Introduction to Time line

The time line given below shows the approximate starting and end times of actions and events included in this year's Water Management Plan. It is designed to give a sense of when various actions occur. Dates are approximate and subject to change. Also note actions shown may not happen.

Project abbreviations.

LIB – Libby

HGH – Hungry Horse

LWG - Lower Granite

LGS – Little Goose

LMN – Lower Monumental

IHR – Ice Harbor

MCN – McNary

JDA – John Day

TDA – The Dalles

BON – Bonneville

TMT – Technical Management Team

DWR – Dworshak

PRD - Priest Rapids

ALF – Albeni Falls

GCL – Grand Coulee

RCC – Reservoir Control Center

RFC – River Forecast Center

USBR – US Bureau of Reclamation

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5	T		-	Qtr 4, 20		D		1, 200		_	2tr 2, 2				2003	0
<u>Project</u> LIB	Task Name Operate to Minimum Flows / Ramp Rates	Start Tue 10/1/02	Finish Tue 9/30/03	Oct	Nov	Dec	Jai	n Fe	b Ma	ır ı	Apr	May	Jun	Jul	Aug	Sep
LID	Operate to Minimum Flows / Kamp Kates	Tue 10/1/02	1 de 9/30/03													
HGH	Operate to Minimum Flows / Ramp Rates	Tue 10/1/02	Tue 9/30/03													
LWG	Operate to 1% peak Efficiency	Tue 10/1/02	Sat 11/30/02													
LMN	Operate to 1% peak Efficiency	Tue 10/1/02	Sat 11/30/02													
LGS	Operate to 1% peak Efficiency	Tue 10/1/02	Sat 11/30/02													
IHR	Operate to 1% peak Efficiency	Tue 10/1/02	Sat 11/30/02													
MCN	Operate to 1% peak Efficiency	Tue 10/1/02	Thu 10/31/02													
JDA	Operate to 1% peak Efficiency	Tue 10/1/02	Thu 10/31/02													
TDA	Operate to 1% peak Efficiency	Tue 10/1/02	Thu 10/31/02													
BON	Operate to 1% peak Efficiency	Tue 10/1/02	Thu 10/31/02													
TMT	Assess Potential of Providing Flow for Chinook Below BON	Tue 10/1/02	Tue 10/1/02	10/1												
TMT	Assess Potential of Providing Flow for Chum Below BON	Tue 10/1/02	Tue 10/1/02	10/1												
TMT	Preliminary discussions of flood control / refill	Tue 10/1/02	Tue 10/1/02	10/1												
TMT	Albeni Falls fall/winter Draw down Discussions	Tue 10/1/02	Tue 10/1/02	10/1												
	Hanford Reach / Vernita Bar flows set (non-BiOp)	Tue 10/1/02	Tue 10/1/02	10/1												
	Calculate Integrated Rule Curves at LIB and HGH	Tue 10/1/02	Tue 10/1/02	10/1												
TMT	Develop fall / winter update	Tue 10/1/02	Tue 10/1/02	10/1												
DWR	Operate at minimum outflow	Tue 10/1/02	Mon 6/30/03													
PRD	Vernita Bar Protection Flows (non-BiOP)	Tue 10/1/02	Thu 5/15/03													
GCL	Kokanne Forebay Elevation 1283-1285 ft. (non- BiOP)	Tue 10/1/02	Thu 10/31/02													
JDA	Waterfowl hunting enhancement (non-BiOP)	Mon 10/7/02	Mon 1/20/03													
MCN	Waterfowl hunting enhancement (non-BiOp)	Mon 10/7/02	Mon 1/20/03													
LIB	Storage May be used to Support Chum Flows	Fri 11/1/02	Fri 2/28/03													
HGH	Storage May be used to Support Chum Flows	Fri 11/1/02	Fri 2/28/03													
ALF	Storage May be used to Support Chum Flows	Fri 11/1/02	Fri 2/28/03													
		P	age 1													

