

II. Habitat Restoration																		
Don	C-4bRed&GVP	O	BC	Redlands Selective Fish Passage Oper. (FWS)			FWS-GJ	USBR	\$82,252	\$82,252	\$84,661	\$84,661	\$87,119	\$87,119	\$89,660	\$89,660		
Don	C-4bRed&GVP	O	BC	GVP Selective Fish Passage Oper. (FWS)		FY16 report recommends: 1) removing heavily vegetated portion of the left river bank to alleviate recurring heavy sedimentation at the upper end of the fish passage, including blockage of the fish return tube; and 2) again sluicing the fish passage during spring high flows to remove sediment from in front of the fish passage.	FWS-GJ	USBR	\$65,047	\$65,047	\$66,988	\$66,988	\$68,968	\$68,968	\$71,012	\$71,012		
Don	4bGVPScreenE		BC	Eval fish condition below GVIC screen return														
Don	C-5	O	MC/BC	Price-Stubb Fish Passage	PDO will put SOW on web.	FY16 work plan was for \$7,723; only FY16 billing AK saw was \$2,833 for cleaning fish ladder (similar to FY15 and FY14). SOW says \$6K/year in FY 16 & 17. Their work plan says \$7,325.	PID	USBR	\$7,325	\$7,325		\$7,325		\$7,325		\$7,325		
Don	C-23	O	BC	Grand Valley Project fish screen & passage O&M	Need SOW (Jana checking with Mark Harris at GVVUA).	PDO doesn't receive copies of GVVUA bills from USBR. FY16-17 (draft?) SOW on I:drive, but not on web shows budget of \$40,000 for FY16 and \$41,200 for FY17. Ann rpt says \$79,788 provided in FY16 and \$78,896 expended (all work completed).	GVVUA	USBR	\$80,000	\$80,000		\$81,600		\$83,232		\$84,897		
KMc	C-28	N	MC/BC	Tusher Wash diversion electrical O&M	Anticipated O&M for Tusher weir wall and facility electrical components (latter in return for access lease and monitoring). Need cost est. after design completed in FY15. Placeholder; may not be needed in FY16 based on anticipated construction schedule.	O&M costs anticipated for pending weir wall (via contract with Green River Canal Co.) and on the recently-completed fish passage and fish screens on the east side (via contract with East Side Canal water users). Partial-year costs anticipated in FY18 and full-year costs in FY-19 and beyond; costs not yet known.	TBD	USBR										
KMc	C-28a	O	BC	Green River Canal entrainment monitoring	2/13/15: 2015 cost up from \$6,655 to upgrade equipment; 2016 costs up from \$2,751 and FY18&19 costs added to operate system after fish exclusion built. Maintain through FY-19.		Peter MacKinnon: USU	USBR		\$6,209		\$6,398		\$6,526				
Don	C-29	O	MC/BC	GVIC fish screen & passage O&M	SOW not posted to web yet.	\$77,423 budget in FY17 work plan submitted by Charlie to Jana 6/29/16 includes funds to replace push trolleys on all 3 brush arms, re-galvanize sub-water surface infrastructure of screen & baffle system slots, and re-grade for drainage. GVIC also would like to discuss w USBR the potential for replacing wedgewire screen panels with vertical traveling or mechanically-screened panels (capital cost?). FY16 costs \$46,971 per annual report and USBR billing.	GVIC	USBR	\$77,423	\$77,423		\$78,972		\$80,551				
Don	C-29a	O	BC	Grand Valley Canal salvage	Includes Green River, but needs to describe Green River tasks.		FWS-GJ	USBR	\$34,558	\$34,558	\$35,533	\$35,533	\$36,528	\$36,528	\$37,507	\$37,507		
KMc	C-29a add	O	BC	Green River Canal salvage	PDO: Green R canal salvage shouldn't be necessary after 2018 (pending fish exclusion completion).	Annual report recommends considering pilot investigation into emigration, immigration and intra-canal movement of tagged fishes. Pair of submersible PIT antennas near the downstream outlet of the canal and operated throughout irrigation season might elucidate fate of fishes detected by the GRCC PIA and would require minimal effort to maintain. Also recommends investigating potential for sluice return improvement and private canal improvement as part of larger fish exclusion solution. FWS work in this SOW and UDWR work in SOW #138; should we put the Green River Canal work in one standalone SOW?	FWS-VNL (UDWR work in SOW #138)	USBR		\$10,557	\$11,045	\$11,045	\$11,269	\$0	\$11,496			
