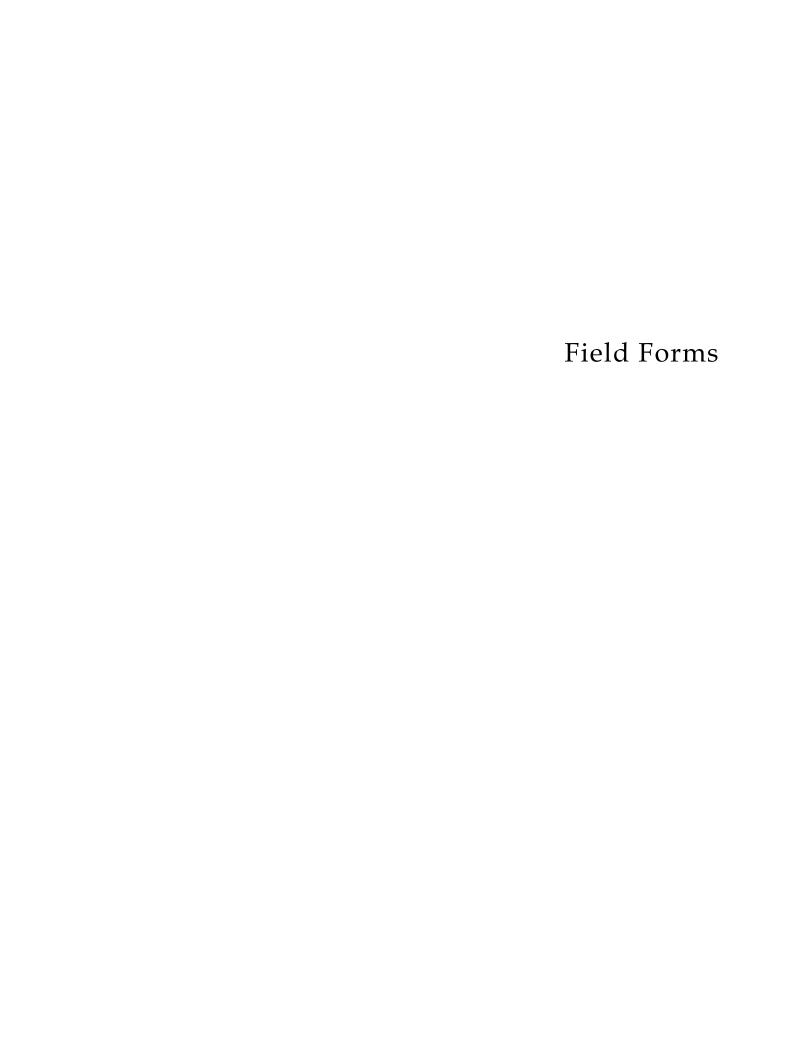
APPENDIX A. FIELD FORMS, FIELD NOTES, PHOTOS, AND COCS

Reconnaissance



Project Name	LDW Baseline Seep	Collection		Project Task	Seep Reco	nnaissan	ce Survey		
Date:	5/17/18			Crew	BB. S.A.	JU.	CL		
Weather:	~ 56°K, OVENC	ast		Photo no	1-12	_ /			
Name of person	on filling out form:	34							
·	-								
Seep Number	: SP 05 Ea	sting (x): 12718	713.8	Northing (y	199461	1	Time: /0 /	54	
Calculated flo	wrate w7 ml/s	Bass							
Temp	SpC	DO	рН	Т	urbidity	Salini	ity		
114.4	119655.8	1 8.14	16:	72 1	50.4	1			
2	219755.0	2	2	2		2			
3	3	3	3	3		3			
Comments:	23 sec					0			
270 n	le 35 sec	thod							
	* 1			ř.					
Bearing 1:	Object description:		Distance:	8		Compas	ss n		
Bearing 2:	Object description:		Distance:			Compass direction			
Comments/sk	etch:	· · · · · · · · · · · · · · · · · · ·							
,									
						Ç*			
									<
		~							

	e: LDW Baseline	Seep Collection	Projec	ct Task: Seep Re	connaissance Survey	
Date:	5/15/18		•	Crew: BB J	M. GD CL	
Weather:	V609 OVE 1	rastula	unbrealge	noto no. 73 -	74	T
	son filling out form:	1	DOI WILL		10	-
		LV				
Seep Numbe	#: SP06	Easting (x):	22082,9 Nort	hing (y) / 99/5	9,7 Time: 1346	
Calculated fl	5.11	L/s BB				
	C SpC	DO	pH	Turbidity	Salinity	
1 1917		217 007	ny 1 9.01	1 48 189	<i>ኒ /</i> 1	
2	2/5/0	602	76 2	2	2	
3 Comments:	3	3	3 VC	3	3	
Bearing 1:	Object	71001 - 1100	Distance:	e brigger	Compass	
Dearing i.	description:				direction	
Bearing 2:	Object description:		Distance:		Compass	
Bearing 2: Comments/s	description:		Distance:		Compass direction	
	description:		Distance:		Compass direction	

roject Name:	LDW Baseline	Seep Collection	Project	lask: Seep Re	connaissance Survey
ate:	5/16/18			Crew: BB	SD, JU, CL
eather:			Pho	to no. 108 -	120
	on filling out form:	CAL		-	
ame or perso	on thing out form.				
eep Number	" SP24	Easting (x): 127	7564,3 North	ing (y) <i>[929 3</i>	7,8 Time: 1303
Calculated flo	ow rate ~ / 7				
emp	SpC	DO	рН	Turbidity	Salinity
16.0	16092	1215167	16,44	17,/	1
,	26093	.5 2	2	2	2
Comments:	3	3	3	3	3
300 V	n(5eC	Sample	highe	Than (-2.4)
ch	Object	rethod	Sample & Distance:	highe	Than (-2,4) Compass
GBearing 1:	Object description:	rethod (highe	
ch	Object description: Object description:	rethod	Distance:	2 highe	Compass direction
Gearing 1:	Object description: Object description:	rethod	Distance:	highe	Compass direction
Bearing 1:	Object description: Object description:	rethod	Distance:	highe	Compass direction
Gearing 1:	Object description: Object description:	rethod	Distance:	highe	Compass direction
Gearing 1:	Object description: Object description:	rethod	Distance:	highe	Compass direction
Gearing 1:	Object description: Object description:	rethod	Distance:	highe	Compass direction
Gearing 1:	Object description: Object description:	rethod	Distance:	highe	Compass direction
Gearing 1:	Object description: Object description:	rethod	Distance:	highe	Compass direction
Gearing 1:	Object description: Object description:	rethod	Distance:	highe	Compass direction
Gearing 1:	Object description: Object description:	rethod	Distance:	highe	Compass direction

roject Name:			(a)	A Tooles Coop Doo	annaiseanna Cuniov	
	LDW Baseline Seep	Collection	Projec	ct Task: Seep Rec	onnaissance Survey	
ate:	116/18	1		12/	13	
eather:		wast	Pr	ioto no. $15-3$	9	
ame of perso	n filling out form:					
eep Number:	27 Ea	sting (x): 127	Palan a Nort	hing (y) 10 May 1	9 Time: //	36
		1	10 10 1 D	1-100-1-1		
	wrate ~ (e0 mL	/5 8B	рН	Turbidity	Salinity	
emp	SpC	5 19.40	1 7,16	1 13.2	1	\\
14,4	1123675	2	2	2	2	
	2 12 370.8	3	3	3	3	
funne	me 50 I method				9	
Bearing 1:	Object description:	8	Distance:		Compass direction	
Bearing 1: Bearing 2: Comments/sk	description: Object description:	U.	Distance:			8

Dania of Manage	I DM Baselles Coop	0-1111	Project	Tooks Com Do		
Project Name:	LDW Baseline Seep	Collection	Projec	272	connaissance Survey	
Date:	116/18			Crew: 106, 51	J.JH, CL	
Weather:	(0')		Pho	oto no. <u>130 -</u>	126	
Name of perso	on filling out form: $\underline{\mathcal{L}}$	1				
Seep Number	SP28 Eas	sting (x):/378	352,3 North	ning (y) 190350), 3 Time: 1346	
Calculated flo	ow rate ~ // rv	1-15 803				
Temp	SpC	DO	рH	Turbidity	Salinity	
1 1611)	1/183,4	1 9.31	17,51	1 3815	1	
2	21113.1	2	2	2	2	
3	3	3	3	3	3	
350M Jun	All 33 Ser	c od		·	ga By H	
Bearing 1:	Object description:		Distance:		Compass direction	
Bearing 2:	Object description:		Distance:		Compass direction	
Comments/sk	etch:					
					es .	

