

Appendix H  
TDG decision making rationale 2000

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# Decision Rationale

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**Date** 01-Jun-00

**Comments** Snake system just about as close to cap as we can get. Lower Columbia spilling below cap and forebays below 115%. Change from prolonged cool period could cause %age to increase quickly.

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<b>Location</b>	<b>CurrentSpill</b>	<b>New Spill</b>	<b>Rationale</b>
IDSW	114	114	High was 117.7%. Didn't spill to cap.
LGNW	152	152	No change. High of 120.7%; 1 hour over 120%.
LGSW	55	55	No change. High of 120.4%. 9 hours over 120%.
LMNW	48	45	High of 120.5%. Over 120% for 4 hours. 12-hour average was 119.9%.
MCPW	152	160	High was only 118.5%. 12-hour average 117.7%.
TDDO	123	128	High of 116.0%. Didn't spill to cap, but it was close.
WRNO	100	110	High of 111.9% at Camas, which was a drop from yesterday's 114.3%

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**Date** 02-Jun-00

**Comments** Lower Snake gas levels in the forebays and tailweaters are running near their gas cap limits. With warming weather beginning, the caps will have to be looked at closely over the weekend. Also, The Dalles forebay is over the 115% level for 8 hours and

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<b>Location</b>	<b>CurrentSpill</b>	<b>New Spill</b>	<b>Rationale</b>
SKAW	110	115	Max was 118.1%. Camas at 113%
LGSW	55	50	Max of 121.1%; over the 120% level for 10 hours. LMN forebay over 115% cap for 5 hours.
LMNW	45	40	Max of 120.9%; over 120% level for 4 hours. IHR forebay was over 115% for 10 hours.
JHAW	172	170	Max of 120.4% ; over 120% level for 1 hour. TDA forebay over 115% for 8 hours. TDA did not spill to cap.
WRNO	110	115	Max was 116.1%. Camas at 113%. Could go 10 KCFS but the weather is warming.

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**Date** 03-Jun-00

**Comments** Snake needs adjustment but the lower Columbia doing well

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<b>Location</b>	<b>CurrentSpill</b>	<b>New Spill</b>	<b>Rationale</b>
SKAW	115	110	Max was 120.2% for 2 hourd; CWMW was over 115% for 11 hours.
LMNW	40	35	Max was 119.9%; IHR was over 115% for 22 hours.
LGNW	62	58	Max was 121.8%; over 120% for 10 hours.
LGSW	50	45	Max was 119.7%; LMN was over 115% for 12 hours.

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**Date** 04-Jun-00

**Comments** IHR heating up and increasing in gas level. Camas also reating up and increasing in gas level. JDA di not spill to cap.

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<b>Location</b>	<b>CurrentSpill</b>	<b>New Spill</b>	<b>Rationale</b>
LGSW	45	42	Max is 119.2% but LMN is over 115% for 8 hours.
LMNW	35	30	Max is 118.1% but IHR is over 115% for 22 hours.
JHAW	170	170	No change. Max is 118.8% and TDA max only 113.3%. However, JDA did not spill to cap of 170 kcfs. It only went to 162.

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**Date** 05-Jun-00

**Comments** Increased temperature in the region is apparent in the increasing TDG levels through out the system. Cooler weather is expected for the next few days then a gradual increase to region norms by the weekend.

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<b>Location</b>	<b>CurrentSpill</b>	<b>New Spill</b>	<b>Rationale</b>
LGSW	42	37	Reduction to bring down LMN forebay
LMNW	30	25	Reduction to bring down IHR forebay.
IDSW	114	90	Reduce spill to approximate 100 % of flow. At 100% flow MCQW forebay over 115 12 hour average for 6 hours.
JHAW	170	170	No change at JDA even though TDA forebay over 115 because of spill test pattern. JDA will be spilling 0 for 12 hours.
CWMW	100	90	Reduction at BON to reduce SKAW and Camas TDG. Camas TDG over 115 for 15 hours. BON on continuous spill for the next 6 days.

