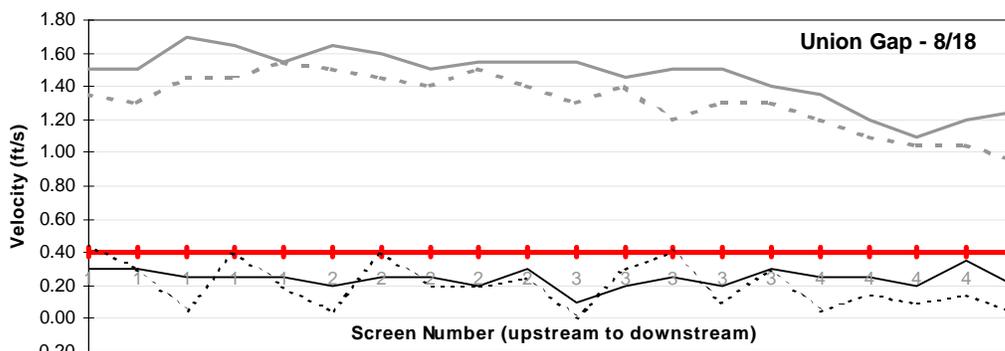
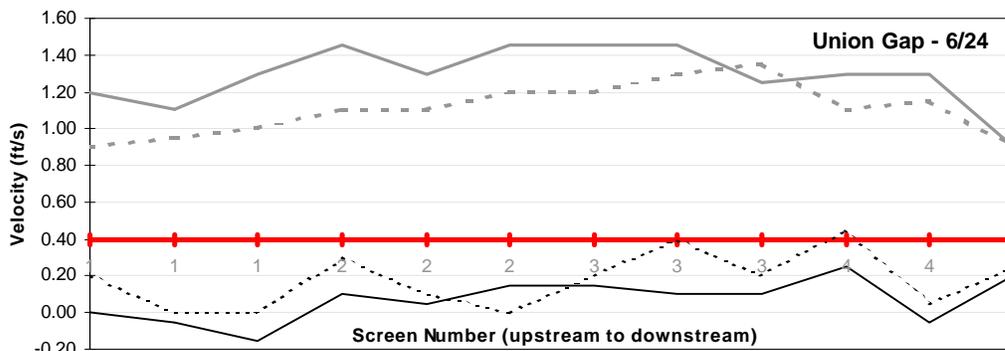
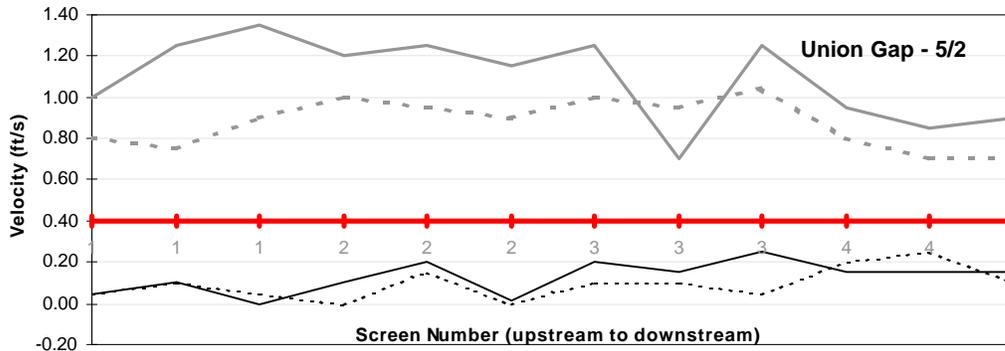
