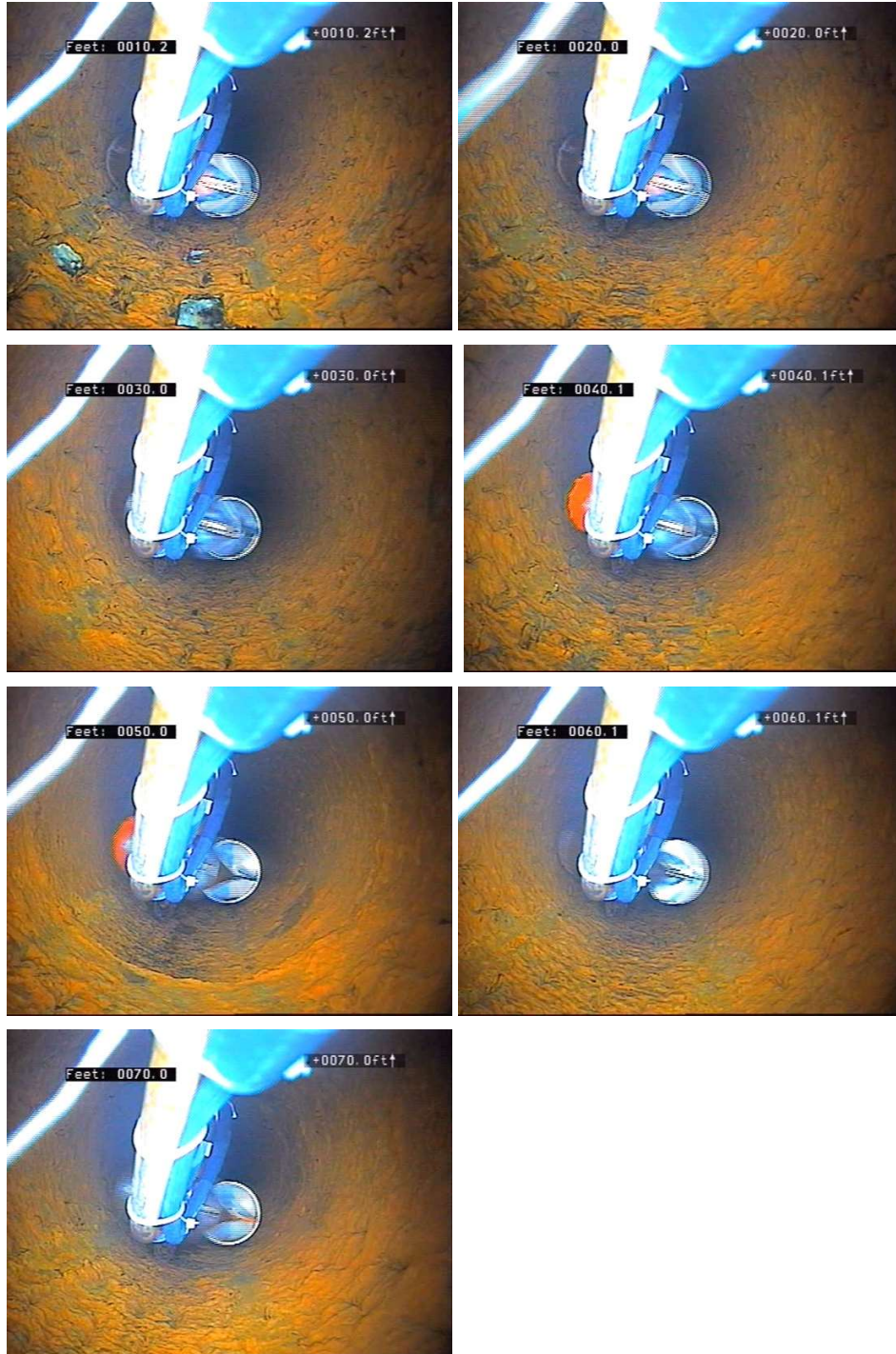
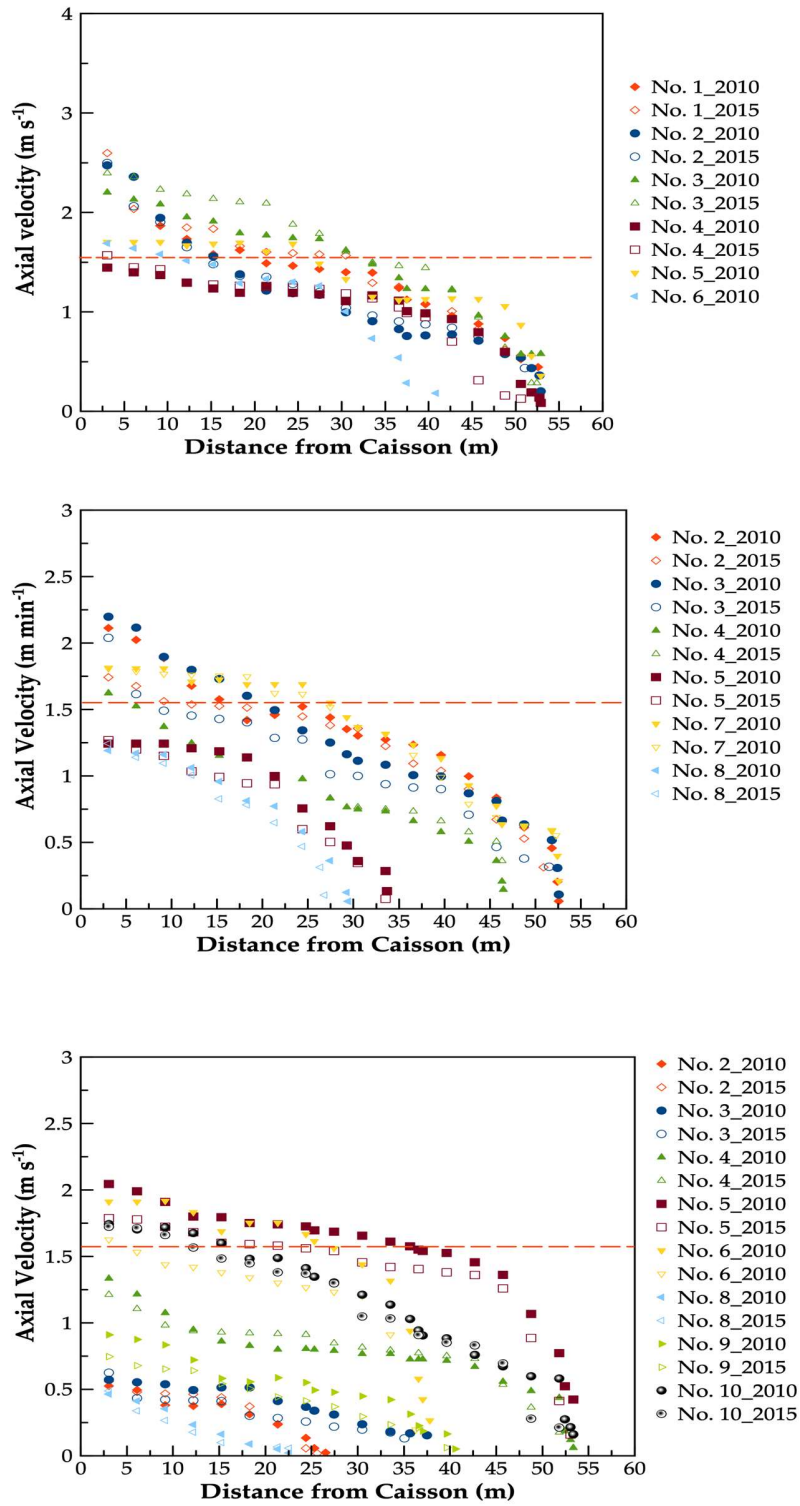