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**Date** 06-Jun-00

**Comments** *Weather conditions appear stable for the next few days. Operating conditions at LWG and Lower Snake projects may change early next week due to no more use of Surface Bypass Collector at LWG and the beginning of fish barging.*

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<b>Location</b>	<b>CurrentSpill</b>	<b>New Spill</b>	<b>Rationale</b>
CWMW	90	90	No change. Wait one more day to see if yesterdays change at BON was enough to reduce TDG at Camas.
LGSW	37	35	Reduce spill to decrease TDG in LMN forebay. LMN forebay over 115 for 12 hours with a high of 117.3
TDDO	128	128	Looked at increasing at TDA since the Tailwater TDG is only up to 116.6% Decided not to since the project did not spill to the current cap.
LMNW	25	25	No change. Considered a change since IHR forebay is over 115 for 20 hours with a high of 119.2. Decided no change since it appears that the decreased spill at LMN is bringing the TDG down below 115 based on the check_spill information.

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**Date** 08-Jun-00

**Comments** *System appears fairly stable with slight upward trend.*

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<b>Location</b>	<b>CurrentSpill</b>	<b>New Spill</b>	<b>Rationale</b>
LGSW	35	32	LMN forebay 12 hour average over 115 for at least 5 hours.
IDSW	90	85	MCN forebay Oregon side 12 hour average over 115 for 8 hours.
JHAW	170	160	TDA forebay over 12 hour average for 6 plus hours. Don't have current information from Priest Rapids to clarify the picture. Make change here tomorrow as spill schedule changes per the test pattern.
TDDO	128	128	BON forebay is at 114 in the hourly data and trending up rapidly. No change. Watch tomorrow.
WRNO	90	85	Camas TDG over 115 for 10 hours with the 12 hour average over 115 for 8 plus hours. Make change here tomorrow due to spill schedule change.
LMNW	25	25	No change. LMNW is only at 117 but IHR forebay is at 114.5%

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**Date** 09-Jun-00

**Comments** Received comments from Jim Ceballos of NMFS. He is concerned that we could spill more on the Snake River projects (LWG, LGS, LMN, an MCN) as mentioned in a TMT call.  
We are reviewing our calculations and decision making criteria.

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<b>Location</b>	<b>CurrentSpill</b>	<b>New Spill</b>	<b>Rationale</b>
IDSW	85	90	Increase. MCN forebay 12 hour avg only 113.3%, finally moved below 115%
CWMW	85	95	Camas 12 hr avg = 113.7% Project will be only spilling 75KCFS during the day according to the test schedule. Increase cap slightly (one day) in anticipation of the decreased gas levels during this test condition.
TDDO	128	128	No change. Low gas levels but the project is currently not spilling to the cap.
MCPW	160	160	No change. 12 hour avg reached 119.9% Good trend over last three days , 12 hour avg holding between 119 and 120%
LMNW	25	30	Increase. IHR forebay 12 hour avg only reached 113.9%
LGSW	32	32	The adjustment down yesterday brought the LMN forebay into compliance (12 hour avg = 114.6) No change here even though tailwater is only 114.5.
LGNW	58	60	12 hour avg dropped below 119%.
JHAW	160	160	No change. Not reaching cap often. When they did at 170KCFS the TDA forebay has been over 115%

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**Date** 10-Jun-00

**Comments** TDG is the system dropping off.

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<b>Location</b>	<b>CurrentSpill</b>	<b>New Spill</b>	<b>Rationale</b>
SKAW	0	0	CWMW was 113.9% but WRNO was 118.1% and SKAW was 116.9%. Wasn't sure how much dissipation would occur, therefore, no change.
LGSW	32	42	Max was only 115.1% LMN forebay only 112.1%
LMNW	30	40	Max was only 115.9%. IHR forbay only 112.5%
IDSW	90	100	Max was only 116.7% Spilled to max of 90 kcfs for 1 hour, therefore, go to 100 kcfs even if it only gets there for 1 hour.
MCPW	0	0	Didn't spill to cap.
JHAW	0	0	Didn't spill to cap

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TDDO 0 0 Didn't spill to cap.

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**Date** 11-Jun-00

**Comments** TDG in the system still dropping.

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<b>Location</b>	<b>CurrentSpill</b>	<b>New Spill</b>	<b>Rationale</b>
SKAW	95	105	Max was 117.6%. CWMN was only 112.6%; it dropped from yesterday
LMNW	42	50	Max was 117.8%. IHR was only 109.8%.
MCPW	160	170	Max was 118.5%. JDA was only 107.8%.
WRNO	95	105	Max was 117.2%. It dropped since yesterday.
LGSW	42	47	Max was 118.0%. LMN was only 109.9%

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**Date** 12-Jun-00

**Comments** Cool, wet weather persists. System TDG getting close to operating goals of 115% and 120%.

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<b>Location</b>	<b>CurrentSpill</b>	<b>New Spill</b>	<b>Rationale</b>
LGNW	60	62	Max was 119.7% 12-hour average was 118.8%
TDDO	123	123	No change because it didn't spill to the cap. High of 116.1%
LMNW	45	48	High of 119.1%.
JHAW	172	172	No change because it didn't spill to cap. High of 118.9%.
LGSW	53	55	Max was 120.2%; over 120% for 2-hours and LMN over 115% for 4 hours.
IDSW	109	114	High of 118.6%.
WRNO	95	100	High of 114.3% at Camas.
MCPW	150	152	High of 119.4%.