Project Name	ect Name: LDW Baseline Seep Collection			sk: Seep Recon	naissance Survey	
Date:	5/14/18		Cr	ew: BB SD	JM CL	
Weather:	63°F SU	ww	Photo	no. 127 -	INX'	
	on filling out form:	117			110	
Seep Number	SP29	Easting (x): /278/	145. / Northing	(y) 190078	8 Time: 14.07	
Calculated flo	ow rate ~43 n	nL/S BB				
Temp	SpC	DO	pН	Turbidity	Salinity	
1 15,7	1270,2	612.35	16.44	1 32,0	1	
2	22704,	32	2	2	2	
3 Comments:	3	3	3	3	3	
YOD M Jun	l 7 sec nel wetl	rod	i		38. °N	
			=>			
Bearing 1:	Object description:	D	istance:		Compass direction	
Bearing 2:	Object description:	D	istance:		Compass direction	
Comments/sk	etch:					
÷ F						
*		a.				

Project Name	E: LDW Baseline Seep	Collection	Project Ta	ask: Seep Reco	onnaissance Survey	
Date:	5/16/18		C	rew: 88, 80,		
Weather: 1	158°F, ove	mast su	nbreaksphoto	7	18	
Name of pers	son filling out form:	الما			.0	
Seep Number	20.20	sting (x):/278 4	509,9 Northing	9 (V) 189897,	6 Time: 1048	
Calculated flo		1-15 63				
Temp	SpC	DO	pH	Turbidity	Salinity	
113.7	113809,7	16,73	16,85	12135	1	
2	21382318	2	2	2	2	
3 Comments:	3	3	3	3	3	
300 M Funne	nt 10 sec el method	Î.	er Na			
	-		3			
Bearing 1:	Object description:	Di	istance:	25	Compass direction	
Bearing 2:	Object description:	Di	istance:		Compass direction	
Comments/sk	ketch:					
						=
383						
		3.				

Project Name:	, LDW Baseline S	Seep Collection	Р	roject Task: Seep Rec	onnaissance Survey	
Date: 5	116/18			Crew: BB, SL	JM, CL	
Weather:	58° MM	dis		Photo no. 29 -	77	
	n filling out form:	CI				
Name of perso	in mining out room.					
Seep Number:	W 31	Easting (x): / 2478	17.41	Northing (y) 190 193	7.56 Time: /// O	
Calculated flo	wrate - 60 r	nL/5 853/				
Temp * C	SpC	DO WY	pH	Turbidity	Salinity	
114,4	1 20128	13 18.13	161		1	
2	2 20342	15 2	2	2	3	
3	3	3	3	3	3	
Comments:	me 5 elmeth	sec			ti.	
Funn	elmeth	rod			· .	-
Bearing 1:	Object description:		Distance:		Compass direction	
Bearing 2:	Object description:		Distance:		Compass direction	
Comments/sl	etch:					
					¥	
				::		
	€1					

Project Name	:LDW Baseline Seep	Collection	Project 1	ask: Seen Reco	onnaissance Survey	,	
Date:	5/16/18	15		rew: BB , SA	ITM AL	75	
Weather:	JEGOK MICHE	6 Ost .			, 0101, 000	,	
_	DOF WOUL	081	Photo	o no / / 9	1		
Name of pers	on filling out form:						
Seep Numbe	r: SP32 Ea	sting (x): /277	817,41 Northin	19 (Y) 190193.	S6 Time:	1010	
Calculated fl	10 115		- 8	·			
Temp	SpC	DO	pH	Turbidity	Salinity		
1 15.5	14209	18,73	1 7,13	11,47	1		
2	24233	2	2	2	2		
3	3	3	3	3	3		
Comments:	map // a	u 100					
300	MIL 4						
r.	ml 4 si e/method	-1					
runn	e/ METHOR	7					
	Object		.,		T		
Bearing 1:	description:		istance:	100	Compass direction		
Bearing 2:	Object	Di	istance:		Compass		
	description:				direction		
Comments/sl	tetcn:						
			0.2				
٥							7.
		9				2 ~ .	

Project Name:	ject Name: LDW Baseline Seep Collection		Project	Task: Seep Reco	onnaissance Survey	
Date:	5/16/18			Crew: BB,SD	JU, CL	-
Weather:	63 F, Sunni	1	Pho	to no. 121 -	129	
Name of person	on filling out form:	CL				
Seep Number	SP33 E	sting (x): 1277	741.8 Northi	ng (y) 190519	1,5 Time: 1336	
Calculated flo		15 88		- ge		
Temp	SpC	DO	pH	Turbidity	Salinity	
1 15.9		14.87	1 6.58	117.8	1	
2	25208.6	2	2	2	2	
3 Comments:	[3	3	3	3	3	
300 v	nl 20 se nel me 4i	rod	y y			-
Bearing 1:	Object description:	D	istance:	8	Compass direction	
Bearing 2:	Object description:	D	istance:		Compass direction	
Comments/si	ketch:					

Name of person	5/16/18 6/0, CLOW on filling out form: (dy w/sun	reals	Crew: BB SI Photo no. 51 +	62, CL	
Weather:	on filling out form:	dy w/suni	preaks		62	
Name of person	on filling out form: (L W/ M/	JI EUS	Those no.	W V	
Seep Number		<u> </u>				
	(PR 35					
Calculated flo		Easting (x): /217	193.7	Northing (y) 190699	6 Time: 1149	ł .
Calculated no	ow rate 100 m	L/583	8			
Temp	SpC	DO	pН	Turbidity	Salinity	
1 14,6	1 7698	117,98		3 180,71	1	
2	2 7697	17 2	2	2	2	
3	3	3	3	3	3	
Comments:	200 3	sec	7	DE		
200			-2,	. /		
Lun	me 3 nel meth	od				
July 1	10/11/01/1					
				ė		
	Ta		Dieterasi		Compass	
Bearing 1:	Object description:		Distance:		direction	
Bearing 2:	Object description:		Distance:		Compass direction	
Comments/sl	ketch:					
						-
×						

Droject Nemo	LDW/Bassline Con	n Callaction	T Droi	inet Teeki Coop Door	6	
Project Name:	-111/10	p Collection	Proj	00 01	nnaissance Survey	
Date:	5/16/18			Crew: (66, 57)	Myll	
Weather:	61°, cloud	5 W/Sunb	reals	Photo no. <u>69</u>	75	
Name of perso	on filling out form:	CL				
	-					
Seep Number	P36	asting (x): 1276	62 4,9 No	orthing (y) 190832	.2 Time: 1209	,
Calculated flo	w rate $\sim 25 \text{m}$	11/5 BB				
Temp	SpC	DO	pН	Turbidity	Salinity	
1 13.9	19090.	1 4,68	1 6.6	8 1/5-3	1	
2	292341	1 2	2	2	2	
3	3	3	3	3	3	
Comments: 300 Fun	ml 12 nel meti	sec hod		;	N	
Bearing 1:	Object		Distance:		Compass	
bearing 1.	description:				direction	
Bearing 2:	Object description:		Distance:		Compass direction	
Comments/sk	etch:		e e		8	

Project Name	I DIM Deselles Committee					
	- alice	Collection	Project 7	Task: Seep Re	econnaissance Survey	
Date:	5/16/18			rew: <u>BB, S/</u>), JM, CL	
Weather: ~	ba Suamy	, Some ct	endly Phot	o no. 95 -	107	
Name of pers	on filling out form:	1	3			
	ليكان المالية					
Seep Number	r: 5038 Eas	sting (x): / 12/2/	165 a Northir	na (v) 1/2/2/5	P = Time: 11 22	
	0700	10-10-	185,0	19 (y) 19135	8.5 Time: 1233	
Calculated flo		-15 BB	- a			
Temp	SpC	DO	рН	Turbidity	Salinity	
115.1	13523,5	17.92	1 7,28	19:00	1	
2	2 3538,2	2	2	2	2	
3	3	3	3	3	3	
Comments:	1				•	
mod	me sec	10				
, -	,,,,,		9			
Jun	ml sec nel meth	od				
Jun	nel meth	od				
Bearing 1:	nel meth		Distance:		Compass direction	
	Object					
Bearing 1:	Object description: Object description:		Distance:		direction	
Bearing 1:	Object description: Object description:		Distance:		direction	
Bearing 1:	Object description: Object description:		Distance:		direction	
Bearing 1:	Object description: Object description:		Distance:		direction	
Bearing 1:	Object description: Object description:		Distance:		direction	
Bearing 1:	Object description: Object description:		Distance:		direction	
Bearing 1:	Object description: Object description:		Distance:		direction	