Don	116/C-33	O	MC/BC	Redlands screen, passage & gage O&M	SOW pending	No current SOW. FY16 cost \$51,504 per annual report and USBR billing. PDO copies of USBR billing indicate previous year costs of FY15 \$33,817; FY14 \$17,195; FY13 \$30,608; FY12 \$78,833; FY11 \$83,061.	RWPC	USBR	\$70,000	\$70,000		\$53,000		\$54,060				
	C-6			Floodplain Restoration Program														
Kantola	EASEMENT	O	BC	Easement & weeds mgmt.		Annual report mentions need for "full funding", however, funds carried over from FY15 and FY16. Funding needs for ONWR easement management should be part of larger floodplain management discussion.	FWS-ONWR	USBR	\$50,000	\$50,000		\$50,000		\$50,000		\$50,000		\$50,000
Chart	C-6 OLDCHARLEY		BC	Old Charley	Ute Tribe not currently allowing access to Old Charley.	ONWR discussing potential for renewing Old Charley management with Ute Tribe												
Chart	FR-164	O	BC	Middle Green R Floodplain Sampling	Reduced cost; no longer includes pumping to maintain water quality at Old Charley/other sites; does include operational expenses to run fish exclusion at Johnson Bottom.	FWS-VNL may need to increase costs to closely monitor and manage Johnson and Shephard Bottom sites.	FWS-VNL	USBR	\$36,597	\$36,597	\$39,117	\$39,117	\$39,977	\$39,977	\$40,782	\$40,782		
Chart	FR-165	O	BC	Use of Stewart Lake floodplain by larval and adult endangered fishes	Clarify in study methods/approach that as of 2014, stocking razorbacks on top of natural recruitment is no longer advised	UDWR may need to increase costs based on extra time needed to fill and drain.	UDWR-VNL	USBR	\$46,985	\$46,985	\$47,925	\$47,925	\$48,883	\$48,883	\$49,861	\$49,861		
III. Reduce Nonnative Fish & Sportfish Impacts																		
KMc	98a	OR	BC	Middle Yampa smb & pike management	SOW pending; expected to match Program Guidance. Some effort may shift from EF removal passes to backwater netting.	remove northern pike in backwaters. CPW considering removing Task 4 (in channel e-fishing prior to runoff) to focus on expanding northern pike netting and other agency priorities, such as harvest tournaments. Task 4 responsibilities could be redistributed to CSU (under project 125 and 128) if they are willing, beginning in 2018. CSU will determine if they can do all the Yampa River CPM and nonnative removal work so that CPW can focus on expanding backwater netting. CPW would need additional funding under Task 3, but none under Task 4 and perhaps less in Task 2 (equip/maint.). LFL is familiar with the area and has jet boats, but would need additional staff and funding to cover their additional 125 and 128 sampling.	CPW	USBR/CPW	\$224,474	\$224,474	\$228,963	\$228,963	\$233,543	\$228,963	\$238,214	\$228,963		
KMc	98b	O	BC	Upper Yampa pike management	Salary savings from GS7/9/11 position. Added pike backwater netting effort (~15K 2 GS-5 techs + travel for one month). Vernal CRFP may need offer CPW some assistance in the 98a reach (shifting a pass from 98b or 110).		FWS-VNL	USBR	\$91,567	\$91,567	\$96,707	\$96,707	\$98,785	\$98,785	\$100,592	\$100,592		
KMc	110	O	BC	Lower Yampa bass and catfish management	Should the mention of Smith-Root GPPs on page 3 be changed?		FWS-VNL	USBR	\$100,360	\$100,360	\$102,581	\$102,581	\$109,010	\$109,010	\$111,374	\$111,374		

