

# Adding flexibility to temporary barriers setup for DSM2 v8 historical simulation

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## **Why modify the input structure for temporary barriers operations:**

1. Possible new barrier configurations which didn't happen in the historical record
2. Improve barrier descriptions



## **Possible new barrier configurations**

1. Middle River weir elevation operation
2. Grant Line Canal weir elevation and width operation

## **Improve barrier descriptions**

1. Add number of operated pipes for Old River near Tracy barrier
2. Add the modified flashboard operation for SMSCG



## Approach

1. Add additional time series in the gates-v8.dss
2. modify the temporary barrier input files

# Grant Line Canal Barrier Time Series

## Version 8 vs. Version 6

	No.	Data Source	B part in the DSS file	Values	
				1	2
GL_CN	1	DSM2 v.8	INSTALL	0	1
		DSM2 v.6	POS	10	1
		Barrier geometry txt file		barrier out	barrier in
	2	DSM2 v.8	WEIRWIDTH	125	77
		DSM2 v.6	WIDTHDOWN / WIDTHUP	125	77
		Barrier geometry txt file	Weir width	125	77
	3	DSM2 v.8	WEIRELEVATION	1	-13.1
		DSM2 v.6	CRESTELEV	1	-13.1
		Barrier geometry txt file	Weir elevation	1	-13.1
	4	DSM2 v.8	PIPE OP DOWN	0	1
		DSM2 v.6	CFPIPEDOWN	0	0.6
		Barrier geometry txt file	Downstream pipe coefficient	0	0.6

# Middle River Barrier Time Series

## Version 8 vs. Version 6

	No.	Data Source	B part in the DSS file	Values	
				1	2
MID_R	1	DSM2 v.8	INSTALL	0	1
		DSM2 v.6	POS	10	1
		Barrier geometry txt file		barrier out	barrier in
	2	DSM2 v.8	WEIRELEVATION	1	2
		DSM2 v.6	CRESTELEV	1	2
		Barrier geometry txt file	Weir elevation	1	2
	3	DSM2 v.8	PIPE OP DOWN	0	1
		DSM2 v.6	CFPIPEDOWN	0	0.6
		Barrier geometry txt file	Downstream pipe coefficient	0	0.6

# Old River Near Tracy Barrier Time Series

## Version 8 vs. Version 6

	No.	Data Source	B part in the DSS file	Values					
				1	2	3	4	5	6
OLD_R	1	DSM2 v.8	INSTALL	0	1				
		DSM2 v.6	POS	10	1				
		Barrier geometry txt file		barrier out	barrier in				
	2	DSM2 v.8	PIPE OP	0	0.333	0.444	0.556	0.667	1
		DSM2 v.6	NPIPES	0	3	4	5	6	9
		Barrier geometry txt file	# of pipes	0	3	4	5	6	9

# Old River Head Barrier Time Series

## Version 8 vs. Version 6

	No.	Data Source	B part in the DSS file	Values						
				1	2	3	4	5	6	
ORHRB	1	DSM2 v.8	WEIROP(SPRING)	0	1					
			WEIROP(FALL)				1			
		DSM2 v.6	POS	10	barrier in and widthdown/up = 167 and CRESTELEV = 10		barrier in and widthdown/up = 32 and CRESTELEV = 0			
		Barrier geometry txt file		barrier out						
	2	DSM2 v.8	PIPEELEV	-8	-5	-4				
		DSM2 v.6	PIPEELEV	-8	-5	-4				
		Barrier geometry txt file	PIPEELEV	-8	-5	-4				
	3	DSM2 v.8	PIPE OP	0	0.333	0.5	0.67	0.833	1	
		DSM2 v.6	NPIPES	0	2	3	4	5	6	
		Barrier geometry txt file	# of pipes	0	2	3	4	5	6	

# Suisun Marsh Salinity Control Gate Time Series

## Version 8 vs. Version 6

	No.	Data Source	B part in the DSS file	Values		
				1	2	3
MTZSL	1	DSM2 v.8	BOATLOCK OP	0	1	1 -open, 0 - close
		Barrier geometry txt file	PIPE ELEV		-10	
		Barrier geometry txt file	Flashboard NPIPES		2	
	2	DSM2 v.8	FLASHBOARD OP	0	1	0 - out, 1 - in
		Barrier geometry txt file	weir coef.	1	0	
	3	DSM2 v.8	Modified_FLASHBOARD_OP	0	1	0 - out, 1 - in
		Barrier geometry txt file	PIPE_ELEV		-11	
		Barrier geometry txt file	Flashboard NPIPES		14	
	4	DSM2 v.8	RADIAL FRACT	0.333	0.667	1
		Barrier geometry txt file	SUISUN Marsh gates	gates	gates	3 gates open.
	5	DSM2 v.8	RADIAL OP	0	1	-10
		Barrier geometry txt file	SUISUN Marsh gates	close	open	tide operation