: Panel prorated based on percentage of Properly Functioning Condition expected in 2018: 1% per year for passive fencing, and for active planting, expect an initial bump from existing conditions (barren in some areas), then 1% per year after that. Therefore, 0.51 stream miles treated relative to 85.9 Chinook bearing stream miles in assessment unit yields 0.6% improvement
Snake River Spring/Summ er Chinook	Lemhi River	LRC1	Lemhi tributaries and Carmen Creek	5.2: Peripheral and Transitional Habitats: Floodplain Condition	5.00%	50	50	51.2		75.5	80	areas in watershed lower in tribs are most productive to anadromous fish 2016: low bookend values modified by panel during look forward	all riparian and flow projects are interrelated to floodplain condition and contribute to this LF; 2016: 1.05 stream miles treated relative to 85.9 Chinook bearing stream miles in the assessment unit = 1.2% improvement
Snake River Spring/Summ er Chinook	Lemhi River	LRC1	Lemhi tributaries and Carmen Creek	6.1: Channel Structure and Form: Bed and Channel Form	5.00%	50	50	51.5		75.5	80	areas in watershed lower in tribs are most productive to anadromous fish 2016: low bookend values modified by panel during look forward	~2.5 mi improvement in important areas; incorporates delayed benefits from riparian, floodplain projects. Understanding of this LF will evolve w/ greater recognition of dynamics and experience on effects of treatments 2016: Panel prorated based on amount of project and intensity of treatment that affected bed and channel form. 1.3125 stream miles treated relative to 85.9 Chinook bearing stream miles in the assessment unit yield 1.5% improvement

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comm
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River Spring/Summ er Chinook Snake River Spring/Summ er Chinook	Lemhi River	LRC1	Lemhi tributaries and Carmen Creek Lemhi tributaries and Carmen Creek	Limiting Factor 6.2: Channel Structure and Form: Instream Structural Complexity 7.2: Sediment Conditions: Increased Sediment Quantity	5.00%	40	Estimate 40 35	Estimate 40.9 36.3		Estimate           75.5           51	60	2016: Low bookend revised as per Expert Panel 2016: low bookend values modified by panel during look forward	2016: 0.75 treate relative to 85.9 C stream miles in th unit yields 0.9% i riparian and bed projects contribu 2016: CHaMP da pool sand + fines Compare this to a tributaries of 199 used as a referen condition. Note e downstream mai assessment units projects were dro consideration for
Snake River Spring/Summ er Chinook	Lemhi River	LRC1	Lemhi tributaries and Carmen Creek	8.1: Water Quality: Temperature	5.00%	40	40	43.8		71	80	2016: low bookend values modified by panel during look forward	Prorated based of effect on sedime miles treated rela Chinook bearing yields 1.3% impro Estimate conside bed/channel forr projects 2016: Riparian im (0.6%) + flow imp (3.2%) = 3.8% im temperature

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ed stream miles Chinook bearing the assessment improvement

& channel form ute to estimate ata suggest total s = 25.67%. average for %, which can be nce target effects to instem s. Fencing ropped from or 2018 period). on anticipated ent. 1.13 stream lative to 85.9 stream miles ovement

ers riparian, m and flow

mprovement provement provement for

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	<b>Estimates</b> Comm
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River	Lemhi River	LRC1	Lemhi	9.2: Water	35.00%	25	25	28.2		23.5	40	2016: low bookend values	about 15.3 cfs &
Spring/Summ			tributaries and	Quantity:								modified by panel during	counting the shap
er Chinook			Carmen Creek	Decreased								look forward	which tempers hi
				Water Quantity									acquisition highly
													water year, runof
													factors Flow pro
													lower reaches wh
													most. [also consid
													Hawley/upper Ka
													Ck (2 cfs), anothe
													cfs)-these project
													and considered ir
													factors. be sure to
													look back project
													Over total of 25.3
													2016: Assumed p
													right values. Add
													projects from the
													extending into th
													period. Therefor
													added back to str
													950 cfs yields 3.2
													improvement
Snake River	Lemhi River	LRC2	Lemhi, Hayden	1.1: Habitat	1.00%	85.25	85.25	85.25		85.25	90	stranding	evaluated only or
Spring/Summ			Creek, Big	Quantity:								changed from 51/60, 8/8/12	PLUS I-63, L-54, a
er Chinook			Springs Creek	Anthropogenic									(described under
				Barriers									2016: No actions,
													change in estimat
Snake River	Lemhi River	LRC2	Lemhi, Hayden	1.3: Habitat	0.00%	50	50	50		50	50		2016: No actions,
Spring/Summ			Creek, Big	Quantity: HQ-									change in estimat
er Chinook			Springs Creek	Competition									

2.1 mi (not aping project high flows)ly influcenced by off, and similar rojects affect where needed iders auer (6 cfs), Lee er big 8-mile (2 cts are described in other limiting to "true up" ct list in 2015)