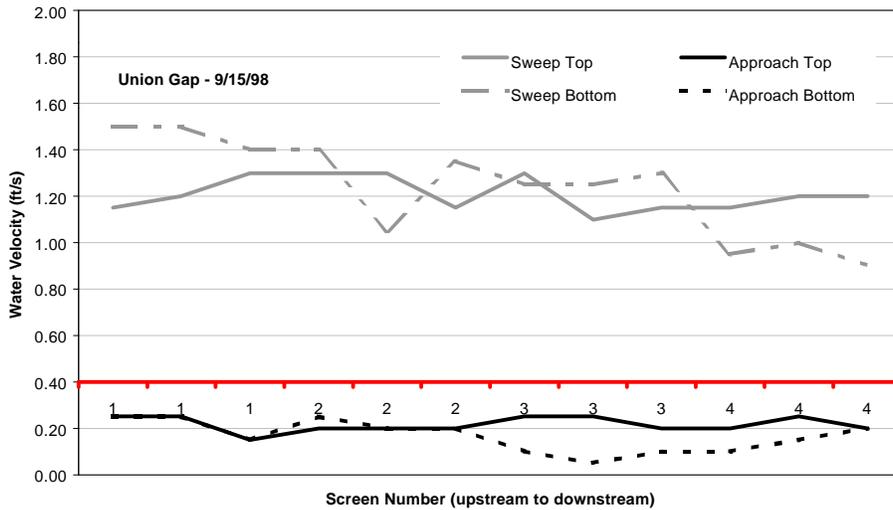
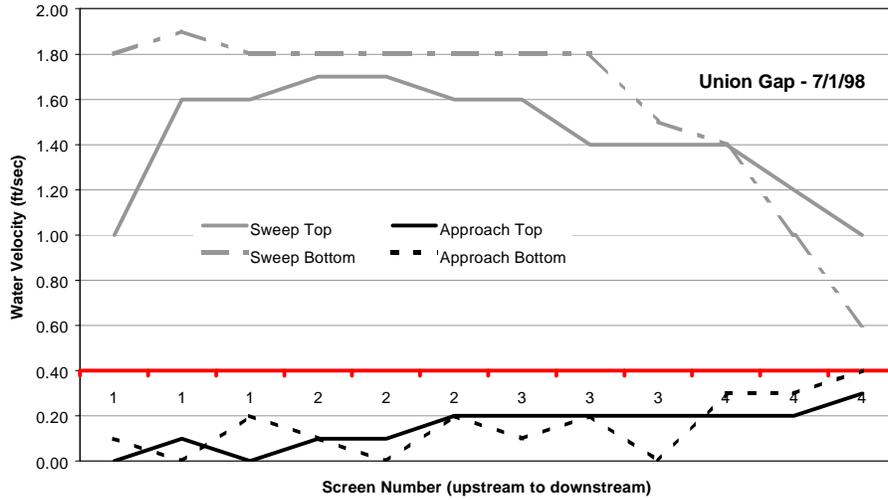
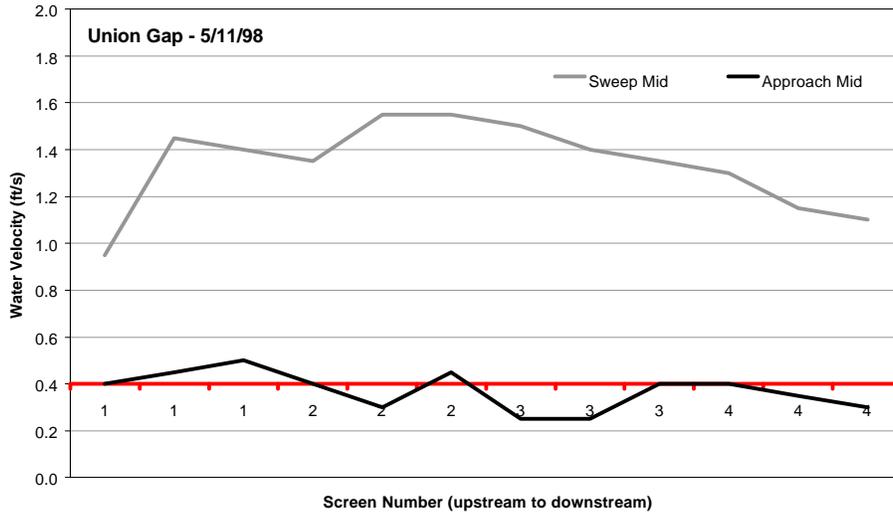