Water Management Plan Draft 8-21-02 Appendix 3 Qtr 4, 2002 Qtr 1, 2003 Qtr 2, 2003 Qtr 3, 2003 Project Task Name Start Finish Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Storage May be used to Support Chum Flows GCL Fri 11/1/02 Fri 2/28/03 DWR Storage May be used to Support Chum Flows Fri 11/1/02 Fri 2/28/03 BON Provide Chum Flows Fri 11/1/02 Wed 4/30/03 TMT Determine winter / spring chum flow levels Fri 11/1/02 Fri 11/1/02 11/1 RCC Determine Flood Control / Refill Strategies Sun 12/1/02 Sun 12/1/02 RCC Determine any Flood control shifts Sun 12/1/02 Sun 12/1/02 I IB Operate to Flood Control Curve Sun 12/1/02 Mon 6/30/03 DWR Operate to Flood Control Curve Sun 12/1/02 Mon 6/30/03 ALB Operate to Flood Control Curve Sun 12/1/02 Mon 6/30/03 GCL Operate to Flood Control Curve Sun 12/1/02 Mon 6/30/03 HGH Operate to Flood Control Curve Sun 12/1/02 Mon 6/30/03 ARDB Whitefish Flows 45-55 Kcfs (non-BiOP) Fri 12/20/02 Mon 3/31/03 LIB Fri 3/7/03 Burbot Flows 6-8 Kcfs (non-BiOp) Wed 1/1/03 ARDB 1 MAF Flow Augmentation Filling Wed 1/1/03 Wed 4/30/03 RFC January Final Forecast Wed 1/8/03 Wed 1/8/03 TMT Preliminary Work on Spring/ Summer Update Wed 1/15/03 Wed 1/15/03 TMT Sat 2/1/03 Begin discussing spring Operations Sat 2/1/03 TMT Begin Spring transport Discussions Sat 2/1/03 Sat 2/1/03 TMT Sat 2/1/03 Sat 2/1/03 Hanford Reach Operations Discussions (non-BiOp) RFC Fri 2/7/03 February Final Forecast Fri 2/7/03 **USBR** Min Flows from HGH and at Columbia Falls Sat 3/1/03 Sat 3/1/03 BON Spring Creek Hatchery Release (non-BiOP) Sat 3/1/03 Mon 3/10/03 RCC Outlook for Meeting Flow objectives prepared Sat 3/1/03 Sat 3/1/03 RFC March Final Forecast Fri 3/7/03 Fri 3/7/03 LWG Operate to 1% peak Efficiency Sat 3/15/03 Tue 9/30/03 Page 2