.3cfs paper water ded Flow le Look Back he 2016-2018 ire, 37.36 cfs tream relative to 2%

on L-1 project and L58a rr LF 9.2) s, therefore no ate

, therefore no te

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comments
	-		Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River Spring/Summ er Chinook	Lemhi River	LRC2	Lemhi, Hayden Creek, Big Springs Creek	Limiting Factor 2.3: Injury and Mortality: Mechanical Injury	2.00%	91.25	91.25	91.25		91	95	lowbookend changed from 90, 8/8/12	10 replacements assumed to maintain current functionality- no additional LF change; remaining screens for Basin Ck 2016: Screen replacement projects in 2018 period: 70 screens exist (about 85 cfs of screened water), which preven harm, but they need to be maintained according to schedule in order to keep baseline steady and avoid having the bookend slip down. credit is assigned for replacements, it would lead to double counting credit, so thos are prorated to 0%. New scree installations should be credited Therefore, improvement to
													2018 - 0
Snake River Spring/Summ er Chinook	Lemhi River	LRC2	Lemhi, Hayden Creek, Big Springs Creek	4.1: Riparian Condition: Riparian Vegetation	15.00%	35.1	35.1	35.4		38	40	changed from 20/35, 8/8/12	18.65 mi 2016: 0.3 treated stream miles relative to 80.3 Chinook bearin stream miles in the assessment unit yields .03% improvement
Snake River Spring/Summ er Chinook	Lemhi River	LRC2	Lemhi, Hayden Creek, Big Springs Creek	5.2: Peripheral and Transitional Habitats: Floodplain Condition	10.00%	21	21	23.4		21	30		3.22 mi- Riparian projects also contribute to this LF 2016: Panel prorated based on percentage of function expected by 2018 (20-75%). Some projects expected to raise stage at some flows. 1.9 stream miles treated relative to 80.3 Chinoo stream miles in assessment uni yield 2.4% improvement
Snake River Spring/Summ er Chinook	Lemhi River	LRC2	Lemhi, Hayden Creek, Big Springs Creek	6.1: Channel Structure and Form: Bed and Channel Form	13.00%	41	41	44		42	60		riparian and floodplain condition LF actions contribute also 2.41 treated stream miles relative to 80.3 Chinook bearin stream miles in the assessment unit yields 3.0% improvement

umed to ctionalitynge; r Basin Ck ment od: 70 85 cfs of ich prevent to be g to keep avoid slip down. If uld lead to lit, so those lew screen be credited. nent to eam miles ook bearing ssessment rovement jects also l based on on expected me raise stage ream miles ).3 Chinook ssment unit nent in contribute miles ook bearing ssessment

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comments
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River	Lemhi River	LRC2	Lemhi, Hayden	6.2: Channel	16.00%	23	26.1	26.1				New Limiting Factor in 2016	2.48 stream miles treated across
Spring/Summ			Creek, Big	Structure and								Added LF 6.2, which is far	80.3 Chinook bearing stream
er Chinook			Springs Creek	Form: Instream								from Properly Functioning	miles across the assessment unit
				Structural								Condition state at present.	yields 3.1% improvement
				Complexity								Referenced 1994 Lemhi	
												Habitat Inventory pool	
												habitat by length = 23%	
Snake River	Lemhi River	LRC2	Lemhi, Hayden	7.2: Sediment	8.00%	30.1	30.4	30.4		31	35		riparian, floodplain condition,
Spring/Summ			Creek, Big	Conditions:									and bed and channel
er Chinook			Springs Creek	Increased									formcontribute
				Sediment									2016: stream miles treated
				Quantity									were adjusted for sediment
													function changes. 0.21269
													treated stream miles relative to
													80.3 Chinook bearing stream
													miles in the assessment unit
													yields 0.3% improvement
Snake River	Lemhi River	LRC2	Lemhi, Hayden	8.1: Water	10.00%	35.5	35.5	47.8		30	45		riaprian, floodplain condition,
Spring/Summ			Creek, Big	Quality:									flow, and bed&channel form LF
er Chinook			Springs Creek	Temperature									projects contribute
													2016: Riparian improvement
													(0.3%) + flow improvement
													(12.0%) approximates
													temperature improvement -
													12.3%

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comm
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River	Lemhi River	LRC2	Lemhi, Havden	9.2: Water	25.00%	30.9	30.9	42.9		24.5	30		LRC1 flow actions
Spring/Summ			Creek. Big	Quantity:									affect flow in mai
er Chinook			Springs Creek	Decreased									2016: L63 is some
er ennook			oprings creek	Water Quantity									curtailed and the
				Water Quantity									when it is running
													than naner amou
													assossment unit
													considered unstr
													assessment unit c
													and added them a
													(some flows do no
													the way down to
													projects from the
													extending into the
													period were carri
													and added to Loo
													uplift calculations
													forward meeting
													Therefore average
													water through 20
													Relative to the 75
													the assessment u
													12% improvemen
Snake River	Pahsimeroi	PRC1	Pahsimeroi	1.1: Habitat	5.00%	54	54	64.2		45	60		2012: 17.2 mi tot
Spring/Summ	River		River and	Quantity:									hatchery ladder p
er Chinook			tributaries	Anthropogenic									included in in oth
			downstream	Barriers									projects; hatcher
			from the										affects juvenile ar
			mouth of Big										different life histo
			Creek										Ck/Little Morgan
			oreen										in this estimate
													2016:2016: Impro
													prorated based o
													protated based of
													offected in 25% in
													difected in 25% if
													(10% for minor se
													structures). Patte
													Springs Creek 10
													Upper Muddy, an
													were a total block
													stream miles ope
													95 Chinook bearin
													miles in the asses
													yields 10.2% impr

s(23.6 cfs) instem etimes en shut off, but g, it runs higher unt. For this panel eam tributary contributions, as applicable not make it all D LRC2). Flow Look Back he 2016-2018 ied forward ok Forward (after the look concluded. ge of leased 018 = 90.2 cfs. 50 cfs of flow in unit, there is a nt.