Project Nam	e: _ LDW Baseline S	Seep Collection	Proje	ect Task: Seep Rec	onnaissance Survey	
Date:	5/15/18		-	Crew: BB, OT	11 SD CL	
Weather:	NES OF STV	weast		hoto no. 55	1.9	
/ ·		CI		noto no / / /	ea	
Name of per	son filling out form:				10	
Seep Numb	er: 8P42	Easting (x): 19 7F	GANR R Nor	thing (y) 193791	2 Time: 1924	
Calculated f	IAP-ET		77010	1195 11	10 1127	
Temp	SpC	DO	pH	Turbidity	Salinity	
1 15.1		+ 18.33	19.02	17.39	1	
2	21181,4	2	2	2	2	
3	3	3	3	3	3	
HOO W	nel metho	d	2 2			
	79)		210			
Bearing 1:	Object description:		Distance:	*	Compass direction	
Bearing 2:	Object description:	N.S.	Distance:		Compass direction	
Comments/s	sketch:					

Project Name:	LDW Baseline Seep	Collection	Proje	ct Task: Seep Rec	connaissance Survey	
Date: 5	15/18			Crew: BB, Si	D, JM, CL	
Veather: \sim	58. OVEN	ast	P	hoto no. 63 -	70	
	n filling out form:	11				
ame or perso	n filling out form.					
Seep Number:	SP43 EE	sting (x): 1275	803. 1 Nor	thing (y)/9447	2,8 Time: 1243	
Calculated flo	wrate ~ 100 ml	1				
Temp	SpC	DO	pН	Turbidity	Salinity	
1 13.5	12802.7	- 1 7,73	17.9	1 / . /	1	
2	22804,5	2	2	2	2	
Comments:	3	3	3	3	3	
Lunna	elmethod	1			*	
Bearing 1:	Object description:		Distance:		Compass direction	
Bearing 2:	Object description:		Distance:		Compass direction	1114
Comments/sk	etch:				*	

Project Name:	LDW Baseline S		Project Task: Seep Reconnaissance Survey					
Date: 5	115/18			Crew: BB, IM, SO, CL				
Weather: $\overline{\sim}$	58°, DVEN	reast		Photo no. 44 = 54				
7.	on filling out form:	Ofwisting	10002	2	Sf.			
		<u> </u>						
Seep Number	SB45	Easting (x):/274	198,5	Northing (y) 19	6710,2	Time: //##		
Calculated flo		nL/5 80						
Temp	SpC	DO	pH	Turbic		nity		
1 14.8	1/0740	1 6.88		02 119	1 2			
2	2/076/	2	3	3	3			
3	3	3	3	3				
Comments:	L 5 SEC							
frime	lmethod							
Bearing 1:	Object description:		Distance:	Distance:		bass tion		
Bearing 2:	Object description:		Distance:		Com direc			
Comments/s	ketch:							
					ĸ			
							-,	
							-	
				1				
				8				
	(4			1				

Project Name	LDW Baseline	Seep Collection	Pr	Project Task: Seep Reconnaissance Survey			
Date:	5/15/18			Crew: BB, SL	S. JM. CL		
Weather: ~	157° AV	eviast	•	Photo no. 4/1 -	42		
	on filling out form:	Mistin	o Lopez	11050			
		1					
Seep Number	SP46	Easting (x):	N	lorthing (y)	Time: //;30		
Calculated flo			74		hanni ava		
Temp	SpC	DO	рН	Turbidity	Salinity		
1	1	1	1 5	1	1		
2	2	2	2	2	2		
3 Comments:	3	3	3	3	3		
	Ohiect		Distance:	41	Compass		
Bearing 1:	Object description:		I Diamine.				
				#I	direction		
Bearing 2:	Object description:		Distance:	8	direction Compass direction		
Bearing 2: Comments/sk	Object description:				direction Compass		
	Object description:			**	direction Compass		
	Object description:				direction Compass		
	Object description:			**	direction Compass		
	Object description:			**	direction Compass		
	Object description:				direction Compass		
	Object description:				direction Compass		
	Object description:				direction Compass		
	Object description:				direction Compass		
	Object description:				direction Compass		

Project Name: Date: Weather: Name of person	115/18	erce	- 1	Lopez	Project Task: _ Crew: _ Photo no	mn a.	JM, CL	
Seep Number	\$847	Eas	ting (x):1243	619.0	Northing (y)	972321	4 Time: ///0	
Calculated flo	w rate \sim /(170 m	L/5 BB				40	
Temp °C	SpC		DO	рН		bidity	Salinity	
1 14.3	1/299	7	18.02	18,3		45,4	1	
2	2/301	13	2	2	2		2	
3 Comments:	3		3	3	3		3	_
Funn	nl 3 elmeth	od .		In:				
Bearing 1:	Object description:		T	Distance:			Compass direction	
Bearing 2:	Object description:			Distance:			Compass direction	
Comments/sk	etch:	2						

Project Name:	LDW Baseline S	eep Collection	Pro	ject Task: Seep Rec	onnaissance Survey		
Date:	5/15/18			Crew: BB, JM, CL, SD			
Weather:	56° ove	reast		Photo no. 28 -34	+		
	on filling out form:	Muistines	Lopez				
Marine or perso	on miling out form.	CIVIOTINE	uper				
Seep Number	SP49	Easting (x): 1172	3037.8 N	orthing (y) 19774	9,9 Time: 1044		
Calculated flo		ml/5 BB			<u> </u>		
Temp O	SpC	DO	pН	Turbidity	Salinity		
1 14,6	118170	19.88	1 7.75	119.4	1		
2	2/8/83,	7 2	2	2	2		
3	3	3	3	3	3		
Comments: 300 FYI! Super	Ml 55 funnel sinky mud	ec method but grea	& Flow		. 47		
17			*				
Bearing 1:	Object description:		Distance:	150	Compass direction		
Bearing 2:	Object description:		Distance:		Compass direction		
Comments/sk	etch:						
				122			
		9					

overca out form: CH D Ei	ame of persor	CAS+	P	Crew: Berif B	^			
overca out form: CH D Ei	/eather: ~		Р		Crew: Berif B Suzannes . Forcant.			
Eine Com: CH	ame of persor			hoto no. <u>/5 - 55</u>	7	/		
0 E	eep Number:	MUSTINE	00000		1			
25 m			oper			у.		
С		Easting (x): 12 7	2888 Nor	thing (y) 19785 (Time: \mathcal{D}_{i}	21		
	alculated flow	nl/3 88						
APR 1891 1991	emp	DO	pН	Turbidity	Salinity			
16380	14,80			1 39,2	1			
16404	, , ,	2 8 11	2	2	2			
	Comments:	3	3	3	3			
nnel 4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	thong mu	ethod to	Messure				
ion:	Bearing 1:		Distance:		Compass direction			
description: Object description:			Distance:		Compass direction			
tion:	Comments/ski							
tic	Comments/sk							

Project Name	: LDW Baseline Se	ep Collection	Pro	oject Task: Seep Red	connaissance Survey	
Date:	5/15/18			7	. Suranne O	. Christy L.
Weather:	overcast con	N N56°		Photo no. 1 – 14) successed b	ladar A
-	on filling out form:	Buste	peraguist	rioto iio. 1-1-4		Je ween
Mairie Oi pers	on ming out form:	Den's	purgymsi			
Seep Numbe	r: SP51	Easting (x): /27	2385,97 N	orthing (y) 198348	7.) Time: /0	101
Calculated flo	- + 90					,
Temp OC	SpC	DO	pН	Turbidity	Salinity	
1 15,00	7 119456	1 8.55	1 4,27	1×50 KS7	<i>∠J</i> 1	
2	2 19629	2	2	2	2	
3	3	3	3	3	3	
Bearing 1:	Object		Distance:	- 1	Compass	
	description: Object		Dietaras		direction	
Bearing 2:	description:		Distance:	1	Compass direction	
Comments/sl	ketch:		- N			
-						
2)						

Project Name	LDW Baseline Seep	Project T	ask: Seep Recor	nnaissance Survey	
Date:	5/18/18		C	rew: BB, SB	JM. CL. KK
Weather:	V58°F		Photo	o no//	17
Name of pers	on filling out form:	7_			
Seep Numbe	r: 5P57 Eas	sting (x): 12695	HJ, O Northin	g (y) 201147.	6 Time: 1902
Calculated flo		838			
Temp	SpC	DO	pH	Turbidity	Salinity
1 1789	14021.9	19,59	17.62	15,05	1
3	214025.5	2	2	2	2
Commenter		3	3	3	3
300	MP 3 Ser	,			
200	1111 200				
fun.	ml 3 sec nel metho	d w	alkin		,
Bearing 1:	Object description:	D	istance:		Compass direction
Bearing 2:	Object description:	D	Istance:		Compass
Comments/sk	etch:				
			< 2		
				1	
			*		

