		WGFP 401 Certification						
Water Quality Parameter		**Temperature**	**Nutrients**	**Total Phosphorus**	**Dissolved Oxygen**	**Aquatic Life**	**Mercury**	**Manganese**
Geographic Scope		*Colorado River downstream of Windy Gap*	*Fraser*	*Three Lakes*	*Shadow Mountain Reservoir*	*Colorado River downstream of Windy Gap*	*Three Lakes, Carter, Horsetooth, Chimney Hollow*	*Colorado River from Granby to downstream of Windy Gap*
Monitoring	Sites	Real Time at: Windy Gap, Hot Sulphur, Williams Fork	Effluent (TP and TN), monthly	GR-DAM, SM-DAM, GL-MID TP, TN Monthly	GR-DAM, SM-DAM, GR-PUMP Monthly	Annually at: Windy Gap upstream, Windy Gap downstream, Pioneer Park, +2 TBD	Fish tissue Biennially all existing lake/reservoirs annually in Chimney Hollow	TBD
	Start	ASAP or within 1 yr of 404 Permit	When WWTP upgraded	ASAP or within 1 yr of 404 Permit	ASAP or within 1 yr of 404 Permit	ASAP or within 1 yr of 404 Permit	First field season after 404 Permit First field seasons after construction	
	Duration	At least 5 yrs after WGFP fully operational	2 yrs if upgrades successful	At least 5 yrs after WGFP fully operational	At least 5 yrs after WGFP fully operational	At least 5 yrs after WGFP fully operational		TBD
Modeling	Model work	Model refinements						
	Report	Within 5 yrs after WGFP fully operational						
Operations	Description	Curtailment within 1C of acute and 0.3 C of chronic stds						
	Start	Upon start of WGFP operation						
	Duration	Until WQCD approves mitigation measures provide only a *de minimis* benefit						
Annual Reporting	Start	ASAP or within 1 yr of 404 Permit (due Apr 1)	When WWTP upgraded (due Apr 1)	ASAP or within 1 yr of 404 Permit (due Apr 1)	ASAP or within 1 yr of 404 Permit (due Apr 1)	ASAP or within 1 yr of 404 Permit (due Jun 1)		
	Duration	At least 5 yrs after WGFP fully operational	2 yrs if upgrades successful	At least 5 yrs after WGFP fully operational	At least 5 yrs after WGFP fully operational	At least 5 yrs after WGFP fully operational (more if bypass built) Or pre/post habitat work + 3 and 4 yr post habitat work		
Investigation Report	(only if impairment)	12 mo after impairment		12 mo after impairment	12 mo after impairment			Within 5 yrs of 404 permit
Category 4b Plan	(if feasible)	2 yrs after determined feasible		2 yrs after determined feasible	2 yrs after determined feasible			2 yrs after determined feasible
Other		Subdistrict to ensure 5412 flows reallocated to aquatic life benefits if 2012 IGA terminated Do not use bypass valve is manganese is an issue	Enter agreement for WWTP upgrades . WWTP upgrades before completion of Chimney Hollow			Redirect bypass funding to aquatic habitat improvements if bypass does not materialize	Post FCA signs if needed	

			USBR ROD				WGFP Carriage Contract	WGFP LBD IGA
Water Quality Parameter		**General**	**Temperature**	**Nutrients**	**Dissolved Oxygen**	**General**	**General**	**Aquatic Environment**
Geographic Scope		*Chimney Hollow*	*Colorado River downstream of Windy Gap*	*Three Lakes + watershed*	*Colorado River between Windy Gap Reservoir and Williams Fork*	*Three Lakes*	*Colorado River between Granby Reservoir and Windy Gap Reservoir*	*Colorado, Fraser, Williams Fork River Basins upstream of the Colorado River confluence with the Blue River*
Monitoring	Sites	CH-DAM General chemistry, metals, nutrients, physical parameters, zooplankton, phytoplankton Monthly (except winter)	Real Time at : Windy Gap, Williams Fork	WWTP effluent, NPS monitoring to verify nutrient 1:1 reductions of WGFP loading pre/post mitigation measures. Currently: (Willow Creek) WC-IRU, TRB-WCU, WC-WCRU, WC-WCRD, CH-WCU TP, TN Additional Sites TBD	Monitoring requirements are not specified and would be determined by the Corps.	Continued participation and funding of ongoing Nutrient Studies in the Three Lakes system. Not defined in terms of monitoring.	$1,500,000 towards monitoring and enhancement.	Monitoring Plan TBD to identify undesirable changes in, and agree upon desired modifications to, the aquatic environment, and to measure the effectiveness of actions taken to protect or improve the aquatic environment. Plan will incorporate the elements of the monitoring plan prepared during Phase 3B of the draft SMP as deemed appropriate.
	Start	Upon construction of Chimney Hollow	?	Prior to construction and operation of WGFP.			According to schedule submitted by Sudistrictc upon execution of	After issuance and acceptance by the Subdistrict of the ROD and all
	Duration	At least 5 yrs after WGFP fully operation						
Modeling	Model work							
	Report							
Operations	Description		After Jul 15: Curtailment when chronic std is reached or within 1C of acute std. Use of Bypass Valve and Auxiliary Outlet to release colder water.					
	Start		Upon start of WGFP operation					
	Duration							
Annual Reporting	Start	After WGFP fully operational (due Apr 1)		Nutrient Reduction Plan prior to construction and operation of the WGFP.				
	Duration	At least 5 yrs after WGFP fully operational		Nutrient Reduction Plan to be reviewed and approved by USBR and USACE. Annual Monitoring Plan to be reviewed and approved by USBR				
Investigation Report	(only if impairment)				If DO impairment as a result of WGFP, USBR and USACE will review data and if necessary, identify and implement additional mitigation measures for DO.			
Category 4b Plan	(if feasible)							
Other				Adaptive management in light of monitoring results to show effectiveness and need for more or less mitigation.		Studies to better understand water quality issues in the Three Lakes system and to provide guidance for future management decisions.	Requires compliance with LBD agreements. Requires comliance with mitigation measures from ROD for WG and WGFP. Incorporates WGFP IGA.	