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Project	Task Name	Start	Finish	Qtr 4, 2 Oct	002 Nov	Dec	Qtr 1, Jan	2003 Feb	Mar	Qtr 2, 200	03 1ay Ju		3, 2003 Il Aug	g Sep
LMN	Operate to 1% peak Efficiency	Sat 3/15/03	Tue 9/30/03	Oct	INOV	Dec	Jan	1 60	Iviai	Дрі і і	iay Ju	11 30	ii Aug	ј ј Оср
LGS	Operate to 1% peak Efficiency	Sat 3/15/03	Tue 9/30/03	-										
IHR	Operate to 1% peak Efficiency	Sat 3/15/03	Tue 9/30/03	_										
MCN	Operate to 1% peak Efficiency	Sat 3/15/03	Tue 9/30/03	_										
JDA	Operate to 1% peak Efficiency	Sat 3/15/03	Tue 9/30/03											
TDA	Operate to 1% peak Efficiency	Sat 3/15/03	Tue 9/30/03											
BON	Operate to 1% peak Efficiency	Sat 3/15/03	Tue 9/30/03	_										
JDA	Goose Nesting Enhancement (non-BiOp)	Sat 3/15/03	Sun 6/1/03	_										
MCN	Protect Nesting Waterfowl (non-BiOp)	Sat 3/15/03	Tue 7/15/03	_										
	Juvenile Fish collection	Tue 3/25/03	Tue 9/30/03	-										
TMT	Determine start dates for spring spill	Tue 4/1/03	Tue 4/1/03	-					•	4/1				
TMT	Determine Start dates for Mop Operations	Tue 4/1/03	Tue 4/1/03	-					•	4/1				
RCC	Determine JDA elevations	Tue 4/1/03	Tue 4/1/03	-					•	4/1				
LIB	Start Operational Plan	Tue 4/1/03	Tue 4/1/03	_					•	4/1				
HGH	Start Operational Plan	Tue 4/1/03	Tue 4/1/03	_					•	4/1				
	Finish Spring/ summer update	Tue 4/1/03	Tue 4/1/03						•	4/1				
TDA	Wasco Co sampling Tuesdays (non-BiOp)	Tue 4/1/03	Sun 8/31/03											
USBR	Upper Snake Augmentation determined	Tue 4/1/03	Tue 4/1/03						•	4/1				
PRD	Hanford Reach Protection flows (non-BiOp)	Tue 4/1/03	Mon 6/30/03											
ARDB	Trout Spawning Flows 15-25 KCFS (non-BiOp)	Tue 4/1/03	Mon 6/30/03											
LWG	Spring Flow Objective	Thu 4/3/03	Fri 6/20/03											
LWG	Mop Operation	Thu 4/3/03	Tue 9/30/03	-										
LGS	Mop Operation	Thu 4/3/03	Sun 8/31/03	-										
LMN	Mop Operation	Thu 4/3/03	Sun 8/31/03	-1										
LGS	Mop Operation	Thu 4/3/03	Sun 8/31/03	-										
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Project	Task Name	Start	Finish	Qtr 4, 2 Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	, 2003 Aug	Se
LWG	Spill For Juvenile Fish Passage	Thu 4/3/03	Fri 6/20/03	001			· ·	. 00	11101	7,61	y	7 00	0 4.1	7.08	
LGS	Spill For Juvenile Fish Passage	Thu 4/3/03	Fri 6/20/03												
LMN	Spill For Juvenile Fish Passage	Thu 4/3/03	Fri 6/20/03												
IHR	Spill For Juvenile Fish Passage	Thu 4/3/03	Sun 8/31/03												
RFC	April Final Forecast	Mon 4/7/03	Mon 4/7/03							4 /	7				
TMT	Set Flow Objectives / refill strategy	Mon 4/7/03	Mon 4/7/03							4 /	7				
LIB	Be at April 10 Flood Control Elevation	Thu 4/10/03	Thu 4/10/03							4	10				
GCL	Be at April 10 Flood Control Elevation	Thu 4/10/03	Thu 4/10/03							4	10				
DWR	Be at April 10 Flood Control Elevation	Thu 4/10/03	Thu 4/10/03							4	10				
HGH	Be at April 10 Flood Control Elevation	Thu 4/10/03	Thu 4/10/03							4	10				
ALB	Be at April 10 Flood Control Elevation	Thu 4/10/03	Thu 4/10/03							4	10				
MCN	Spring Flow Objective	Thu 4/10/03	Mon 6/30/03												
PRD	Spring Flow Objective	Thu 4/10/03	Mon 6/30/03												
JDA	Minimum Irrigation Pool	Thu 4/10/03	Tue 9/30/03												
MCN	Spill For Juvenile Fish Passage	Thu 4/10/03	Mon 6/30/03												
JDA	Spill For Juvenile Fish Passage	Thu 4/10/03	Sun 8/31/03												
TDA	Spill For Juvenile Fish Passage	Thu 4/10/03	Sun 8/31/03												
TDA	Spill For Juvenile Fish Passage	Thu 4/10/03	Sun 8/31/03												
HGH	Operational Plan Due	Thu 5/1/03	Thu 5/1/03							•	5/1				
LIB	Operational Plan Due	Thu 5/1/03	Thu 5/1/03							•	5/1				
LIB	Sturgeon pulse	Thu 5/1/03	Mon 6/30/03												
ARDB	1 MAF Flow Augmentation Drafting (non-BiOp)	Thu 5/1/03	Thu 7/31/03												
RFC	May Final Forecast	Wed 5/7/03	Wed 5/7/03								♦ 5/	7			
TMT	Determine Volume of Water Available for Sturgeon pulse	Wed 5/7/03	Wed 5/7/03								♦ 5/	7			
RFC	June Final Forecast	Sat 6/7/03	Sat 6/7/03									6 /	7		