ital- (30 mi from projct already her completed ry project and other tory stages) Falls n not considered

rovement on full vs. ity, life stages increments seasonal erson Big 0 Restoration, nd Flying Joseph ckage. 9.675 ened relative to ring stream essment unit provement

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comments
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River Spring/Summ er Chinook	Pahsimeroi River	PRC1	Pahsimeroi River and tributaries downstream from the mouth of Big Creek	1.3: Habitat Quantity: HQ- Competition	0.00%	50	50	50		50	50		2016: Expert Panel effectively removed this limiting factor by zeroing out the weight.
Snake River Spring/Summ er Chinook	Pahsimeroi River	PRC1	Pahsimeroi River and tributaries downstream from the mouth of Big Creek	2.3: Injury and Mortality: Mechanical Injury	5.00%	73	75	76.8		75	100		2012: 23 cfs screened relative to 610 cfs in Chinook bearing streams within the assessment unit yields 3.8% improvement. Calculation for cfs in all Chinook bearing streams in this newly combined assessment unit (previously PRC1 and PRC2 were separate) was determined by adding the two Morgan flow numbers = 610 cfs.
Snake River Spring/Summ er Chinook	Pahsimeroi River	PRC1	Pahsimeroi River and tributaries downstream from the mouth of Big Creek	4.1: Riparian Condition: Riparian Vegetation	15.00%	52.1	52.5	53.6		55	70		14.5 mi riparian enhancement be sure to include P-13 in 2015 look back 2016: Combines PRC1 and PRC2 riparian actions. Treated miles are stream miles, assuming both sides were treated, and prorated at 50% if only one side was treated. Flying Joseph will have planting. Total chinook bearing stream miles for the newly combined assessment unit is 95 miles). Seven projects, prorated based on vegetation growth rates (1% per year, with an initial bump if actively planted rather than just grazing exclusion). 1.41 stream miles treated relative to 95 Chinook bearing stream miles in the assessment unit yields 1.5% improvement

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comments
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River	Pahsimeroi	PRC1	Pahsimeroi	6.1: Channel	15.00%	52.9	52.9	57.5	55	55	60	established 8/9/12- most	2012: Influenced by flow and
Spring/Summ	River		River and	Structure and								gain from Fury Ln to P-12 +	riparian LF projects by natural
er Chinook			tributaries	Form: Bed and								Sulfer Ck to be done thru	processes - projects from Fury
			downstream	Channel Form								2018; much to do in tribs	Lane to P-12
			from the									,	2016: Combines PRC1 and PRC2
			mouth of Big										actions.Improvement prorated
			Creek										based on percentage of Properly
													Functioning Condition expected
													to be achieved within 2018
													period. Therefore, 4.4 treated
													stream miles relative to 95
													Chinook bearing stream miles in
													the assessment unit yields 4.6%
													improvement
Snake River	Pahsimeroi	PRC1	Pahsimeroi	6.2: Channel	15.00%	20	24.4	24.4				New Limiting Factor in 2016	2016: 4.16 stream miles
Spring/Summ	River		River and	Structure and									effectively treated through 2018
er Chinook			tributaries	Form: Instream									relative to 95 Chinook bearing
			downstream	Structural									stream miles in the newly
			from the	Complexity									combined assessment unit
			mouth of Big										(PRC1+PRC2) yields 4.4%
		22.04	Creek		4 = 0.004								improvement
Snake River	Pansimeroi	PRC1	Pansimeroi	7.2: Sediment	15.00%	21.5	21.5	23.6		21	50		Influenced by all riparian LF
Spring/Summ	River		River and	Conditions:									actions
er Chinook			downstroom	Sodimont									opstream effects from PRC2
			from the	Quantity									PPC1 (flow projects planned for
			mouth of Big	Quantity									PRC1 (now projects planned for
			Crock										much ):
			CIEEK										2016: Combined projects for
													assessment units PRC1 and
													PRC2 Panel prorated stream
													miles treated based on
													vegetation growth in the 2018
													time period and on predicted
													effects on sediment input to
													stream. Added Big Creek and
													Page projects because Look
													Back only included to 2015
													rather than to 2018. 1.96
													treated stream miles relative to
													95 Chinook bearing stream
													miles in the assessment area
													yields 2.1% improvement