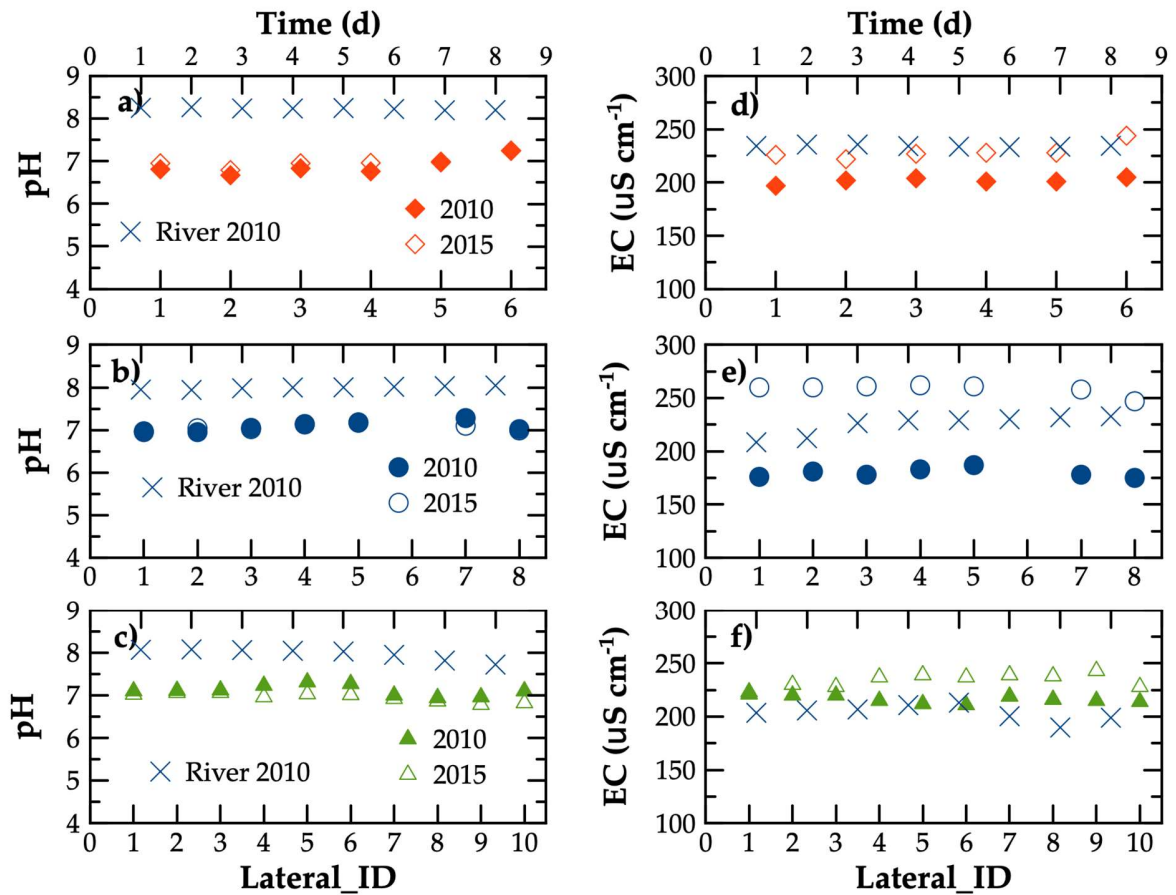
**Figure S1.** Diver preparing to enter one of the collector caisson (left) and diver climbing down one of the collector caisson ladder (right) [Source: 3].