Project Name	_ LDW Baseline Seep Collection	Project Ta	Project Task: Seep Reconnaissance Survey			
Date:	112/18	Cr	ew: 78.9	D.TM.CL, KK		
Weather:	58°F, overcast	Photo	no. 18-2	8'		
Name of person	on filling out form:	- :				
Seep Number	0139	554.0 Northing	(v) 200786 (l)	5 Time: 19-10		
Calculated flo						
Temp	SpC DO	pH	Turbidity	Salinity		
1/3/8	214000 10 2	1 7,07	14,59	2		
3	3 3	3	3	3		
Comments:						
300 V	We 5500 = 19	e340.1 0405.8				
.,,,,,	16	1405,8				
funi	nel method	Hydra	sulfide	odor		
Bearing 1:	Object description:	Distance:		Compass direction		
Bearing 2:	Object description:	Distance:		Compass direction		
Comments/sl	etch:					
-						

Project Name:	LDW Baseline S	eep Collection	Projec	ct Task: Seep Rec	connaissance Survey	
Date: 5	117/18			Crew: BB, S	B. JH.CL	
Weather: V	5 X OF , 971	excastula	man by Pr	noto no. 135 -	- 135	
	on filling out form:	CL	Teste			
Marile or perse	, , , , , , , , , , , , , , , , , , ,					
Seep Number	SP65	Easting (x):/3/6/6-7	764,5 Nort	hing (y) 206183	3,7 Time: 1330	
Calculated flo	wrate 4 ml	S 858				
Temp	SpC	DO	pН	Turbidity	Salinity	
1 14.5	127887	3,717.66	1 7.48	1 65.	1	
2	227893	2	2	2	2	
3 Comments:	3	3	3	3	3	
Fun	ome 41	od		5		
Bearing 1:	Object description:		Distance:		Compass direction	
Bearing 2:	Object description:		Distance:		Compass direction	
Comments/sl	etch:	8			3	

LDW Baseline See	ep Collection	Proj	ect Task: Seep Rec	onnaissance Survey	
Date: 5/17/18 Crew: BB SD JU CL					
on filling out form:	Cul	- Cone			
SPldo E	asting (x): 1266	507.44 No	rthing (y) 206749	36 Time: 1355	
wrate 5 mL	15 1808				
SpC	DO	pH	Turbidity	Salinity	
1/3740,0		18,63	1 8.5	1	
2/3735:			2	2	
3	3	3	3	3	
me/meth	vd w/51	hoveled	hole for	beaker	
Object	-	Dietance:		Company	
description:		Distance.		direction	
Object description:		Distance:		Compass direction	
etch:				-	
	on filling out form: SPLOOF SPC 1/3740, 0 2/3735, 3 MC 4/John Object description: Object description:	In filling out form: SPLOG Easting (x): / Duber From Filling out for	SPO Easting (x): / Hobsof 44 No wrate 5 ml/s &s SpC DO pH 1/3740,018,0717,63 2/3735,32 3 3 3 MC 4/2Sec We Method w/ shoveled Object description: Object description:	Crew: BB S VEO F SUNAYW/Clouds Photo no. 136- on filling out form: SPlace Easting (x): 126507-44 Northing (y) 206349 we rate 5 M/S BB Spc DO PH Turbidity 1/3740,018,0718,6318,5 2/3735,32 2 2 2 3 3 3 3 3 3 MC 49Sec Whe Method W/Shoveled hole for Object description: Object description: Object description: Object description:	Crew: BB SD JM CL Photo no. 136 - 148 In filling out form: SPC DO PH Turbidity Salinity 1/3740,0 1 8 0 7 1 8 1 8 5 1 2/3735,3 2 2 2 2 2 3 3 3 3 3 3 3 3 MC LIGHT METHOD W/Shoveled hole for beaker Object description: Object description: Object description: Distance: Crew: BB SD JM CL Photo no. 136 - 148 Northing (y) 206349, 36 Time: 355 Time: 355

Project Name	LDW Baseline Seep	Collection	Project Ta	ısk: Seep Recon	nnaissance Survey			
Date:	5/17/18		Cr	Crew: BB. SD. TN. CL				
Weather:	~ (B) OF, SI	uny		Photo no. 181-190)				
Name of pers	on filling out form:			·				
Seep Number	: SP 68 Eas	ting (x): /265 8	396,4 Northing	(v) 207434	L, 4 Time: 1449			
Calculated flo		Is the	6		<i>I</i>			
Temp	SpC	DO	pH	Turbidity	Salinity			
12317	8 1/8794.6	1 9,46	1 8,55	1/8,58	1			
2 "	218306.2	2	2	2	2			
3 Comments:	3	3	3	3	3			
Juni			1 Sample					
Bearing 1:	Object description:	Di	istance:	# 	Compass direction			
Bearing 2:	Object description:	Di	stance:		Compass direction			
Comments/sk	etch:							
					1			
						<		
Œ		6				÷.		

Project Name:	LDW Baseline Se	eep Collection	Project	ct Task: Seep Re	connaissance Survey	
Date: 5	117/18			Crew: 286	D, JM, CL	
Weather: 6	3°F, SIN	nau	PI	noto no. 17	5-	
G	/	Dre.				
Name of perso	n filling out form:					
Seep Number:	SP 70	Easting (x): 1 Hele	030.2 Nor	thing (y) 2100 C	5.2 Time: 144	0
Calculated flo	w rate 125 m	L/5 9B				
Temp	SpC	DO	pН	Turbidity	Salinity	
115.4	123415	2 8.04	17,49	1 3,5	1	
2	223444	42	2	2	2	
3	3	3	3	3	3	
Comments:	4				(¥	
75 Fu	nelme	a Sec Mod - H	ossible	pipe	90	
Bearing 1:	Object description:		Distance:		Compass direction	
Bearing 2:	Object description:		Distance:		Compass direction	
Comments/si	etch:					
					3	
						13.1

Project Name:	_ LDW Baseline Se	ep Collection	Proje	ct Task: Seep Rec	onnaissance Survey	
Date:	118/18		1	Crew: BB ST	JH CL. KK	
Weather: N	59°F. AV	excast	P	noto no. 60 - 3	72	
_	on filling out form:	(/-				
Marrie or perso	and the same of th					
Seep Number:	SP72	Easting (x): 126 7	7079.8 Nor	thing (y) 21072	1.9 Time: 1340	
Calculated flo	wrate 43 mL	15 BB			4 19 3	
Temp	SpC	DO	рН	Turbidity	Salinity	
1 17.8	1/8609	11 7,97		1411	1	
2	218619	102	2	2	2	
3	3	3	3	3	3	
Comments:	omt =	I Ser				
funi	omt =	hed	need 4	o sample	@ Con tide	
funi	nel met	hod	need 4	o sample	@ Con tide	
Funv Bearing 1:	Object description:	hod	NECO 9	o sample	© Cow tide Compass direction	
	Object	hod		o sample	Compass	
Bearing 1:	Object description: Object description:	hod	Distance:	o sample	Compass direction Compass	

Project Name	LDW Baseline Seep	Collection	Project T	ask: Seep Recon	naissance Survey
Date: 5/17/18				rew: 38, SD.	TM.CL
		yany	Photo		144
Name of pers	on filling out form:				
Seep Number	: SP 73 Eas	ting (x): 12676	943,7 Northing	g (y) 908418	R, O Time: 1496
Calculated flo	ow rate 23 ml/s		V		
Temp	Spc /6825.4	00 9,59	pH 8.87	Turbidity 5. 8	Salinity
1 25.9	1/68/6.1	1	1 5	1 5 17	1
2	2	2	2	2	2
3 Comments:	3	3	3	3	3
Luane	me 13.S esmethed				
Bearing 1:	Object description:		Distance:	*	Compass direction
Bearing 2:	Object description:	2	Distance:		Compass direction
Comments/sk	etch:				
			¥		
30		e e			.2

roject Name	: LDW Baseline See	n Collection	Projec	t Task: Seep Rec	connaissance Survey	
ate:	5/17/18	ı		Crew: BBS	30 MM. CL	
	112°= 500	eurssun	6111 Ph	noto no. 148 -	- 1121	
eather:	60 F, CE	ougsie!	rug	1010 110. 140	141	
ame of pers	on filling out form:	CL				
		41 (-) (-)	Nort Nort	hing (v) = a in a a	Time: 1.11	,
eep Numbe	" SP74 E	asting (x): ///	7390,0 Not	hing (y) 208024	5,2 Time: 1414	<i></i>
alculated flo	ow rate 3 ml/s	(a)B				
emp	SpC	DO	рН	Turbidity	Salinity	
17,3	2 15689,2	1 7,07	17,14	1 5,8	1	
1.0	2568616)_2	2	2	2	
	3	3	3	3	3	
comments:	0	() 0.0			27	
· 2	nuel met	eo sec				
_						
6.	and moy	Good			×	
71h	mee "	rucr				
			1-		10	
Bearing 1:	Object description:		Distance:		Compass direction	
	Object		Distance:		Compass	
Bearing 2:	description:				direction	
Comments/s	sketch:					
					<u>4%</u>	
	5					
		(a)				
				¥		
	95					
ĺ					r .	