KMc	123a	OR	BC	Green River bass management	Budget reflects passes that accompany CPM pop ests. "PD Recommends" amount FY16 and forward reflect 2/20/15 revised SOW to add 24 days of electrofishing for walleye on the lower Green and lower Colorado rivers. FY19-20 costs increase for walleye passes not conducted under pikeminnow monitoring #128 (off years).	UDWR Moab will perform one bass removal pass in Desolation Canyon in years with Project 128 and average/above hydrology, and will perform more Echo/Split removal. In years with no 128, two passes will take place in Deso - one primarily for walleye and one primarily for bass. In dry years, more effort may be placed in Deso if needed. Tildon has asked if the Program would prefer to have one scope of work dedicated to walleye (rather than scattered across 123a, 123b, and 126).	FWS-VNL, UDWR-Moab	USBR	\$223,200	\$223,200	\$227,964	\$227,964	\$259,284	\$259,284	\$264,587	\$264,587				
KMc	123b	O	BC	Green River bass management	SOW modified for FY17 to include Starvation fish screen ()		UDWR-VNL	USBR	\$252,831	\$252,831	\$257,887	\$257,887	\$263,045	\$263,045	\$268,306	\$268,306				
KMc	125	OR	BC	Middle Yampa River smallmouth bass and pike management.	Additional costs are for work in 98c reach. Page 16 shows incorrect totals for FWS-Vernal. 6/22/15: SOW left out labor for one task; now added for FY16 & 17 (\$3819 and \$3894). PDO check final budgets. (Done; spreadsheet updated; SOW finalized.)	Passes that explicitly support project 128 need to be removed and placed in the 128 SOW for priority and funding clarity (including any 98a passes gained for the same purpose). Work in Steamboat to Hayden retained.	CSU, FWS-GJ, FWS-VNL	USBR	\$415,280	\$415,280	\$425,001	\$425,001	\$428,572	\$428,572	\$438,301	\$438,301				
KMc	126a	O	BC	Colorado River smallmouth bass removal	Additional costs for 3 walleye passes and nrf removal from streamside ponds (previously shown in a separate line item in Program Guidance).		FWS-GJ	USBR	\$241,767	\$241,767	\$248,537	\$248,537	\$255,460	\$255,460	\$262,605	\$262,605				
KMc	126b	OR	BC	CPW assistance	SOW pending; expected to match Program Guidance. NNF workshop may discuss additional pond management (i.e. Merwin traps). SOW subm Sep '15 proposed \$72,643 FY16; \$21.7K over the \$50,936 approved amount (for dedicated Merwin trap for LaFarge and time sampling the other notched pits). FY 17 and 18 costs are \$3K for this SOW are lower than originally projected, so the overall cost increase for this SOW is just a little over \$15K.	In Colorado River, focus should be on pond management. Should BC consider reducing frequency of Rifle to Beavertail passes based on low catch rates? Funding could be saved or moved to more work in the White River.	CPW	USBR	\$48,473	\$48,473	\$49,847	\$49,847	\$50,846	\$50,846	\$51,871	\$51,871				
KMc	140	O	BC	Yampa fish response to nna mgmt	Synthesis report has been discussed, but FR-115 is the first priority; Bestgen provided FY17 cost (see next row). FY 17 base cost \$94,825 + synthesis report \$55,270 = \$150,095. Synth. rpt. will summarize ann. fish community assessments related to flow & temp effects on native & NNF abundance. This extended analysis will incorporate more smb trend data and ideas about further ways to disadvantage bass, perhaps including some modeling from the pop. dynamics model.		CSU	USBR	\$150,095	\$150,095	\$97,293	\$97,293	\$102,182	\$102,182	\$104,870	\$104,870				
KMc	154		BC	Duchesne R. NNA fish mgmt.		Is Program interested in reviving this project and funding (probably ~\$40K from Program)? Mark Fuller checking on Tribal interest. FWS might also seek Tribal grant funding.	Ute Tribe	?												