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comm
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River Spring/Summ er Chinook	Pahsimeroi River	PRC1	Pahsimeroi River and tributaries downstream from the mouth of Big Creek	8.1: Water Quality: Temperature	10.00%	55.3	55.3	68.5		41	60		2012: Influenced riparian LF action from Sulphur Ck main Pahsimeroi estimate- respon Spgs/cross ditch tbd 2016: Sum of imp riparian (1.5%) +
Snake River Spring/Summ er Chinook	Pahsimeroi River	PRC1	Pahsimeroi River and tributaries downstream from the mouth of Big Creek	9.2: Water Quantity: Decreased Water Quantity	20.00%	43.2	43.2	54.9		32	50	MAKE SURE SPREADSHEET BREAKS IS BIG CREEK (NOT Big Springs Ck)	<ul> <li>13.2% improve</li> <li>2012: 5-20 cfs th</li> <li>net gains in flow</li> <li>Sulfer; saving wa</li> <li>Lanes; moving wa</li> <li>ditch; location of</li> <li>more important in</li> <li>change</li> <li>2016: Average cf</li> <li>71.6 cfs. Relative</li> <li>cfs(combined fro</li> <li>PRC2) there will limprovement</li> </ul>
Snake River Spring/Summ er Chinook	Pahsimeroi River	PRC2	Pahsimeroi River and tributaries upstream from the mouth of Big Ck. Including the Big Ck. Drainage	1.1: Habitat Quantity: Anthropogenic Barriers	20.00%	20	20	20		20	35	Different wts and bookends for steelhead due to steelhead use of tribs that chinook don't use 2016: Limiting Factor weight = zero because panel combined PRC2 into PRC1	26.2-30.2 mi acce Pahsimeroi sinks runoff/flow regin influences availal access in any give these projects to conditions when available seasona value for other n Mainstem Pahsin Goldberg conflue Influenced by flo THESE PROJECT A REACHES AFFECT STEELHEAD, NOT

d by flow and ns- most benefit influencing ni. Conservative nse from Big configuration

provements in + flow (11.7%) ement

hat affects 6 mi; r from P-13 and ater from Furey vater at cross f available flow than net flow

fs from leases = ve to 610 om PRC1 and l be 11.7%

cess

s area- Natural me significantly able water and ven year; need o improve n there is nal flow; more native spp. meroi up to ence ow actions

ARE IN UPPER TING T CHINOOK

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	<b>Estimates</b> Comn
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River	Pahsimeroi	PRC2	Pahsimeroi	2.3: Injury and	10.00%	20	20	20		20	75	Different wts and bookends	THIS PROJECT DO
Spring/Summ	River		River and	Mortality:								for steelhead due to	AFFECT CHINOO
er Chinook			tributaries	Mechanical								steelhead use of tribs that	
			upstream	Injury								chinook don't use	COPY FROM PRO
			from the									2016: Limiting Factor weight	
			mouth of Big									= zero because panel	
			Ck. Including									combined PRC2 into PRC1	
			the Big Ck.										
			Drainage										
Snake River	Pahsimeroi	PRC2	Pahsimeroi	4.1: Riparian	10.00%	20.2	20.2	20.2		26	60	Different wts and bookends	influenced by flo
Spring/Summ	River		River and	Condition:								for steelhead due to	Big Ck
er Chinook			tributaries	Riparian								steelhead use of tribs that	
			upstream	Vegetation								chinook don't use	
			from the									2016: Limiting Factor weight	
			mouth of Big									= zero because panel	
			Ck. Including									combined PRC2 into PRC1	
			the Big Ck.										
			Drainage										
Snake River	Pahsimeroi	PRC2	Pahsimeroi	7.2: Sediment	10.00%	20.2	20.2	20.2		21	50	Different wts and bookends	Affected by flow
Spring/Summ	River		River and	Conditions:								for steelhead due to	Big Ck
er Chinook			tributaries	Increased								steelhead use of tribs that	
			upstream	Sediment								chinook don't use	
			from the	Quantity								2016: Limiting Factor weight	
			mouth of Big									= zero because panel	
			Ck. Including									combined PRC2 into PRC1	
			the Big Ck.										
			Drainage										
Snake River	Pahsimeroi	PRC2	Pahsimeroi	9.2: Water	50.00%	25.3	25.3	25.3		30	40	Different wts and bookends	12 cfs from Big C
Spring/Summ	River		River and	Quantity:								for steelhead due to	ditch closure add
er Chinook			tributaries	Decreased								steelhead use of tribs that	cfs to Big Ck- 23
			upstream	Water Quantity								chinook don't use	Fury Ln/P16 suit
			from the									2016: Limiting Factor weight	
			mouth of Big									= zero because panel	Flow increase in
			Ck. Including									combined PRC2 into PRC1	anticipated from
			the Big Ck.										rewatering/seali
			Drainage										streambed
Snake River	Salmon	UMC1	Mainstem	1.1: Habitat	10.00%	65.9	65.9	67		63	95		pole ck large par
Spring/Summ	River upper		Upper Salmon	Quantity:									issue
er Chinook	mainstem		River, Alturas	Anthropogenic									2016: One proje
	above		Lake Creek,	Barriers									treated 1 stream
	Redfish		and										Chinook bearing
	Lake		Tributaries										the assessment u
			upstream										improvement.
			from Alturas										
			Lake Creek										

omments
CT DOES NOT NOOK
PRC2 TO PRS3
y flow LF actions in
flow LF actions in
Big Ck; Hamilton e adds another 11 - 23 cfs total (part of suite of projcts)
e in 2033 from sealing of
e part of barrier
roject effectively ream mile over 92.6 rring stream miles in ent unit = 1.1% nt.