Project Name:	LDW Baseline Se	ep Collection	Projec	20 (onnaissance Survey	
Date:	1/1/18	7	tach	Crew: DB 3	13,014,00	
Weather:	N58 % O	rercast	- W bright	oto no. <u>//3</u> –	1990-	
Name of person	on filling out form:	CL	ipress		Tr.	
Seep Number	SP77	Easting (x): / 2/e8	182, 2 Nort	hing (y) 2055 9	4.7 Time: 13/7	
Calculated flo	wrate 30 m	L/5 8B	201		< 11	
Temp	SpC	DO	pH	Turbidity	Salinity	
1 14.2	- 1128831	715.50	16181	10.4	1	
2	2/2936	4 2	2	2	2	
3 Comments:	3	3	3	3	3	
fur	ome 8 me me	thod	· ·			
Beering 4	Object		Distance:	×	Compass	
Bearing 1:	description:				direction	
Bearing 2:	Object description:		Distance:		Compass direction	
Comments/sk	etch:				79	
			F			
						1

Project Name	: LDW Baseline Seep	Collection	Project Ta	sk: Seep Recon	naissance Survey
Date: 5//8//8			Cre	ew: BB, SI	DITM.CL, KK
Weather: 🔨	590F. Over	cast	Photo	no. 47-F	59
Name of pers	on filling out form:	CL			
Seep Numbe	r: 80 78 Eas	sting (x): 12685	29,0 Northing	(y) 204281	1,2 Time: 1303
Calculated flo	11 1100	/S 808			
Temp	SpC	DO	рН	Turbidity	Salinity
1 14,4	1168987	11 8.45	17,7	1610	1
2	216907.10	2	2	2	2
3 Commentar	3	3	3	3	3
Comments:	nmf 25	DA,			
1/)U mi 70		11 1 2	1- 1	
	. 17	1 CYCl	: Went fl	OW	
him	50 mt 3 s nel method		V		
7.0	TOT VITO	E .			
Bearing 1:	Object description:	Dis	stance:		Compass
	Object	Dis	stance:		direction Compass
Bearing 2:	description:	Dia	italice.		direction
Comments/sk	etch:	.tr			

Project Name:	Name: LDW Baseline Seep Collection			Project Task: Seep Reconnaissance Survey			
Date:	ate: 5/18//8			Crew: BB, SA JU, CL KK			
Weather: 1	58°F, 8	verias	₹ Ph	ioto no 355			
,	Name of person filling out form:						
Seep Number	SP 79	Easting (x): 120	87/0,3 Nort	hing (y) 20409	1,4 Time: 1249		
Calculated flo	w rate 🗦 🥎 m	US 83			" \		
Temp	SpC	DO	рН	Turbidity	Salinity		
115,2	1/9/59	151 4.4	16.95	1 9.1	1 1 1/2 3		
2	219152	0 2	2	2	2		
3	3	3	3	3	3 /		
Comments:	nl 15 Se	6			2600 113		
Fum	el meth	ed					
Bearing 1:	Object description:		Distance:		Compass direction		
Bearing 2:	Object description:		Distance:		Compass direction		
Comments/sk	etch:				-		
					e		

Project Name:	LDW Baseline Se	ep Collection	Proje	ct Task: Seep Reco	onnaissance Survey	
Date: 5	117/18	4.	Crew: BB, SD, JM, CL			
Weather: ~56 F, OVENCOST				noto no. 34- 4	K14 '	
· ·	on filling out form:	1/				
name or perso	on mining out form.					
Seep Number	SP 83	Easting (x):/2707	56.5 Nor	thing (y) 201595	Time: // 25	
Calculated flo	wrate 33 ml	./S 88				
Temp	SpC DO		pH Turbidity		Salinity	
1 141	18042.8	18.97	17,23	1 35.0	1	
2	28043.5	2 2	2	3	3	
3 Comments:	3	3	3	3	3	
	nnel lle	sec thod for	ry Fut	De .	Compass	
Bearing 1:	description:		Distance.		direction	
Bearing 2:	Object description:		Distance:		Compass direction	
Comments/s	Ketch:				*	
	(6)					

Project Name	:LDW Baseline See	p Collection	Project 1	Task: Seep Rec	onnaissance Survey	
Date:	1/12/18			rew: BB S6	S. JM. CL	
Weather:	EBE OVEN	ast	Photo		88	
Name of pers	on filling out form:	CL			, ,	
	Y2					
Seep Numbe	" SP.874 E	asting (x): 1 He9 E	59 7,9 Northin	19 (y)20335	2,5 Time: 12%	39
Calculated flo	2011	5 Pass	545			
Temp	SpC	DO	pH	Turbidity	Salinity	
1 15.4	14744	815.45	16,73	11413	1	
3	24745,0	7 2	2	2	2	
Comments:	13 .	3	3	3	3	
Comments.	new se	eρ				
300 1	ne 10 sec					
0	1 /		100		0	
Junne	ymethod	ora	uge colo	rgrave	l	
			(6)			
Bearing 1:	Object	D	istance:	£	Compass	
	description: Object				direction	
Bearing 2:	description:	D	istance:		Compass direction	
Comments/sk	etch:					
a						-
		#			1	

roject Name ate: 5 /eather: ame of pers	on filling out form:	ercast	P	Crew: <u>BB</u> , 1	onnaissance Survey OH CL
Seep Numbe	" SP85 E	asting (x):/269	588.7 Nor	thing (y) Joseph l	10 Time: 13-51
Calculated flo		US BB	pH	Turbidity	Salinity
Temp	SpC		1 /2192	1 4/ 00	1
1 14.	2 20220	617,52	2	2 7100	2
3	3	3	3	3	3
Comments:		seep			
Fun Bearing 1:	nelmetha Description	t - awe	Distance:	COW	Compass direction
Bearing 2:	Object Distance:				Compass direction
Comments/s	inetti.				g

	The same of		8				
Project Name:	ject Name: LDW Baseline Seep Collection			Project Task: Seep Reconnaissance Survey			
Date:	117/18			Crew: <u>3B, St</u>	D, JM, CL		
Neather: 🔨	1150F.	overcas	3 f	Photo no	1-199		
	on filling out form:	CL					
Marile of polos	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
Seep Number	SP86	Easting (x)://	15950.6 No	orthing (y) 2069	\$9,5 Time: /	524	
Calculated flo							
Temp	SpC	DO	pH	Turbidity	Salinity		
1 1/0,2	1894	71179	× 1711.	18.9	1		
2	2/8/90	4/2	3	3	3		
3	3	3	3]3	3		
Comments:	new	5eep					
Su	nl 3 St nnel me	ethal	nee	dbig boo	ard for	Standing	
Bearing 1:	Object description:		Distance:		Compass direction		
Bearing 2:	Object description:	* x	Distance:		Compass direction	ň	
Comments/s	ketch:		*				
					1 .1		
				že.			
		-					
1							
1	17						

Project Name	LDW Baseline Seep	Collection	Project Ta	sk: Seep Recon	naissance Survey
Date: _5/18/18				W: RB, St	TMC1, KK
Weather: 1	588 BURKE	est	Photo	no. 29-	25
_	on filling out form:	1/			
					0
Seep Numbe	SP 87 Eas	sting (x): 12695	565,9 Northing	(v) 200703,	2 Time: 1220
Calculated flo	ow rate 63 mL	15 BB 6.3			
Temp	SpC	DO	рН	Turbidity	Salinity
114,31	17759.7	16181	16,94	1/5/80	1
2	27766,7	2	2	2	2
3	3	3	3	3	3
Comments:	25 mil)			
405	er 250ml	new	seep		
		, ,	P		
funn	ec 250 ml				
Bearing 1:	Object description:	D	Distance:		Compass direction
Bearing 2:	Object description:		Distance:		Compass direction
Comments/sk	etch:				
					9
					_

Project Name:LDW Baseline Seep Collection				Task: Seep Reco	onnaissance Survey	
Date: 5/18/18				rew: BB, S	D. VM. CLIKK	
Weather:	59°F, ove	vcast	Phot	o no. 73-	-\$1 /- /	
Name of person filling out form:						
		101				
Seep Number: 5088 Easting (x): 1367097, 4 Northing (y) 210695.9 Time: 1344						
Calculated flo	ow rate (00 v	nl/s BB				
Temp	SpC	DO	рН	Turbidity	Salinity	
1 12.8	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7,98	18.16	1 3,3	1	
2	2 20 300	2	2	2	2	
3	3	3	3	3	3	
Comments:	ne	Ill Seev	2			
	200	o cop	¢.			
200	me osee	0				
Lunal	mother (d.	own From	n SP726	Ashgri	ove)	
BOD MI 5 Sec fumel method (down from SP72 @ Ashgrove)						