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**Date** 13-Jun-00

**Comments** Low runoff on the Snake and lower Columbia causes several of the Corps projects not to spill to the caps.

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<b>Location</b>	<b>CurrentSpill</b>	<b>New Spill</b>	<b>Rationale</b>
LGSW	0	0	No change. Project didn't spill to cap.
WRNO	105	110	Max was 120.0%. 12-hour high was 118.48%. CWMW max was only 111.6%; 12-hour high was 110.82%
TDDO	0	0	Didn't spill to cap.

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JHAW	0	0	Didn't spill to cap.
MCPW	170	175	Max was 119.2%. 12-hour high was 118.85%. JDA max was only 118.85%.
IDSW	0	0	No change. Project didn't spill to cap.
LMNW	0	0	No change. Project didn't spill to cap.
SKAW	105	110	Max was 118.9%.

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**Date** *14-Jun-00*

**Comments** *Expected dramatic increase in temperature is predicted to be reflected in increasing gas levels tomorrow. Make changes as BON and JDA tomorrow in anticipation of the changed spill requirements specified in the spill test schedule for these sights.*

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<i>Location</i>	<i>CurrentSpill</i>	<i>New Spill</i>	<i>Rationale</i>
LGSW	47	50	Average of 12 highest readings in 24 hours = 118.5%
MCPW	175	175	Change at MCN yesterday appears to have been appropriate for conditions. High 12 in 24 avg = 119.5%
JDA	160	160	No change. Not spilling to cap.
CWMW	110	110	Change at BON yesterday appears to have been appropriate for conditions.
LMNW	50	42	Average of 12 highest readings in 24 hours = 121.3%
TDA	128	128	No change. Not spilling to cap.

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**Date** *15-Jun-00*

**Comments**

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<i>Location</i>	<i>CurrentSpill</i>	<i>New Spill</i>	<i>Rationale</i>
JHAW	160	160	Project did not spill to the gas cap for a long period of time. When the gas cap was reached, the TDG levels appeared to be very near 120%
LGSW	50	52	High 12 in 24 avg = 118.6%
TDDO	128	128	Did not spill to gas cap.
IDSW	100	105	Spilled to cap. Highest hourly TDG = 118.3% No exceedance at MCN.
LMNW	42	45	Yesterday ruced from 50 to 42. Reduction appears to have been to drastic for given conditions.
CWMW	110	100	TDG levels are acceptable. Decrease gas cap in anticipation of daytime operation change starting tomorrow according to the test pattern.

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*Date* 16-Jun-00

*Comments* Warmer weather expected impacts the size of the adjustments down at LMN and MCN.

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<i>Location</i>	<i>CurrentSpill</i>	<i>New Spill</i>	<i>Rationale</i>
TDDO	128	128	Did not spill to cap.
CWMW	100	100	No change. TDG is low but is also lagging current operation change. TDG should come up late this afternoon and remain consistent around 115%.
MCPW	175	170	MCN tailwater TDG 12/24 high avg = 120.5%
LMNW	45	40	IHR forebay TDG 12/24 high avg = 116.1%

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*Date* 17-Jun-00

*Comments*

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<i>Location</i>	<i>CurrentSpill</i>	<i>New Spill</i>	<i>Rationale</i>
LGNW	60	60	No change. 12 high/24 avg - 119.97%. Hold current spill for next 24 hour period and review again.
LGSW	52	50	12 high/24 avg = 120.1% Reduce slightly.
LMNW	40	37	LMNW 12/24 avg = 119% IHR forebay = 116.1%
CWMW	110	110	No change. TDG still rising at WRNO and SKAW. Review tomorrow to see where the values top out at.