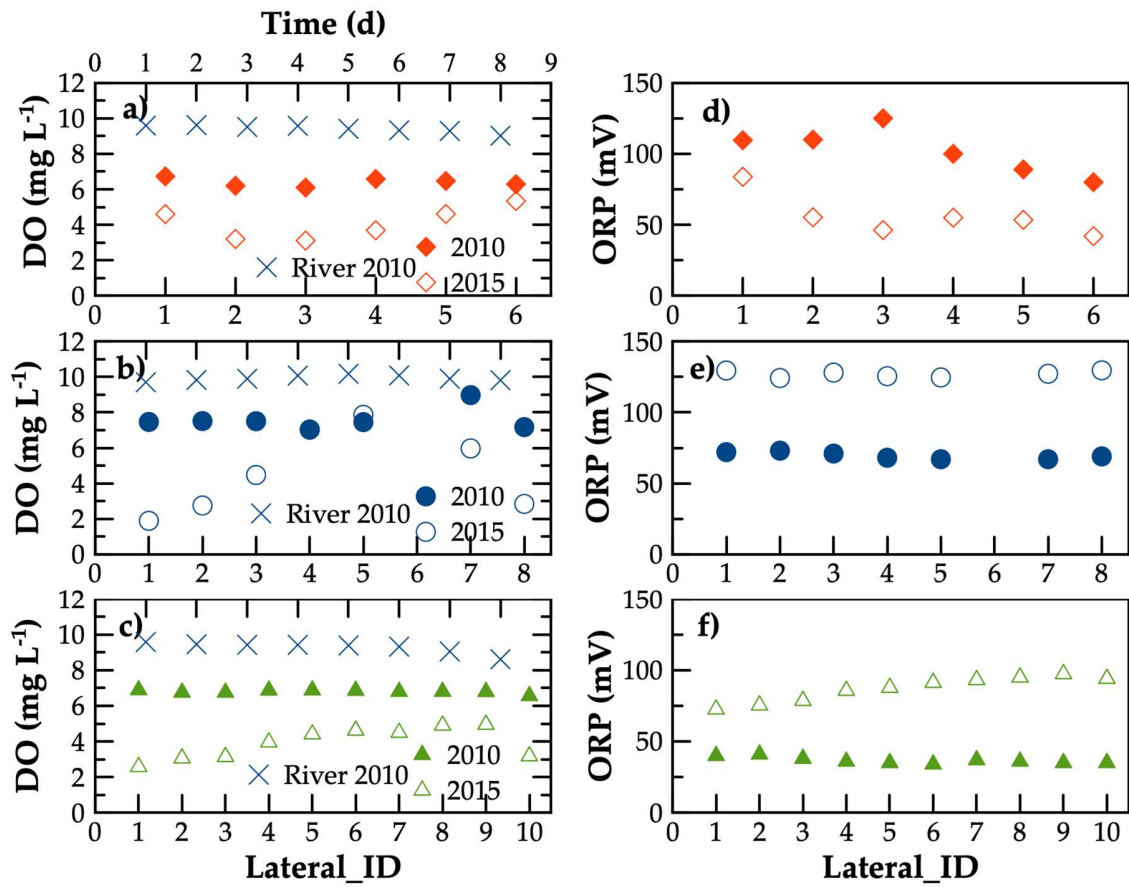
**Figure S2:** Collector Well 3, Lateral 4: 10 ft (3.048 m) progression from the lateral video inspection, 2015 (Source: Sonoma County Water Agency).