FSU	Population	Code	Assessment	2012	LF Weight	Low	Original	Undated	High 2018	Original	High 2033	LE Weight and Bookends	Estimates Comments
200	opulation	couc	Unit	Standardized	Liveight	Bookend	2018	2018	Bookend	2033	Bookend	Comments	Estimates comments
				Limiting Factor		Bookena	Estimate	Estimate	Bookend	Estimate	Bookend		
Snake River Spring/Summ er Chinook	Salmon River upper mainstem above Redfish Lake	UMC1	Mainstem Upper Salmon River, Alturas Lake Creek, and Tributaries upstream from Alturas Lake Creek	1.3: Habitat Quantity: HQ- Competition	5.00%	50	50	50		50	50		2016: No actions, therefore no change to estimate
Snake River Spring/Summ er Chinook	Salmon River upper mainstem above Redfish Lake	UMC1	Mainstem Upper Salmon River, Alturas Lake Creek, and Tributaries upstream from Alturas Lake Creek	4.1: Riparian Condition: Riparian Vegetation	20.00%	40.6	40.6	41.8		50	70		2016: Two improvement projects treated 1.2 stream miles, but were prorated to reflect maturity and growth in 2018, Therefore the 1.08 effective stream miles treated relative to 92.6 Chinook bearing stream miles in the assessment unit yields 1.2% improvement.
Snake River Spring/Summ er Chinook	Salmon River upper mainstem above Redfish Lake	UMC1	Mainstem Upper Salmon River, Alturas Lake Creek, and Tributaries upstream from Alturas Lake Creek	7.2: Sediment Conditions: Increased Sediment Quantity	15.00%	51.6	51.6	52.3		51	75		2016: Panel prorated improvement for meeting sediment requirements for Properly Functioning Condition by 2018. Pole Creek: expect initial pulse of sediments, then almost fully functional due to maturity of riparian zone, which has been wet due to springs. 0.64 stream miles effectively treated relative to 93.6 Chinook bearing stream miles across the assessment unit yields 0.7% improvement
Snake River Spring/Summ er Chinook	Salmon River upper mainstem above Redfish Lake	UMC1	Mainstem Upper Salmon River, Alturas Lake Creek, and Tributaries upstream from Alturas Lake Creek	8.1: Water Quality: Temperature	15.00%	63.2	63.2	76.8		60	80		2016: Panel considers benefits to temperature by Summing riparian improvements (1.2%) and flow (12.4%) improvements = = 13.6% improvement

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comm
			Unit	Standardized	_	Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River Spring/Summ er Chinook	Salmon River upper mainstem above Redfish Lake	UMC1	Mainstem Upper Salmon River, Alturas Lake Creek, and Tributaries upstream from Alturas Lake Creek	9.2: Water Quantity: Decreased Water Quantity	35.00%	82	82	94.4		75	90		2016: Pole Creek switch: high value the headwaters of River. High priorit Plan. 20-yr Beave lease and pole cre were also include lookback to 2018 23.9 cfs of water to 192 cfs in wate across the assess yields a 12.4% im
Snake River Spring/Summ er Chinook	Salmon River upper mainstem above Redfish Lake	UMC2	Upper Salmon Tributaries with Significant water withdrawals(F ourth of July, Champion, Cleveland, Fisher, Warm, and Williams Creek	1.1: Habitat Quantity: Anthropogenic Barriers	10.00%	20	20	28.8		20	100		2016: Fourth of J diversion barriers removed per USF crossings are alre Prorated (33%) to relative value of t given life stages i seasonality of bar Therefore 2.145 will be opened re Chinook bearing s the assessment u improvement
Snake River Spring/Summ er Chinook	Salmon River upper mainstem above Redfish Lake	UMC2	Upper Salmon Tributaries with Significant water withdrawals(F ourth of July, Champion, Cleveland, Fisher, Warm, and Williams Creek	1.3: Habitat Quantity: HQ- Competition	5.00%	50	50	50		50	50		2016: No actions, change in estimat

k 18 cfs source ue water, as it is of the Salmon rity for Recovery rer Cr. water reek diversion led post 8. Therefore r leases relative ter diversions sment unit mprovement.

July Creek (3 rs to be FS). Road eady bridges. to reflect the barriers impeded by and arrier. miles of stream relative to 24.3 stream miles in unit = 8.8%