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*Date* 18-Jun-00

*Comments*

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<i>Location</i>	<i>CurrentSpill</i>	<i>New Spill</i>	<i>Rationale</i>
LGSW	50	45	LMN forebay over 115%
CWMW	110	105	Camas TDG over 115%
LMNW	37	32	IHR forebay over 115%

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*Date* 20-Jun-00

*Comments*

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<i>Location</i>	<i>CurrentSpill</i>	<i>New Spill</i>	<i>Rationale</i>
IDSW	105	105	No change. Not spilling to cap.
LGNW	60	0	Cease spill in order to start barging fish.
JHAW	160	160	No Change. Not spilling to cap.

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LMNW	27	0	Cease spill in order to start barging fish.
LGSW	42	0	Cease spill in order to start barging fish.
MCPW	170	170	No change. Not spilling to cap.
TDDO	128	128	No change. Not spilling to cap.

**Date** 21-Jun-00

**Comments**

<i>Location</i>	<i>CurrentSpill</i>	<i>New Spill</i>	<i>Rationale</i>
CWMW	105	100	Camas TDG levels over 115%

**Date** 23-Jun-00

**Comments** *With the stopping of spill this week in the Snake, the TDG levels in the Snake have been dropping. The lower Columbia is not spilling to the caps so the gas levels in the lower Columbia also dropping.*

<i>Location</i>	<i>CurrentSpill</i>	<i>New Spill</i>	<i>Rationale</i>
CWMW	100	110	Max was 115.0%. High 12-hour for yesterday was 115.87%.
SKAW	100	110	Max was 114.7%. Some hourly values in the last 12 hours are well below even 115%.
WRNO	100	110	Max was 114.7%. Some of the hourly values in the last 12 hours are well below even 115%

**Date** 28-Jun-00

**Comments**

<i>Location</i>	<i>CurrentSpill</i>	<i>New Spill</i>	<i>Rationale</i>
TDDO	128	100	Reduce spill to 100. Appears to be a drastic reduction however, the project has not been spilling to cap. To effect a reduction in the gas level at BON the cap must be lowered to within the current operating range of the dam.
CWMW	120	115	Project exceeded the spill cap last night. Can not directly evaluate spill cap at 120. Reduce spill to 115 based on increased forebay TDG level. CWMW 12/24 TDG = 119.1%

**Date** 29-Jun-00

**Comments**

<i>Location</i>	<i>CurrentSpill</i>	<i>New Spill</i>	<i>Rationale</i>
TDDO	100	97	BON forebay 12/24 high avg = 115.3%

CWMW

115

110 CWMW 12/24 high avg >120% TDG.

*Date* 03-Jul-00

*Comments*

<i>Location</i>	<i>CurrentSpill</i>	<i>New Spill</i>	<i>Rationale</i>
CWMW	115	115	When BON starts to spill tonight they will spill to the gas cap for the next three days (per schedule). Based on stable temps, the adjustment to 115 yesterday appears to be sufficient to carry into 24 hour spill to gas cap.

*Date* 06-Jul-00

*Comments*

<i>Location</i>	<i>CurrentSpill</i>	<i>New Spill</i>	<i>Rationale</i>
CWMW	110	100	Reduction yesterday from 115 to 110 kcfs appeared to slightly increase the TDG levels at WRNO and SKAW. Current SKAW 12/24 avg = 121% CWMW = 118% Reduce by 10 today to bring levels back under caps.
JHAW	160	140	The project TDG level is around 117%. The spill cap, at 160, would put the project over the gas cap. This is a "just in case" movement down of the gas cap.

*Date* 14-Jul-00

*Comments*

<i>Location</i>	<i>CurrentSpill</i>	<i>New Spill</i>	<i>Rationale</i>
LGSW	42	30	LGS is in a period of no spill. On Monday (17 July) all power generation units will be out for maintenance. To maintain river flow for fish, hopefully, under the 120/115% gas cap spill is being set at 30 kcfs based on the 60% DGAS study.
CWMW	110	113	

*Date* 17-Jul-00

*Comments*

<i>Location</i>	<i>CurrentSpill</i>	<i>New Spill</i>	<i>Rationale</i>
CWMW	113	108	4 hourly readings at WRNO were 123 + %. Reduce by 5 KCFS to stay below absolute ceiling of 125%.
DWQI	0	0	Decreasing spill between 1400 and 1900 which is the time period where the TDG level appears to peak. Change instructions to maintain water temp between 48.0-48.5. Watch how this affects the TDG level during the 24 hours especially 1900-1400.