KMc	158	OR	BC	Assessment of larval CPM presence/survival in middle Green	Depends on outcome of report review, draft due February 2016. Would be helpful in evaluating BW-Synth baseflow recommendations. PD recommends beginning in FY17. (FY17-20 costs shown in PD recommends column are FY16-19 proposed costs +2%).	Funding pending completion & review of final report (no report as of yet). Check with PI's - could this study transition toward an evaluation of elevated base flows?	UDWR-VNL	USBR			\$120,626	\$121,542	\$122,968	\$123,039	\$125,356	\$125,427				
KMc	167	O		White R. SMB removal	Increased to 2 passes by UDWR in 2014 and out years. Task 1 effort also increased. CPW SOW pending.	CPW work is under project #126b	FWS-Vernal, UDWR-Vernal	USBR	\$72,641	\$72,641	\$66,456	\$76,143	\$67,914	\$77,794	\$68,405	\$78,483				
KMc	C-18-19		BC	Reservoir sources of nna fish (otolith microchemistry)	PDO investigating USGS-Denver ability to analyze otoliths (and potential outside funding).	USGS doing this work under small contract with PDO (funds in #3)														
KMc	C-20	O	BC	Highline Net O&M	SOW pending from CPW.	No program funds unless threshold exceeded.	CPW													
KMc	FR-115	O	BC	Effects of Flaming Gorge releases on Lodore/Whirlpool Canyon fish comm.	Bestgen provided additional cost for synthesis report. FY-16 funding covered add'l obj #7 and #8, for synthesis report and study to monitor FG flow manipulation to control NNF.		CSU	USBR	\$95,967	\$95,967	\$99,086	\$99,086	\$101,466	\$101,466	\$103,906	\$103,906				
IV. Propagation & Genetics Management																				
29 O&M Propagation Facilities																				
Czapla	29a	O	BC	Grand Valley			FWS-Ourray NFH 24 Road Unit, USBR	USBR	\$560,810	\$560,810	\$576,359	\$576,359	\$587,622	\$587,622	\$603,958	\$603,958				
Czapla	29b	O	BC	Ourray	Fisheries provides (may be higher than \$525K). SOW pending. "FY 16 PD Recommends amount now FAC	FWS fully funds.	FWS-Ourray NFH Randlett Unit	FWS-FAC	\$640,162	\$640,162		\$652,965		\$666,025		\$679,345				
Czapla		O	BC	Ourray well-field development/repair			USBR	USBR	\$6,420	\$6,420		\$6,549		\$6,680		\$6,814				
Czapla	29c	O	BC	Wahweap	Wahweap's budget may need to increase by \$10,000 (actually less, since others should cost-share), if its decided that they will maintain the secondary bonytail broodstock (start year uncertain as of yet). Need to break out FY17-FY20 budgets (done).		USBR	UDWR-Wahweap	\$233,426	\$233,426	\$238,094	\$238,094	\$242,856	\$242,856	\$247,713	\$247,713				
Czapla	29d	O	BC	Mumma native species hatchery			CPW	CPW	\$85,209	\$85,209	\$86,913	\$86,913		\$88,651		\$90,424				
Czapla	NEW	N	BC	Investigate potential for translocating humpback chub to Yampa Canyon.		White paper regarding translocation of humpback chub to Yampa Canyon: Shane Capron, Melissa Trammell, Dave Speas, and Tom Czapla, with participation from Harry Crockett and Paul Badame, will lead development on a white paper to evaluating potential success for translocating or stocking humpback chub into Yampa Canyon; \$0 budget, but SOW requested.			\$0	\$0	\$0	\$0								