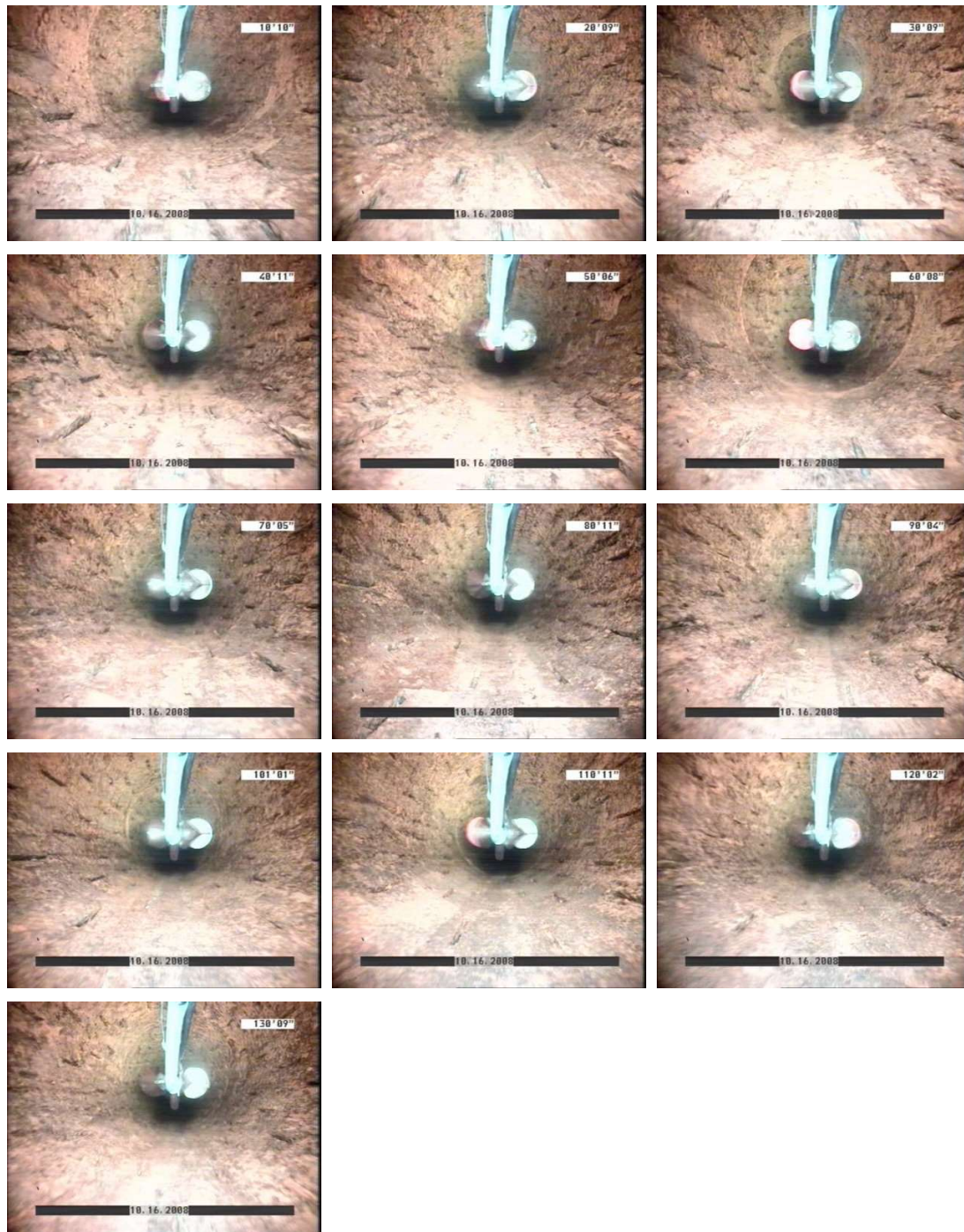
**Figure S3.** Axial velocity in different laterals at increasing distances between the screen length and the caisson for Collector 3 (top), Collector 4 (middle), and Collector 5 (bottom). Optimal design < 1.524 m s<sup>-1</sup> (red line).