				Qtr 4,				1, 2003			2003			3, 2003	
Project	Task Name	Start	Finish	Oct	Nov	Dec	Jar	n Fe	b Mar	Apr	May	Jun	Ju	l Au	ıg Se
TMT	Determine Summer Flow objective	Sat 6/7/03	Sat 6/7/03									6 /	7		
DWR	Temperature Modeling and release strategy	Sun 6/15/03	Sun 6/15/03									♦	6/15		
	Start work on next year's Water Management Plan	Sun 6/15/03	Sun 6/15/03									♦	6/15		
LWG	Summer Flow Objective	Sat 6/21/03	Sun 8/31/03												
MCN	Determine Summer Transport Date	Wed 6/25/03	Wed 6/25/03									4	6/2	5	
LIB	Refill By June 30	Mon 6/30/03	Mon 6/30/03									•	6/	30	
GCL	Refill By June 30	Mon 6/30/03	Mon 6/30/03									•	6/	30	
DWR	Refill By June 30	Mon 6/30/03	Mon 6/30/03									•	6/	30	
HGH	Refill By June 30	Mon 6/30/03	Mon 6/30/03									•	6/	30	
ALF	Refill By June 30	Mon 6/30/03	Mon 6/30/03									•	6/	30	
LIB	Operate to meet Summer Flow objectives	Tue 7/1/03	Sun 8/31/03												
GCL	Operate to meet Summer Flow objectives	Tue 7/1/03	Sun 8/31/03												
HGH	Operate to meet Summer Flow objectives	Tue 7/1/03	Sun 8/31/03												
ALF	Operate to meet Summer Flow objectives	Tue 7/1/03	Sun 8/31/03												
DWR	Operate to meet Summer Flow objectives	Tue 7/1/03	Sun 8/31/03												
MCN	Summer Flow Objective	Tue 7/1/03	Sun 8/31/03												
GCL	Operate Bank Lake 5 ft. from full	Tue 7/1/03	Sun 8/31/03												
LIB	Bull trout Releases	Tue 7/1/03	Thu 7/31/03												
LIB	Libby / Arrow Swap Considered	Tue 7/1/03	Tue 7/1/03									•	\rightarrow 7/	1	
LIB	Summer draft Limit 2439 ft.	Sun 8/31/03	Sun 8/31/03												♦ 8/
HGH	Summer draft Limit 3540 ft.	Sun 8/31/03	Sun 8/31/03												8 /
GCL	Summer draft Limit 1280 or 1278 ft.	Sun 8/31/03	Sun 8/31/03												8 /
DWR	Summer draft Limit 1520 ft.	Sun 8/31/03	Sun 8/31/03												8 /
GCL	Banks Lake Drafted to 1565 ft.	Sun 8/31/03	Sun 8/31/03												8 /
DWR	Operate at minimum outflow	Mon 9/1/03	Tue 9/30/03												

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	Task Name			Qtr 4, 2002		Qtr 1, 20	03	Qtr 2, 200	3	Qtr 3,	2003	
Project		Start	Finish	Oct Nov	Dec	Jan F	eb Mar	Apr M	ay Jun	Jul	Aug	Sep
	Completion of Next year's Water Management Plan	Sat 9/20/03	Sat 9/20/03									4
CL	Kokanee Forebay Elevation 1283 ft. (non-BiOp)	Tue 9/30/03	Tue 9/30/03									·
								,		1		