Czapla	TAGS	O	BC	PIT tags & related equipment	Unlikely to be able to pre-purchase 2016 equip & tags with 2015 funds because have already hit funding ceiling. Dale recommends including some of the new "stick" readers with each order. No SOW submitted. PIT tag inventory is adequate for FY16, but additional stick readers and tagging guns needed. Pls who would like project-specific submersible PIT antennas will revise their SOWs, but funds will come from this project rather than being included in the project SOWs. If funds remain, PIT tags for FY17 may be purchased. 8/2/16: \$176,868 had been budgeted, but Program had available funds, so Speas placed order for \$5,000 PIT tags plus equipment (readers, tagging guns etc) at total cost of \$234,275.	Any FY 17 costs? Are FY 18 and forward estimates accurate? Dave Speas and Dale Ryden working on FY 17 costs and outyear projections (FY18 and 19 likely to be much lower than originally projected, thus FY18 and FY19 costs reduced to \$100K). New stick readers could be provided to hatcheries and hatchery "cheese-block" readers could be deployed to the field. (USBR expects new PIT tag contract to be awarded by mid-summer.) Some additional remote readers anticipated.	USBR	USBR	\$100,000			\$100,000		\$102,000		\$104,040				
V. Research, Monitoring & Data Management																				
Czapla	15	O	BC	Larval Fish Lab Identification			CSU	USBR	\$240,901	\$240,901	\$247,971	\$247,971	\$255,252	\$255,252	\$262,752	\$262,752				
Julie	16		BC	Database Management	See also PIT tags, above and FWS Program Management, below. PD recommends fully funding in FY16, then to 0 in FY 17 and beyond (shifting these responsibilities to a database coordinator under the PDO). USBR should note no funding beyond FY16.	Funding ended in FY17 when database responsibilities transferred to PDO>			\$0		\$0		\$0		\$0					
Julie	170	O	BC	CNHP STReaMS database development/maintenance	Speas to confirm amounts and potential outyear maintenance costs.	CNHP to continue to house, operate, and maintain STReaMS server, perform behind-the-scenes updates, repairs, etc. FY18 & 19 higher to allow CNHP to add more functionality (e.g., NNF data), if warranted. This amount will decrease as the need for more functionality goes away and its simply server maintenance and replacement. so maybe \$55K in FY 19, \$35 in FY20, etc. Will need SOW from CNHP.	CNHP	USBR	\$55,000	\$0		\$55,000		\$55,000		\$35,000		\$20,000		\$20,000
Czapla	22f	O	BC	Yampa & middle Green CPM & RBS larval survey			CSU, FWS-VNL	USBR	\$174,657	\$174,657	\$181,381	\$181,381	\$186,080	\$186,080	\$190,909	\$190,909				
Czapla	127	O	BC	Upper Colo. R. CPM est.			FWS-GJ	USBR	\$160,372		\$259,689	\$259,689	\$267,182	\$267,182	\$274,988	\$274,988				
Czapla	128	OR	BC	Green R. CPM est. (+ Green R razorback data analysis)	\$98,005 included for RBS pop. ests. for the 3 Green segments & White (few Yampa recaptures likely won't be useful) plus survival rate analysis for middle Green, Deso-Grey, and lower Green. If funding sufficient, will look into using some PIT antenna data (including White & Tusher, which may help w/ Deso-Grey survival question). The RBS pop est work could be deferred to 2017. Note: UDWR labor doesn't include costs associated with working up all the captured razorbacks (30-40/boat/day, adding hours to each day). Need Pls to put a little more information in annual reports to better support population status info in briefing book and sufficient progress assessment.	