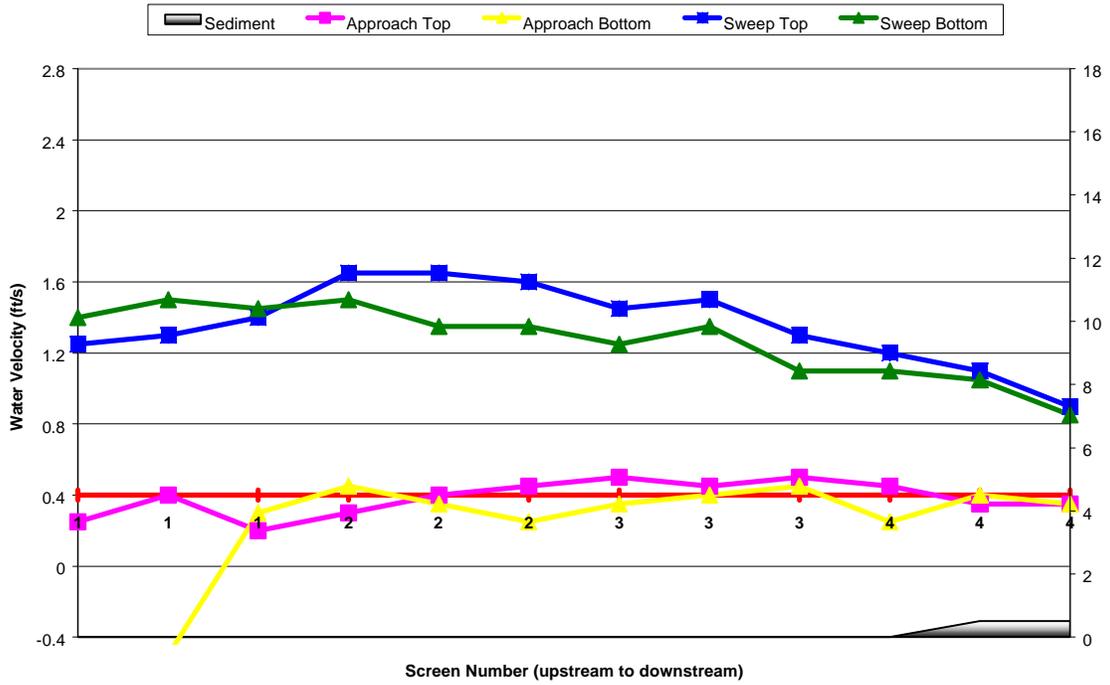
Water Velocities: Union Gap

1997

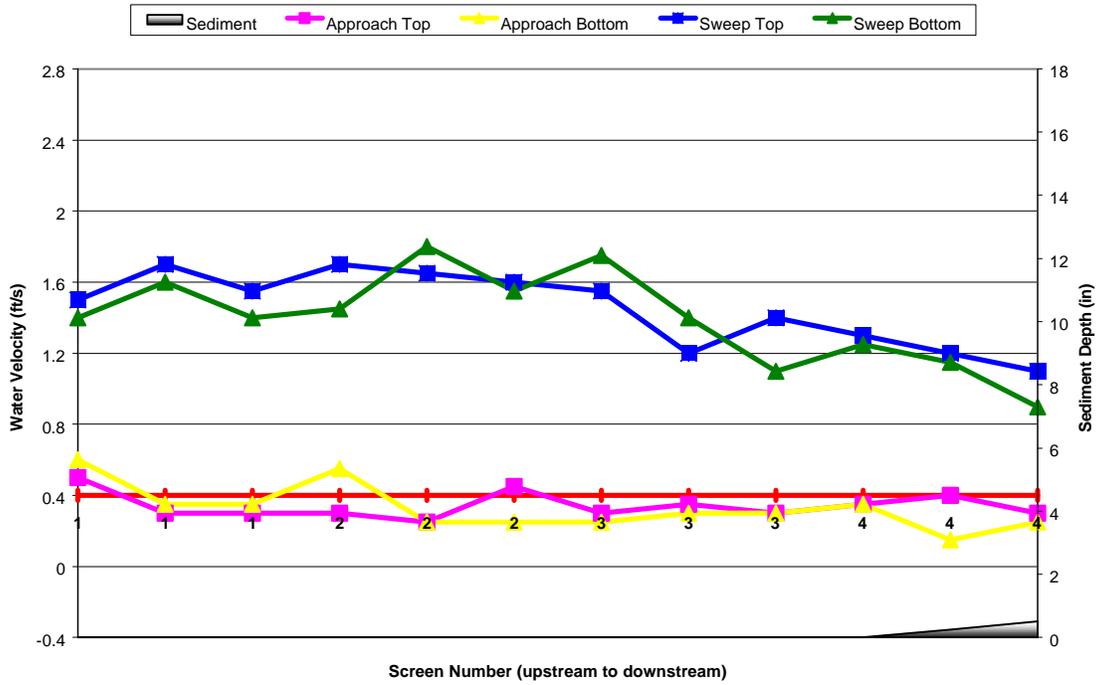




Union Gap - May 13, 1999



Union Gap - July 14, 1999



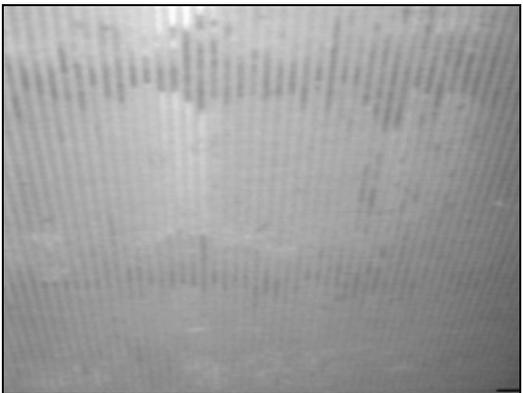
General Observations: Union Gap

Date	Union Gap 5/2/97	Union Gap 6/24/97	Union Gap 8/18/97	Union Gap 5/11/98	Union Gap 7/1/98	Union Gap 9/15/98	Union Gap 5/13/1999	Union Gap 7/14/99
Staff Gages?	forebay=1.19 aftbay=1.16	forebay=1.60 aftbay=1.50	forebay=1.66 aftbay=1.50	forebay=1.48 aftbay=1.40	forebay=1.5 aftbay=1.6	forebay=1.34 aftbay=1.21	forebay=1.55 aftbay=1.40	forebay=1.60 aftbay=1.48
Submergence Marks?	NA	NA	NA	NA	no	no	yes, but below 90 being brushed away by brush pile	no
Stoplogs?	NA	no	NA	NA	no	NA	NA	NA
Louvers?	no info	no info	no info	Louvers behind screen are all pointing in the same direction (~45 degrees) except those behind panel 1 furthest upstream, which are at a different angle (~90 degrees).	no info on their position.	Louvers are ~3/4 open	see picture	see picture
Head Loss?	no	no	1"	Yes, but no info on how much.	1"	0.75"	No. 1/2"	Yes. 1"
Screen Material Condition	brand new perf plate	new & clean	good	no info	good	Good shape except for some excessive algae and debris on the screen that the brush isn't cleaning.	Scr.3 has metal plate covering part.	1ft of screen seen okay.