Bearing 1:	Object		Distance:		Compass	
Bearing 1:	description:				direction	
Bearing 1:			Distance:			
	description: Object description:	x			direction Compass	
Bearing 2:	description: Object description:	×			direction Compass	
Bearing 2:	description: Object description:	×			direction Compass	
Bearing 2:	description: Object description:	×			direction Compass	
Bearing 2:	description: Object description:	×			direction Compass	
Bearing 2:	description: Object description:	×			direction Compass	
Bearing 2:	description: Object description:	×			direction Compass	
Bearing 2:	description: Object description:	x			direction Compass	
Bearing 2:	description: Object description:	27			direction Compass	
Bearing 2:	description: Object description:	×			direction Compass	
Bearing 2:	description: Object description:	X			direction Compass	
Bearing 2:	description: Object description:	27			direction Compass	

Project Name: LDW Baseline Seep Collection	Project Task: Seep Reconnaissance Survey
Date: 5-15-18	Crew: BB SD CL JM
Weather: Cool Overcast ~56°	F Photo no. /-/4
Name of person filling out form:	S. Dudziak
Tide is eto, 9 ft	
Seep number: SP-51	Photo number: 1 - 14
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Sandy SILT (ML) Med, Gray-Brow Firm to soft (Silt Above, Sand Be
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Sheen No Odor Clear Modera
Description of embankment that seep flows from and general seep characteristics:	Originates from mudflat below embankment
Seep location relative to vertical changes in embankment or beach substrate:	water & Bank
Seep number: SP-50	Photo number: 15 - 27
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Sandy Silt (ML) Dark Brown to Gray Brown
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odor No Sheen Moderate Flow
Description of embankment that seep flows from and general seep characteristics:	Flowing from base of embankmenter piling 71 Piling
Seep location relative to vertical changes in embankment or beach substrate:	mm 7 Seep Rip Rap
Seep number:	Photo number:
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	
Description of embankment that seep flows from and general seep characteristics:	
Seep location relative to vertical changes in embankment or beach substrate:	



ject Name: LDW Baseline Seep Collection	Project Task: Seep Reconnaissance Survey
e: 5-15-18	Crew: CE SU DB JA
ather: Cool Overcapt	Photo no. 28 - 34
ne of person filling out form:	tenok
	74
eep number: 49	Photo number: $28 - 34$
ubstrate description Very	Soft med brown SILT (ML) Organics present
.g., rock, soil, cobble, gravel, sand, silt, clay):	Organica present
eep observations (e.g., sheen, bacterial slime, taining, odor, waste material, colored discharge, recipitates, vegetation):	Wo Odor No Steen, green organi Material in sample, Water Cloon Moderate Flow
escription of embankment that seep flows from and eneral seep characteristics:	Flowing from mud blat below embarkment
eep location relative to vertical changes in mbankment or beach substrate:	Seep Jo of Rip
eep numberSP_ 47	Photo number: 35 - 40
substrate description e.g., rock, soil, cobble, gravel, sand, silt, clay):	Soft wed to dank brown, organice silt (Mi) Present
Seep observations (e.g., sheen, bacterial slime, taining, odor, waste material, colored discharge, precipitates, vegetation):	Fast flow from distinct stream No Odor No Sheen water has organics in it.
Description of embankment that seep flows from and general seep characteristics:	seep comes out at base of embendement, distinct stream
Seep location relative to vertical changes in embankment or beach substrate:	Seep & BRip Rop Houses
Pant	
Seep numbers 9 - 46 - Access	Photo number: 41 - 43
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Organic Silt very Soft * Logge (MC)
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Flowing Fast, Geoff &
Description of embankment that seep flows from and general seep characteristics:	From mudflat & & &
Seep location relative to vertical changes in embankment or beach substrate:	Flowing from mudflat below

(2)

Project Name: LDW Baseline Seep Collection	Project Task: Seep Reconnaissance Survey
Date: 5-15-18	Crew: SD BB JM CL
Weather: (001, over cast ~59°;	Photo no. 44-54
Name of person filling out form:	udział
,	
Seep number: $SP-45$	Photo number: 44-54
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Soft SILT (ML) w/algae throughour Med Brown w/some orange oxidized sediment
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odor, No Steen Water is Clear Iron-rich sedimen
Description of embankment that seep flows from and general seep characteristics:	Flowing from mudflat, slightly diffuse flow, seep with in rap
Seep location relative to vertical changes in embankment or beach substrate:	Seep STRIP rap 2 Concrete
Seep number: SP-42	Photo number: 55 - 62
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Poorly graded medium to fine Sand (sp) with some silt. Dark brown to Gray
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odor and Sheen witer is a little cloudy. Bacterial slime on sediments
Description of embankment that seep flows from and general seep characteristics:	Fast flow,
Seep location relative to vertical changes in embankment or beach substrate:	my below
	embantement
Seep number: SP-43	Photo number: 63 - 65
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Primarily gravel (GP) with some Save poorly sorted, multicolored orange - brown
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odor No SLeen Fast, clear flow
Description of embankment that seep flows from and general seep characteristics:	Flowing where rocks & riprap transition to mudflat
Seep location relative to vertical changes in embankment or beach substrate:	Seep 3 0000 Embankment has gentle slope
	ras gentre stope

Project Name: LDW Baseline Seep Collection	Project Task: Seep Reconnaissance Survey
Date: 5-15-18	Crew: BB SD CL TM
Weather: Cloudy ~ 61° F	Photo no.
Name of person filling out form:	Jud Fiak
	27 Mar. Book St. St. State
Seep number: SP-06	Photo number: 73 - 76
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Photo number: 73 - 76 514 (ML) w/minor amounts or Sand (~101) Gray - Brown No Odor, No Sheen, Bacteria
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odor, No Sheen , Bacterio
Description of embankment that seep flows from and general seep characteristics:	Diffuse, slow flow. Seep flows from mudflat but is close to ripra
Seep location relative to vertical changes in embankment or beach substrate:	Seef J & Rip Rap & Concrete
	pretty Clat
Seep number:	Photo number:
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	
Description of embankment that seep flows from and general seep characteristics:	
Seep location relative to vertical changes in embankment or beach substrate:	
Seep number:	Photo number:
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	
Description of embankment that seep flows from and general seep characteristics:	
Seep location relative to vertical changes in embankment or beach substrate:	



Project Name: LDW Baseline Seep Collection	Project Task: Seep Reconnaissance Survey
Date: 5-16-18	Crew: BB SD CL TM
Weather: Cool, Clouds	Photo no.
Name of person filling out form:	Dudziak
Seep number: $SP-3Z$	Photo number: $I - I4$
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Tan to Gray on Surface; Gray to Black
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odor No Shoen bereat sur Clear (Very mucky sedime
Description of embankment that seep flows from and general seep characteristics:	Flow comes out near base of
Seep location relative to vertical changes in embankment or beach substrate:	embankment, Seep Veget
Seep number: SP- Z7	Photo number: 15 - 23
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Sandy SILT (ML) to Silty Sand (SP) W/some gravel, Med, Brown (oxidized
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odor, No Steen, Clear Moderate Flow
Description of embankment that seep flows from and general seep characteristics:	Seep comes out from base of concrete
Seep location relative to vertical changes in embankment or beach substrate:	seep Concrete
Seep number: SP-30	Photo number: 24-28
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Slightly sandy SILT (ML), Very soft, Park brown,
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odor No Sheen Bacterial Slime on sediments
Description of embankment that seep flows from and general seep characteristics:	Channelized flow from beneated
Seep location relative to vertical changes in embankment or beach substrate:	Very Seep Panerete

Project Name: LDW Baseline Seep Collection	Project Task: Seep Reconnaissance Survey
Date: 5-16-18	crew: BB 3P CL TM
Weather: Clouds Cool	Photo no.
Name of person filling out form:	udziak
Seep number: $SP-3/$	Photo number: $29-37$
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Silty Sand (SP) to Sandy Silt (ML) N 50%, Sand ~ 50%, Silt
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odor No Sheen Clear but w/ some organic mafter (algae
Description of embankment that seep flows from and general seep characteristics:	Seep comes out beneath concrete and rip rap- change lized flow
Seep location relative to vertical changes in embankment or beach substrate:	Seep Steep ember
	104
Seep number: $5P - 35$	Photo number: 5/-62
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Sandy Gravel (GP) Dark brown Some cobbles above mudflat
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odor, No Steen. Very turbid water
Description of embankment that seep flows from and general seep characteristics:	Channel flow, Seep comes from Gravel/Cobble area above mudflat
Seep location relative to vertical changes in embankment or beach substrate:	light Slope See Jood Gravel-
by b	out Wery soct beach
Seep number: $SP-36$	Photo number: 63 - 85
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Gravel & Cobbles (60%) & Silt (40%) (GM) Med Gray-Brown
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Very slight unknown odor, No Sheer, Moderate Flow Clear
Description of embankment that seep flows from and general seep characteristics:	Flow come out of gravelly bank Bank is steep
Seep location relative to vertical changes in embankment or beach substrate:	Seef - Cobbles
	was Gravel + Cobsles