, therefore no te

ESU	Population	Code	Assessment	2012 Standardized	LF Weight	Low Bookend	Original	Updated	High 2018 Bookend	Original	High 2033 Bookend	LF Weight and Bookends	Estimates Comments
			onit	Limiting Factor		Doonenu	Estimate	Estimate	Dookenia	Estimate	Bookena		
Snake River Spring/Summ er Chinook	Salmon River upper mainstem above Redfish Lake	UMC2	Upper Salmon Tributaries with Significant water withdrawals(F ourth of July, Champion, Cleveland, Fisher, Warm, and Williams Creek	2.3: Injury and Mortality: Mechanical Injury	10.00%	80	80	80		80	100	stranding	2016: No actions, therefore no change in estimate
Snake River Spring/Summ er Chinook	Salmon River upper mainstem above Redfish Lake	UMC2	Upper Salmon Tributaries with Significant water withdrawals(F ourth of July, Champion, Cleveland, Fisher, Warm, and Williams Creek	4.1: Riparian Condition: Riparian Vegetation	20.00%	40	40	40.8		40	70		2016: One project will treated 0.2 stream miles over 24.3 Chinook bearing stream miles in the assessment unit, yielding an improvement of 0.8%
Snake River Spring/Summ er Chinook	Salmon River upper mainstem above Redfish Lake	UMC2	Upper Salmon Tributaries with Significant water withdrawals(F ourth of July, Champion, Cleveland, Fisher, Warm, and Williams Creek	7.2: Sediment Conditions: Increased Sediment Quantity	15.00%	50	50	50		50.1	75		2016: No actions, therefore, no change to estimate

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comments
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River Spring/Summ er Chinook	Salmon River upper mainstem above Redfish Lake	UMC2	Upper Salmon Tributaries with Significant water withdrawals(F ourth of July, Champion, Cleveland, Fisher, Warm, and Williams Creek	9.2: Water Quantity: Decreased Water Quantity	40.00%	25	25	26.5		25	80		improvements captured in earlier workshop 2016: Fourth of July creek has sufficient water rights to de- water it. Working on negotiations with landowners. Objective is 9 cfs by 2018, so averaged for improvement calculation, therefore 3.0 cfs in leases acquired over 194.6 cfs across the assessment unit, yielding a flow improvement of
Snake River Spring/Summ er Chinook	Valley Creek	VCC1	Valley Creek	1.1: Habitat Quantity: Anthropogenic Barriers	15.00%	75	75	77		75	90	low bookend raised owing to Goat & Iron Ck and federal Hwy 21 projects	2016: 1.485 stream miles of realized improvement over 72.3 Chinook bearing stream miles across the assessment unit yields a 2 % improvement
Snake River Spring/Summ er Chinook	Valley Creek	VCC1	Valley Creek	1.3: Habitat Quantity: HQ- Competition	10.00%	20	20	20		20	25	Brook trout	2016: No actions, therefore no change to estimate
Snake River Spring/Summ er Chinook	Valley Creek	VCC1	Valley Creek	2.3: Injury and Mortality: Mechanical Injury	15.00%	60	60	63.9		80	100	stranding	2016: Two new screens divert 6 cfs across 152.14 cfs (Morgan Case) Chinook bearing stream miles in the assessment unit yielding 3.9% improvement
Snake River Spring/Summ er Chinook	Valley Creek	VCC1	Valley Creek	4.1: Riparian Condition: Riparian Vegetation	10.00%	22.5	22.5	22.6		22.5	90		2016: One project which treated one riparian area (0.4 miles) was prorated 10%. It is a fairly impacted area and has a ways to go - won't get far to 2018. Therefore, .004 miles of treatment relative to the 72.6 Chinook bearing stream miles ir the assessment unit yields 0.1% improvement

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033 LF Weight and Bookends		Estimates Comments
	-		Unit	Standardized	_	Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River Spring/Summ er Chinook	Valley Creek	VCC1	Valley Creek	6.2: Channel Structure and Form: Instream Structural Complexity	5.00%	80	80	80.6		80	90	loss of habitat	2016: Iron Creek comes out of the mouth and splits into two channels (one channel historically) that feed into valley creek; one on private land (old irrigation ditch is a gully). Concept to put back into single channel to get more flow and adds complexity to channel. 2 miles treated but prorated (20%) to reflect progress toward goal by 2018. Therefore 0.4 stream miles treated relative to 72.6 Chinook bearing stream miles in the assessment unit yields 0.6% improvement
Snake River Spring/Summ er Chinook	Valley Creek	VCC1	Valley Creek	7.2: Sediment Conditions: Increased Sediment Quantity	20.00%	77.5	77.5	77.6		77.5	90		2016: Stanley Lake project will treat .4 stream miles, but will only be 10% of the way toward completion by 2018. Therefore 0.04 stream miles treated relative to 72.6 Chinook bearing stream miles = 0.1% improvement
Snake River Spring/Summ er Chinook	Valley Creek	VCC1	Valley Creek	8.1: Water Quality: Temperature	5.00%	75	75	76.4		75	90		2016: two projects went toward improvement value: Iron creek reconnect (2 miles treated, prorated 50%) and STanley lake inlet (0.4 miles treated, prorated 10%). Therefore 1.04 stream miles treated relative to 72.6 Chinook bearing stream miles yields 1.4% improvement
Snake River Spring/Summ er Chinook	Valley Creek	VCC1	Valley Creek	9.2: Water Quantity: Decreased Water Quantity	20.00%	30	30	30		32	90		2016: no actions, therefore no change in estimate