Additional sampling recommended in the 8 miles below Tusher Diversion (important portion of the Green River that was previously inaccessible can now be accessed with boat passage) to provide data for Project 128 and to improve ancillary walleye removal. Both upstream and downstream sampling sections are quite long; therefore, UDWR Moab and the Service (Vernal and Grand Junction) will coordinate to accomplish this in 2017. Reaches may be revised in FY18/19 (e.g., adding an additional day to a pass or revising reach responsibilities). Some issues with sampling passes (timing, location, crews, etc) need to be rectified and some tasks moved from SOW #125 and 98a to 128.	CSU, UDWR-VNL, FWS-VNL, UDWR-Moab	USBR	\$266,112	\$421,075	\$429,645	\$429,645	\$58,767	\$58,767	\$0	\$0				
Czapla	129	O	BC	HBC pop est in Deso/Grey			UDWR-Moab	USBR	\$45,917		\$84,368	\$84,368	\$99,300	\$99,300	\$0	\$0				
Czapla	130	O	BC	HBC in Cataract			UDWR-Moab	USBR	\$18,009	\$36,017	\$0		\$37,546	\$37,546	\$0	\$0				
Czapla	131	O	BC	HBC in Black Rocks	FY15-16 sampling shifted to FY16-17.		FWS-GJ, CSU	USBR	\$54,648	\$73,527	\$66,408	\$66,408			\$78,656	\$78,656				
Czapla	131 add	O	BC	Investigate HBC early life stage mortality	Travis believes he can accurately identify fish down to the low 100mm's. Is funding needed for LFL id (LFL funding in SOW is identified for statistical assistance)? Dale will check with Travis and Bestgen to see if any additional funds needed for identification/verification of small Gila.		FWS-GJ	USBR	\$20,870	\$30,622	\$19,735	\$19,735			\$33,121	\$33,121				
Czapla	132	O	BC	HBC in Westwater	FY15-16 sampling shifted to FY16-17. This SOW calls for submersible antennas.		UDWR-Moab	USBR	\$46,602	\$95,939	\$0	\$0	\$0		\$90,467	\$90,467				
Czapla	138	O	BC	Green & Colo. R. YOY CPM monitoring	Includes Green River canal salvage (thus ~\$10K increase) (report to be filed with C-29a), but salvage shouldn't be needed after FY18.	Per Matt Breen 3/23/16: 2019 & 2020 costs in budget table lower than most recent SOW reflects (supposed to be \$70,657 & \$72,060, but currently reads \$59,913 & \$61,111). AK: because SOW costs included Green River canal salvage, but salvage shouldn't be needed after FY18.	UDWR-VNL, UDWR-Moab	USBR	\$67,933	\$67,933	\$69,473	\$69,473	\$70,657	\$59,913	\$72,060	\$61,111				
Czapla/ Kantola	147	O	BC	Standardize electrofishing fleet		Section 7 funds	Contractor	NFWF												
Czapla	160	O	BC	Lower Green larval, juv RBS monitoring pilot study			UDWR-Moab	USBR	\$59,423	\$59,423	\$60,611	\$60,611	\$61,824	\$61,824	\$63,060	\$63,060				
Czapla	163	O	BC	Gunnison R fish community monitoring			FWS-GJ	USBR		\$118,365	\$92,213	\$92,213	\$94,661	\$94,661	\$33,452	\$33,452				
Julie	G-6 BAESER-169 PIT-Antenna	OR?	BC	Flat plate antenna at razorback bar	\$16.5K for 3 antennas, etc. 2016 and 2 more in 2017. (Project currently borrows antennas from Reclamation/Biomark; MacKinnon suggested FWS might want to purchase antennas for dedicated use. Can project continue to use existing antennas or can Reclamation acquire for FWS under separate proj.? PD: FY17 antenna purchases may not be as high a priority. BC supports purchasing antennas; best to leave in FY17 \$ also, in case replacements necessary.	Status?	FWS-VNL?	USBR	\$30,754	\$30,754	\$20,142	\$20,142	\$20,408	\$20,408	\$20,813	\$20,813				