Seal Condition	brand new	some seam sealant missing on Panel 3	good	no info	good	good from above and below.	Caulking missing between 3&4. Foam caulking end of scr.4.	No caulking between 2/3 and 3/4.
Drums Turning Evenly?	NA	NA	NA	NA	Yes, brush is on a timer.	NA	NA	NA
Debris Anywhere?	some brush on the trashrack, but not too much	only some leaves and small sticks on trashrack and in forebay	only a few tumble mustards that blew into the forebay and some debris in front of Panel 4.	No	about 3" of sediment near the bypass, less in other places.	Little twigs and leaves starting to build up on the trashrack, but by the piles nearby, they must clean it regularly.	No.	Tumbleweeds and sticks in trashrack.
Cleaning System Working?	brush takes 3min 30sec to go one way	yes, brush was picking lots of "junk" off the screen. 7min 12 sec=round trip for the brush	brushes are turned on but not moving; probably on a time delay. Lots of debris on brush.	no data	yes	may be a little too much time between cleanings. Debris started to build up. When we were there, there was at least 1 hr between cleanings.	Brushed every 70 minutes, still leaves debris.	Only operating 1/hour and leaf litter reattaching after brush passes.
Submergence (% of 48")	80.0	85.0	83.3	93.3	93.3	90	85%	

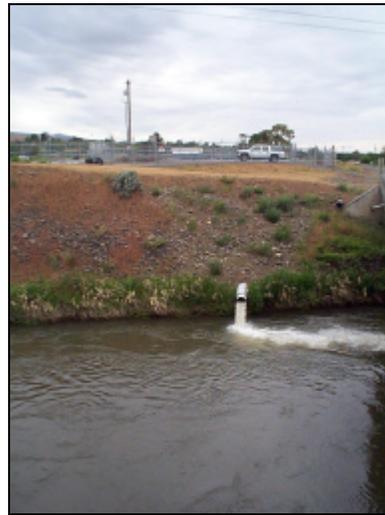
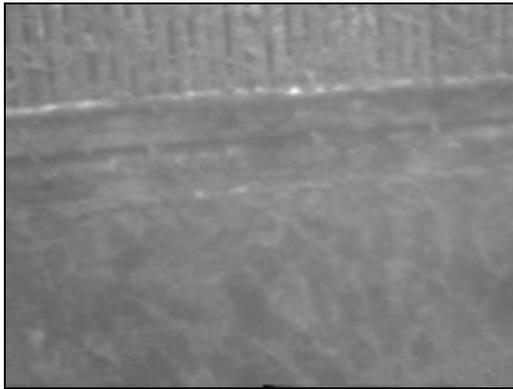
General Observations, continued