6

SEEP RECONNAISSANCE SURVEY FORM B Project Name: LDW Baseline Seep Collection Project Task: Seep Reconnaissance Survey Date: Weather: Photo no. Name of person filling out form: Seep number: Photo number: Fine Gray Sand (SP) w/Silt Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay): Sand is substrate. Silt is around Sand Seep observations (e.g., sheen, bacterial slime, No Sheen staining, odor, waste material, colored discharge, precipitates, vegetation): Fast Flow Description of embankment that seep flows from and Channelized flow. general seep characteristics: low comes from base of rock Seep location relative to vertical changes in embankment or beach substrate: SP-24 108-120 Seep number: Photo number: Reddish-brown silt (ML) with gravel (GP) Substrate description Gravel at base. Silt overlies gravel. Organic matter & pieces of brick observed (e.g., rock, soil, cobble, gravel, sand, silt, clay): Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, No Odor No Sheen Fast Flow precipitates, vegetation): Seep is both channelized & diffuse like Description of embankment that seep flows from and afan, ~ 30ft long area of diffuse seeps, seeps come out under rip general seep characteristics: Seep location relative to vertical changes in embankment or beach substrate: Seep number: Photo number: Sardy Silt (ML) & Silty Sand (SP) Substrate description Sand is brown & black, Sit is gray brown (e.g., rock, soil, cobble, gravel, sand, silt, clay): Silt overlier sand No Odor No Sheen Slightly turbid Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge. Slow flow precipitates, vegetation): Seep comes out from base of one Description of embankment that seep flows from and creosoted pilens general seep characteristics: Seep location relative to vertical changes in embankment or beach substrate: Creosoted

SEEP RECONNAISSANCE SURVEY FORM B LDW Baseline Seep Collection Project Name: Project Task: Seep Reconnaissance Survey Date: lands Weather: Photo no. Name of person filling out form: Seep number: Photo number: Substrate is Sandy Gravel (GP) but it is surrounded by silt (ML) Substrate: Multicolored Silt: Gray Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay): Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation): Description of embankment that seep flows from and general seep characteristics: Seep location relative to vertical changes in embankment or beach substrate: Seep number: Photo number: Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay): Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, Mear precipitates, vegetation): Channelized flow, Description of embankment that seep flows from and general seep characteristics: Seep location relative to vertical changes in embankment or beach substrate: Seep number: Photo number: Substrate description

(e.g., rock, soil, cobble, gravel, sand, silt, clay):

Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):

Description of embankment that seep flows from and general seep characteristics:

Seep location relative to vertical changes in embankment or beach substrate:

Project Name: LDW Baseline Seep Collection	Project Task: Seep Reconnaissance Survey
Date: 5-17-18	Crew: CL, SD BB JM
Weather: Overeast Cool	Photo no.
Name of person filling out form:	ndeink
Seep number: $SP-0S$	Photo number: /-/Z
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Sitty Sandy Gravel (GP) Dank gray brown, Poosh sorted. Some bricks
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No odor No Sheer Turbid Organ in water
Description of embankment that seep flows from and general seep characteristics:	Steep rip rap embalment with wood. comes out from rip rap
Seep location relative to vertical changes in embankment or beach substrate:	Not much room Rig Rig R.
Near SP-1 New	Seep
Seep number: 5P-83 (new)	Photo number: 34-44
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Angulat. Some Slag in area (pieces
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Clear, Some algae Slag pieces within Grave 1
Description of embankment that seep flows from and general seep characteristics:	Modegate Flow No Odor No Shee Area about 10 across. From Rip Rop
Seep location relative to vertical changes in embankment or beach substrate:	135 N 06 SP-1 about mid-stip
500 0 1 ('sP-83
Seep number: Sport (neco)	Photo number:
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Investigated but defermined it was
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Not a groundwater
Description of embankment that seep flows from and general seep characteristics:	A 159
Seep location relative to vertical changes in embankment or beach substrate:	Eastern Side of 1st Afer Bridge Flat mud flat w some rip rop
	Not growdwater Its tidal water

Project Name: LDW Baseline Seep Collection	Project Task: Seep Reconnaissance Survey
Date: 5-17-18	Crew: SP BB JM CL
Veather: Cool Overcast	Photo no.
ame of person filling out form:	Dudzeake
- 2	6.8
Seep number 84 (new)	Photo number: 80-88
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Orange-Red Color & Brown
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odor No Shear anthropogenic
Description of embankment that seep flows from and general seep characteristics:	Fam-like fast blow mixed in
Seep location relative to vertical changes in embankment or beach substrate:	At head of slip inter batteries
60-	tide (
Seep number: 85 (new)	Photo number: 89-104
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Silty Sandy Gravel (6thed to Dk brown w/ orange pieces angular
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Fast blow Clear No Odor No Sha concret blocks, some bricks
Description of embankment that seep flows from and general seep characteristics:	Fan-like flow - 10ft wide
Seep location relative to vertical changes in embankment or beach substrate:	seep is seep - Emberukine.
Seep number: $5P-77$	Photo number: 113-124
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Sitty Sand (SP) w/gravel Dr brown/gray
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odos No Sheer on water + Some sheen on sediments but unsure it its from site or for spill in watering
Description of embankment that seep flows from and general seep characteristics:	Channel flow, fast near concrete
Seep location relative to vertical changes in embankment or beach substrate:	Seef Concrete Structon
	Wood Rip Rap

Project Name: LDW Baseline Seep Collection	Project Task: Seep Reconnaissance Survey
Date: 5-17-18	Crew: BB SD CL JM
Weather: Claudy Cool	Photo no.
Name of person filling out form:	udziak
Seep number: $5P-45$	Photo number: 175-135
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Silty Sand (SP) w/miror gravet-10, Dane brown/gray
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Slow flow, Seep is very close to low tide (about 1ft up frontide) Turbid with organ small channel of flow Nosteen
Description of embankment that seep flows from and general seep characteristics:	Small channel of flows No Steen
Seep location relative to vertical changes in embankment or beach substrate:	About -2ft tide Noskeen About -2ft tide Seep
Seep number: SP-66	Photo number: 136 – 147
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Gray-Brown Silty Sandy Gravel (G.) Angular
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Some Algae in witer Moderate flow Clear No Odos No Sheen
Description of embankment that seep flows from and general seep characteristics:	Charmelized blow from base of embankment
Seep location relative to vertical changes in embankment or beach substrate:	Seep is ~ 100 ft from boat on
, , ,	V Seep
Seep number: SP-74	Photo number: 146-161
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Fine to Med Gr. Sand (SW) Well sosted Some gravel ~10%, Medium Gray - Brown
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Clear you No Odor No Sheen Beach sand
Description of embankment that seep flows from and general seep characteristics:	Gently Stoping beach - Channelized
Seep location relative to vertical changes in embankment or beach substrate:	w & seep

Project Name: LDW Baseline Seep Collection	Project Task: Seep Reconnaissance Survey
Date: 5-17-18	Crew: 50 BB JM CL
Weather: Sun + Gouds	Photo no.
Name of person filling out form: 5 D	ud ziak
Seep number: SP-73	Photo number: 162 - 165
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Gry Brown 511+ (ML)
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Some algae Clear, Moderate Flow, Slight Organic Odos No She
Description of embankment that seep flows from and general seep characteristics:	Constructed we thank, Seep blows from silty bench
Seep location relative to vertical changes in embankment or beach substrate:	Seep 330
	Sound Siff
Seep number: $5P-70$	Photo number: 175 - 180
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Grany fine Sand (5P) W/ algae
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Clear No Odor No Shaen Fast Flow
Description of embankment that seep flows from and general seep characteristics:	Seep is cong from hole in wall somethis round is behind hole
Seep location relative to vertical changes in embankment or beach substrate:	Z ft of bottom in wall
	und T
Seep number: SP-68	Photo number: 181 - 19 0
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Organic Silty Sand ~ 401,511+.
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Significant organics in water algae No Odor No Sheer
Description of embankment that seep flows from and general seep characteristics:	Seep comes from mudflat
Seep location relative to vertical changes in embankment or beach substrate:	Seep Stabar