**Figure S4.** pH at a) Collector 3, b) Collector 4, and c) Collector 5; electrical conductivity (EC) at d) Collector 3, e) Collector 4, and f) Collector 5 (Source: [1, 3]). Daily average pH and EC values associated to the Russian River were collected between 4 October (day 0) and 11 October (day 8) 2010, between 8 November (day 0) and 15 November (day 8), and between 18 October (day 0) and 25 October (day 8) 2010 during the capacity testing for Collector 3 (S4a and S4d), Collector 4 (S4b and S4e), and Collector 5 (S4c and S4f), respectively.



**Figure S5.** Dissolved oxygen (DO) at a) Collector 3, b) Collector 4, and c) Collector 5; redox potential (ORP) at d) Collector 3, e) Collector 4, and f) Collector 5 (Source: [1, 3]). Daily average DO values associated to the Russian River were collected between 4 October (day 0) and 11 October (day 8) 2010, between 8 November (day 0) and 15 November (day 8), and between 18 October (day 0) and 25 October (day 8) 2010 during the capacity testing for Collector 3 (S5a), Collector 4 (S5b), and Collector 5 (S5c), respectively.



**Figure S6:** Collector Well 6, Lateral 4: 10 ft (3.048 m) progression from the lateral video inspection, 2008 (Source: Sonoma County Water Agency).

**Table S1.** Summary of collector wells and construction parameters<sup>1</sup>.

<b>Collector Well</b>	<b>3</b>	<b>4</b>	<b>5</b>
Year constructed	1975	1975	1992
Location	South Westside Road	251 m east of # 3	332 m east of # 4
Pump floor elevation (m, AMSL)	23.79	23.76	23.75
Bottom floor elevation (m, AMSL)	-10.07	-10.90	-6.49
Total caisson length (m)	33.86	34.66	30.24
Inside diameter of caisson (m)	3.96	3.96	3.96
Number of laterals	6	8	10

<sup>1</sup> Source: ([1, 2]).

**Table S2.** Summary of laterals' construction parameters<sup>1</sup>.

<b>Lateral Number</b>	<b>Diameter (m)</b>	<b>Length (m)</b>	<b>Material</b>	<b>Elevation (msl)</b>
Collector Well 3				
1	0.254	52.58	Mild Steel	-29.55
2	0.254	52.88	Mild Steel	-29.55
3	0.254	52.88	Mild Steel	-29.55
4	0.254	52.88	Mild Steel	-29.55
5	0.254	52.88	Mild Steel	-29.55
6	0.254	40.84	Mild Steel	-29.55
Collector Well 4				
1	0.254	37.95	Mild Steel	-33.05
2	0.254	52.58	Mild Steel	-33.05
3	0.254	52.58	Mild Steel	-33.05
4	0.254	46.48	Mild Steel	-33.05
5	0.254	33.68	Mild Steel	-33.05
6*	0.254			
7	0.254	52.58	Mild Steel	-33.05
8	0.254	29.41	Mild Steel	-33.05
Collector Well 5				
1	0.254	51.21	Mild Steel	-17.79
2	0.254	26.52	Mild Steel	-17.79
3	0.254	37.49	Mild Steel	-17.79
4	0.254	53.34	Mild Steel	-17.79
5	0.254	53.34	Mild Steel	-17.79
6	0.254	37.80	Mild Steel	-17.79
7	0.254	21.34	Mild Steel	-17.79
8	0.254	22.56	Mild Steel	-17.79
9	0.254	40.54	Mild Steel	-17.79
10	0.254	53.34	Mild Steel	-17.79

\*\* Blank port. <sup>1</sup> Source: ([1, 2]).