Date	Union Gap 5/2/97	Union Gap 6/24/97	Union Gap 8/18/97	Union Gap 5/11/98	Union Gap 7/1/98	Union Gap 9/15/98	Union Gap 5/13/1999	Union Gap 7/14/99
Flow over Weir? How much?	yes, 9"	yes, 11"	yes, 12"	yes	Yes, 10"	Yes, 11"	Yes. 13.5"	Yes. 13"
Gage to Measure Weir Crest?	no	no	no	Yes, a pole has been marked in inches up to 2 feet.	no	Stick with faded marks on it and a "closed" position marked on the gate frame.	Yes. Gaff pole in .1ft marks.	Yes, pole with 1/2ft marked.
Weir Full Open? If not, how many inches to go?	no, 95% open	no, 4" to go	no, 1 3/4" to go	yes	No, 22" to go	yes	yes	Yes. Flood gate closed.
Water Running Freely behind Weir?	yes	yes	yes	yes	yes	yes	yes	yes
Depth of water in outfall pipe	8"/18"	~7"/15"	6 1/2"/15"	Pipe is submerged, but pulsing and bubbles indicate that the pipe is not full.	~10" (15" pipe)	half full (~7.5")	No. 1/2"	1/2 full.
Outfall Running Smooth?	yes	yes	yes	yes	yes	yes	yes	yes
Debris at End of Pipe?	no	no	no	no	no	no	no	no
Discharge Area ≈ 1 ft?	yes	yes	yes	yes	yes	yes	yes	yes
Silt	none	no info	the only silt was at Panel #4=1"	no info	about 3" of sediment near the bypass, less in other places.	Very little - only one comment about there being 0.5" of silt in front of Panel 4 (of 4).	Only 1/2" sed. on scr.4.	Only small amounts at 4 screen.
Comments			1 small fish in forebay.	Site is in good condition and operating well in high water.	Switch is on, but screens brushes are sometimes not moving. They are on a timer. No log book.	none.	No caulking between 2&3, 3&4. Some diatomson seal and sand at scr.4 and bypass.	May not be caulking in vertical seams.

1997 Photos: Union Gap



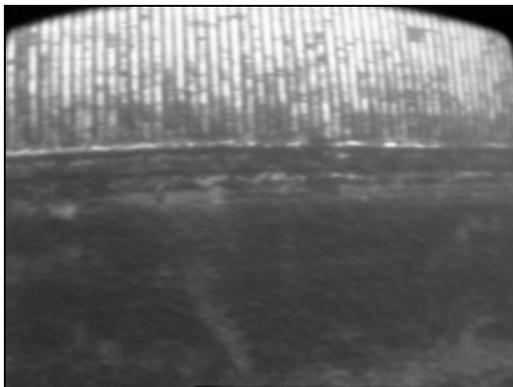
1998 Photos: Union Gap



1999 Underwater Video: Union Gap

Screen Site	Date (Tape #)	Location (screen # & VCR counter)	VCR Counter	Notes	Photos	Descriptor
Union Gap	5/13/99 (1)	1 0:32:22	0:32:23	algae growth on seams, some small debris on screen	0:32:32	P1
		2 0:34:33	0:32:58	algae growth on seams, some small debris on screen *Notes: caulking between 2/3 & 3/4 & end 4 may be missing looks to be loose caulking at bottom of 2 & 3 screen.	0:35:57	C1
		3 0:36:03	0:36:12	leaf debris on screen	0:36:35	AVG
		4 0:37:29	0:38:13	sand cover and leaf debris on screen		
		Bypass 0:39:19	0:40:46	looking at patch on screen	0:41:11	R1
Union Gap	7/14/99 (2)	1 1:09:02	1:09:10	algae growth on bottom of screen	*no picture upstream seal; too much debris	
		2 1:10:24	1:11:15	loose caulking		
		3 1:11:49	1:12:35	missing caulking		
		4 1:13:13	1:14:04	debris on screen		
		Bypass 1:14:52				

1999 Photos: Union Gap



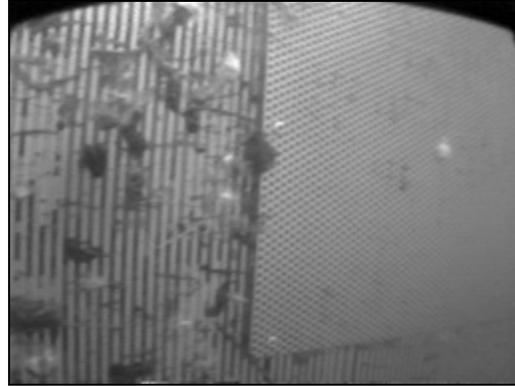
P1



C1



AVG



R1