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comments
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River	Yankee	YFC2	West Fork	5.2: Peripheral	40.00%	95	95	95.9		96	98	Expanded Expert Panel	2016:Yankee Fork West Fork
Spring/Summ	Fork		Yankee Fork	and Transitional								including the YF ID Team	Phase II: 0.1 mile in this
er Chinook				Habitats:								made up this round as	assessment unit (project spans
				Floodplain								compared to a small subset	assessment units). Prorated to
				Condition								in Fall 2011 (conversion to	90% based on percentage of
												standardized Limiting	floodplain function potential
												Factors) and Sp/Summer	predicted to be achieved within
												2012 ExPanel meetings.	2018 period. Therefore, 0.09
												Changed low bookend; Most	treated stream miles relative to
												of Ass Unit is "wilderness"	10 Chinook bearing stream
												with very little area	miles in the assessment unit
												disturbed that can be	yields 0.9% improvement
												restored	
Snake River	Yankee	YFC2	West Fork	6.1: Channel	40.00%	95	95	95.9		96	98	Expanded Expert Panel	2016: 0.1 miles treated,
Spring/Summ	Fork		Yankee Fork	Structure and								including the YF ID Team	prorated to 90% (=0.09 miles
er Chinook				Form: Bed and								made up this round as	treated) to reflect realized
				Channel Form								compared to a small subset	improvement to 2018, relative
												in Fall 2011 (conversion to	to 10 Chinook bearing stream
												standardized Limiting	miles in the assessment unit
												Factors) and Sp/Summer	yields 0.9% improvement
												2012 ExPanel meetings.	
												Changed low bookend; Most	
												of Ass Unit is "wilderness"	
												with very little area	
												disturbed that can be	
												restored	
Snake River	Yankee	YFC2	West Fork	6.2: Channel	20.00%	95	95	96		96	98	Expanded Expert Panel	2016: 0.1 miles treated,
Spring/Summ	Fork		Yankee Fork	Structure and								including the YF ID Team	prorated to 95% (=0.09 miles
er Chinook				Form: Instream								made up this round as	treated) to reflect realized
				Structural								compared to a small subset	improvement to 2018, relative
				Complexity								in Fall 2011 (conversion to	to 10 Chinook bearing stream
												standardized Limiting	miles in the assessment unit
												Factors) and Sp/Summer	yields 1% improvement
												2012 ExPanel meetings.	
												Switched Riparian condition	
												for LWD Recruitment;	
												Historical info suggest that	
												riparian habitat was was not	
												extensive in the mainstem	
												Yankee Fork. Adjusted low	
												bookend down to 35	
				1									

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Commo
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River	Yankee	YFC3	Yankee Fork	4.2: Riparian	20.00%	35.1	35.1	36.6		55	65	Expanded Expert Panel	Treat 5.3 of rough
Spring/Summ	Fork			Condition: LWD								including the YF ID Team	with large wood.
er Chinook				Recruitment								made up this round as	anticipated to cha
												compared to a small subset	function of wood
												in Fall 2011 (conversion to	time. Projects pro
												standardized Limiting	most highlly impa
												Factors) and Sp/Summer	(approx. 1/3 of th
												2012 ExPanel meetings.	Improving 80% of
												Changed low bookend from	by 50%. The 2033
												20 to 45 percent because	estimates an incre
												2/3 of historic Chinook	channel evolves to
												production comes from	wood (e.g., LWD r
												areas outside of dredge	and quantity expe
												reach and there are still	increase).
												some impacts that occur in	2016: Yankee For
												non dredged areas.	Phases I and II: 0.!
												Recognizing Jordan Ck.	assessment unit (
												Impacts	assessment units)
													considered prorat
													vegetation growth
													2018. This project
													channel back to w
													are, so engaged th
													mature riparian h
													therefore, panel p
													75%, considering
													Calc table also inc
													City (planned for 2
1	I	1	1	1	1	1	1	1	1	1	1	1	la

ghly 18 miles . The site is hange more as a d retention over roposed in the bacted area the area). of dredge reach 3 value rease as the to retain more precruitment bected to

ork West Fork 0.5 mile in this (project spans s). Panel ating based on th through ct moved the where the trees the existing habitat; I prorated it to g legacy issues. hcludes Bonanza r 2018): creating

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comme
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River	Yankee	YFC3	Yankee Fork	5.2: Peripheral	25.00%	71.5	71.5	76.3		65	80	Expanded Expert Panel	Anticipate improv
Spring/Summ	Fork			and Transitional								including the YF ID Team	condition as a fun
er Chinook				Habitats:								made up this round as	recruitment and r
				Floodplain								compared to a small subset	However, because
				Condition								in Fall 2011 (conversion to	dredge spoils over
												standardized Limiting	floodplain the ber
												Factors) and Sp/Summer	wood needs to be
												2012 ExPanel meetings.	considered relativ
												Changed low bookend from	treatments (e.g., l
												20 to 45 percent because	the floodplain will
												2/3 of historic Chinook	activated as a fund
												production comes from	wood recruitment
												areas outside of dredge	context of condition
												reach and there are still	Yankee Fork flood
												some impacts that occur in	condition will be r
												non dredged areas.	virtue of other rel
												Recognizing Jordan Ck.	(e.g., road improv
												Impacts	2016:Panel prorat
													stream miles base
													floodplain functio
													Therefore 1.205 s
													treated relative to
													bearing stream m
													4.8% improvemer

ved floodplain nction of LWD retention. se extensive erlie the nefit of large e rightfully ve to other how much of l become nction of large nt). Within ions in the dplain restored by elated actions vements). ted treated ed on on expected. stream miles o 25 Chinook niles yields nt