		WGFP Fish and Wildlife Mitigation Plan (FWMP)		WGFP Fish and Wildlife Enhancement Plan (FWEP)				
Water Quality Parameter		**Temperature**	**Nutrients**	**Aquatic Environment**	**Nutrients**	**Nutrients**	**Manganese**	**Bioavailable Mercury**
Geographic Scope		*Colorado River downstream of Windy Gap*	*Three Lakes*	*Colorado River downstream of Wingy Gap to Kemp-Breeze Area*	*WWTPs*	*Three Lakes + watershed*	*Three Lakes*	*Three Lakes*
Monitoring	Sites	Real Time at : Windy Gap, Williams Fork	WWTP effluent, NPS monitoring to verify nutrient 1:1 reductions of WGFP loading pre/post mitigation measures. Currently: (Willow Creek) WC-IRU, TRB-WCU, WC-WCRU, WC-WCRD, CH-WCU TP, TN Additional Sites TBD	Plan TBD to measure outcomes of the implementation of the Habitat Project.	Nutrient upgrades at WWTP	WWTP effluent, NPS monitoring to verify nutrient 1:1 reductions for TN and TP of WGFP loading pre/post mitigation measures. Currently: (Willow Creek) WC-IRU, TRB-WCU, WC-WCRU, WC-WCRD, CH-WCU TP, TN Additional Sites TBD	Plan TBD.	Plan TBD.
	Start	Within one year after issuance of permits. Curtailed diversions occur	Monitoring of baselined conditions will begin in 2011 and nutrient				Plan to be reviewed and approved by GC within 6 mo of last ROD.	Plan to be reviewed and approved by GC within 6 mo of last ROD.
	Duration	As long as WGFP in operation	Monitoring will continue until 1:1 nutrient offset has been verified. Operation of nutrient reduction projects will continue as long as the WGFP is in operation.					
Modeling	Model work							
	Report							
Operations	Description	After July 15: Curtailment when chronic std is reached or within 1C of acute std. Use of Bypass Valve and Auxiliary Outlet to release colder water.						
	Start							
	Duration							
Annual Reporting	Start					Nutrient Reduction Plan to be reviewed at the same time as submitted to USBR and USACE. Monitoring plan to be submitted within 6 mo of the last ROD.		
	Duration							
Investigation Report	(only if impairment)						if worsening trend. If WGFP deterimed to be the cause, proceed to development and implementation of mitigation.	if worsening trend. If WGFP deterimed to be the cause, proceed to development and implementation of mitigation.
Category 4b Plan	(if feasible)							
Other				To be coordinated with existing monitoring and LBD monitoring plan.	Provide executed agreement with WWTPs to mitigate nutrient loading.			

		WGFP 1041 Permit						
Water Quality Parameter		**Dissolved Oxygen**	**Chlorophyll a**	**Secchi**	**Temperature**	**Fish**	**Aquatics**	**Riparian Vegetation**
Geographic Scope		*Three Lakes*	*Three Lakes*	*Grand Lake and Shadow Mountain Reservoir*	*Colorado River downstream of Windy Gap*	*Colorado River downstream of Windy Gap (?)*	*Colorado River downstream of Windy Gap (?)*	*Colorado River from Windy Gap to Kemp-Breeze & Willow Creek downstream of Willow Creek Reservoir*
Monitoring	Sites	Plan TBD.	Plan TBD.	Plan TBD.	Real Time at : Windy Gap, Williams Fork	Plan TBD	Plan TBD	Baseline (pre construction) Plan TBD
	Start	Plan to be reviewed and approved by GC within 6 mo of last ROD.	Plan to be reviewed and approved by GC within 6 mo of last ROD.	Plan to be reviewed and approved by GC within 6 mo of last ROD.		plan to be submitted within 6 mo of USACE ROD	plan to be submitted within 6 mo of USACE ROD	Plan to be submitted within 60 days of USACE ROD
	Duration					as long as required by LBD	as long as required by LBD	LBD to determine if additional follow up needed beyond baseline conditions
Modeling	Model work							
	Report							
Operations	Description				Curtailment when chronic std is reached or within 1C of acute std. Use of Bypass Valve and Auxiliary Outlet to release colder water.			
	Start							
	Duration							
Annual Reporting	Start			Monitoring plan to include a reporting schedule. Data to be accessible via a public database.				
	Duration							
Investigation Report	(only if impairment)	if worsening trend. If WGFP deterimed to be the cause, proceed to development and implementation of mitigation.	if worsening trend. If WGFP deterimed to be the cause, proceed to development and implementation of mitigation.	if worsening trend. If WGFP deterimed to be the cause, proceed to development and implementation of mitigation.				
Category 4b Plan	(if feasible)							
Other					Subdistrict and Northern Water will not independently propose changes to the temp stds for the reaches affected by the WGFP without first working through LBD	Plan to account for bypass	Plan to account for bypass	