			2012	LF weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comme
1 I I I		Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
			Limiting Factor			Estimate	Estimate		Estimate			
Snake River Spring/Summ er Chinook	/ankee YFC3 Fork	Unit Yankee Fork	Standardized Limiting Factor 6.1: Channel Structure and Form: Bed and Channel Form	20.00%	<b>Bookend</b> 76.4	2018 Estimate 76.4	2018 Estimate 81.5	Bookend	<b>2033</b> Estimate 65	Bookend 80	Comments Expanded Expert Panel including the YF ID Team made up this round as compared to a small subset in Fall 2011 (conversion to standardized Limiting Factors) and Sp/Summer 2012 ExPanel meetings. Changed low bookend from 20 to 45 percent because 2/3 of historic Chinook production comes from areas outside of dredge reach and there are still some impacts that occur in non dredged areas. Recognizing Jordan Ck. Impacts	Treat 5.3 of rough with large wood. T anticipated to cha function of wood time that affects f and sediment dep Projects proposed highlly impacted a 1/3 of the area). T estimates an incre channel evolves to wood and recruit contributing to ch migration. 2016: Bonanza Cii to be one project. prorated based or of Properly Functi Condition likely to in period (10 to 80 range). Therefore miles treated rela Chinook bearing s

hly 18 miles The site is ange as a retention over flow, scour, position. d in the most area (approx. The 2033 value rease as the to retain more t gravels, hannel

ity considered t. Panel on percentage tioning o be achieved 30 percent e, 1.28 stream ative to 25 stream miles in unit yields 5.1%

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Comme
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River	Yankee	YFC3	Yankee Fork	6.2: Channel	30.00%	78	78	85.2		70	85	Expanded Expert Panel	Treat 5.3 of rough
Spring/Summ	Fork			Structure and								including the YF ID Team	with large wood.
er Chinook				Form: Instream								made up this round as	anticipated to cha
				Structural								compared to a small subset	function of wood
				Complexity								in Fall 2011 (conversion to	time. Projects pro
												standardized Limiting	most highlly impa
												Factors) and Sp/Summer	(approx. 1/3 of th
												2012 ExPanel meetings.	2033 value estima
												Changed low bookend from	increase as the ch
												20 to 45 percent because	to retain more wo
												2/3 of historic Chinook	recruitment and q
												production comes from	expected to increa
												areas outside of dredge	2016: Different pr
												reach and there are still	same projects as o
												some impacts that occur in	factors. Proration
												non dredged areas.	instream complex
												Recognizing Jordan Ck.	percentage of nat
												Impacts	(Properly Function
													estimated to be a
													time period. Much
													expected. Therefo
													stream miles treat
													25 Chinook bearin
													miles in the assess
													yields 7.2% impro

hly 18 miles The site is ange more as a retention over oposed in the acted area he area). The ates an hannel evolves ood (e.g., LWD quantity ease). prorations for other limiting ns based on xity and tural conditions oning Condition) achieved in ch wood loading ore, 1.79 ated relative to ng stream ssment unit ovement

ESU	Population	Code	Assessment	2012	LF Weight	Low	Original	Updated	High 2018	Original	High 2033	LF Weight and Bookends	Estimates Commo
			Unit	Standardized		Bookend	2018	2018	Bookend	2033	Bookend	Comments	
				Limiting Factor			Estimate	Estimate		Estimate			
Snake River	Yankee	YFC3	Yankee Fork	7.1: Sediment	5.00%	71.7	71.7	77.8		60	70	Expanded Expert Panel	Treat 5.3 of rough
Spring/Summ	Fork			Conditions:								including the YF ID Team	with large wood.
er Chinook				Decreased								made up this round as	quantity is anticia
				Sediment								compared to a small subset	function of wood
				Quantity								in Fall 2011 (conversion to	time that affects f
												standardized Limiting	and sediment rec
												Factors) and Sp/Summer	main and side cha
												2012 ExPanel meetings.	Projects proposed
												Changed low bookend from	highlly impacted a
												20 to 45 percent because	1/3 of the area).
												2/3 of historic Chinook	2016:Focus for th
												production comes from	factor is need for
												areas outside of dredge	spawning-sized gr
												reach and there are still	retention. Panel p
												some impacts that occur in	projects to reflect
												non dredged areas.	in sediment suital
												Recognizing Jordan Ck.	percentage of nat
												Impacts; Changed LF 7.2 to	(Properly Function
												7.1 due to much better	estimated to be a
												description of conditions and	time period. Pond
												how LF applies - lack of	benefit steelhead
												sediment that provides good	Chinook spawning
												spawning habitat rather than	benefit Chinook r
												high fines in gravels.	winter, and is pro
													accordingly. There
													stream miles trea
													25 Chinook bearir
													miles across the a

thly 18 miles Sediment apted to as a d retention over flow, scour, cruitment in the annels. ed in the most area (approx.

nis limiting r smaller ravels and prorated t improvement bility based on tural conditions oning Condition) achieved in d Series 1 will d spawning (not ng), but will rearing in the orated refore, 1.5325 ated relative to ng stream assessment unit