Project Name:LDW Baseline Seep Collection	Project Task: Seep Reconnaissance Survey
Date: 5-/7-/8	crew: SD BB CL JM
Neather: Cloude	Photo no.
Name of person filling out form:	e i ak
Seep number: SP_ 86 (new)	Photo number: 191-199
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Gravely Silt (ML) tan con to
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Gravely Silt (ML) tan con to gray/black undered Clear fast blow No Odor No Sheeh
Description of embankment that seep flows from and general seep characteristics:	Seep comes out through mudfly
Seep location relative to vertical changes in embankment or beach substrate:	my seep
Seep number:	Photo number:
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	
Description of embankment that seep flows from and general seep characteristics:	
Seep location relative to vertical changes in embankment or beach substrate:	
Seep number:	Photo number:
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	4.2
Description of embankment that seep flows from and general seep characteristics:	
Seep location relative to vertical changes in embankment or beach substrate:	

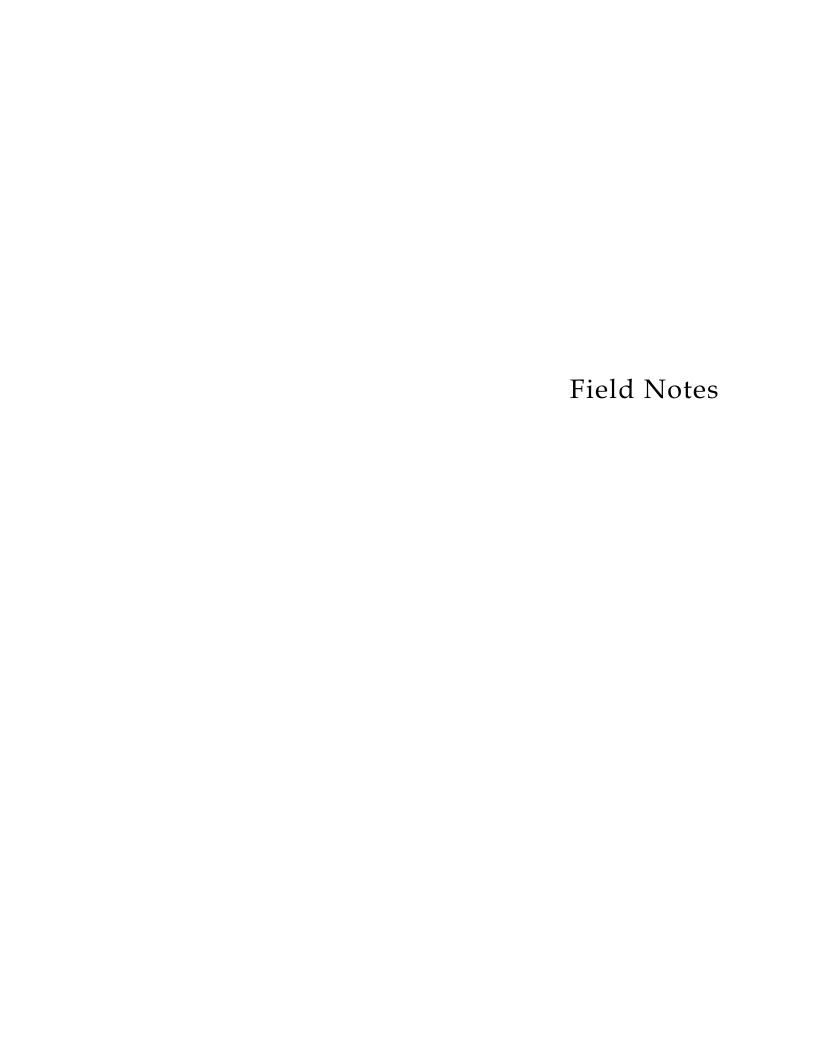
Project Name: LDW Baseline Seep Collection	Project Task: Seep Reconnaissance Survey
Date: $5 - 18 - 18$	Crew: BB SD JM CL
Neather: Cool overcast	Photo no.
Name of person filling out form:	Budzrok
Seep number: SP-57 (under bridge)	Photo number: /-/7
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Silty Sandy Grave (GP) Med Brown some copples
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No oder No Sheep
Description of embankment that seep flows from and general seep characteristics:	Channelized flow on moderate 5/oper
Seep location relative to vertical changes in embankment or beach substrate:	Jean seep seep Piling Piling Piling Piling On corner of bank
Seep number: 5P-59 (under hoider)	Photo number: 18 - 28
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Silty Gravel (GP) Orange Brown to Gray Brown
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odor No Sheep
Description of embankment that seep flows from and general seep characteristics:	Channelized flow fast flow
Seep location relative to vertical changes in embankment or beach substrate:	Right Right
Seep number: SP-587 (new)	Photo number: 29 - 35
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Silty Gravelly Sand (SP) Orange Brown to Gray
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odor No Sheets
Description of embankment that seep flows from and general seep characteristics:	Slow-Flowig Channel flow
Seep location relative to vertical changes in	Seep & Rip Rap

(14)

Project Name: LDW Baseline Seep Collection	Project Task: Seep Reconnaissance Survey
Date: 5-18-18	Crew: BB SD CL JM
Weather: Cool Overcast	Photo no.
Name of person filling out form: S Dud	ent
Name of person mining out form.	
Seep number: $SP-79$	Photo number: 35 - 46
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Silty Grave (GP) Med Brown or, Grave 1 ~ 80%, Surface, Black un
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Yellowish tint in water. No Sheen
Description of embankment that seep flows from and general seep characteristics:	Channelized flow Slight Slope
Seep location relative to vertical changes in embankment or beach substrate:	me Step Bor Rip Rop
Seep number: $SP-78$	Photo number: 47-59
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Sith Gravel (GP) Med Gray-Brown Very soft mud getting to seep some
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Mild salfar ados No Sheen brick Clear Fast Howing
Description of embankment that seep flows from and general seep characteristics:	Below steep rip rap. Channelized for Seep comes out below rip rap
Seep location relative to vertical changes in embankment or beach substrate:	Seep John Ray
Seep number: SP-7Z (asharove)	Photo number: (GP) 60-72
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Sand Gravel Medium Brown 1801, gravel (GP)
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	No Odos No Shaen Clean
Description of embankment that seep flows from and general seep characteristics:	from under Rip Rop
Seep location relative to vertical changes in embankment or beach substrate:	Beneath 148 pility See Steep + base Richard Comerce

Project Name: LDW Baseline Seep Collection	Project Task: Seep Reconnaissance Survey
Date: 5-18-18	Crew: BB SD GL JM
Weather: 1001 Over east	Photo no.
Name of person filling out form: S Dudzial	
Seep number: SP_88 (new) Ashgier	Photo number: 73 - 81
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	Sand Grand (GP) Med Brown 1407, Sand 601, Gravel
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	Fast Flow, Clear No Odor, No Sheen
Description of embankment that seep flows from and general seep characteristics:	Seep come out from under a concrede slab w/ knicks, Channelized then ban-
Seep location relative to vertical changes in embankment or beach substrate:	Sep & Concrete
,	
Seep number:	Photo number:
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation):	
Description of embankment that seep flows from and general seep characteristics:	
Seep location relative to vertical changes in embankment or beach substrate:	'
Seep number:	Photo number:
Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay):	
Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation).	
Description of embankment that seep flows from and general seep characteristics:	
Seep location relative to vertical changes in embankment or beach substrate:	

(16)



CONTENTS

PAGE	REFERENCE	DATE
	LOW Scep Reconnaisance Day	1
	May 15, 2018	7
-2.	Crew Jordan Macke	•
	Suranne Dudriak	-
	Christine Lopez	
		.*
	Bent Burgguist	
	Book: Discovery (Granty	1
	Jeft Wilson	٠
U	seather: present breeze	
2:45	Jeather: overcast breezy	
	Book Health and Safet	- 106
	Boat Health and Safety Sur	Jer
9:00	leave took in	ance
	Leave boat ramp	7 9 2
	Head for Stip Seep 51	
123	Annue av SP-51	_
	Jeff calibrates water quali	B
	meter	THE
-	We can barely see the seep.	
-	just at the water level. Wi	
	until after calibrating to see	2 16
-	Sep appears more dearly.	

2		3
9:41	Head over to SP-06 and SP-07	12:06 Arrive SP-40
	to check them out quickly.	Too shallow to get all the
	Tide shill going down, Itead	way in with the boat. So headed
	back over to SP-51.	10 SP-42.
9:48	Amive @ SP-51	12:17 Arrive SP-42
10:16	Finish at SP-51 and	12:27 Done at 58-42
	head to SP-50	Head he SP-43
10:21	1 CO (72) / (PAG)	Could sample 5P-42 at a fairly
10 -	SP-50 is behind a barge	hightide.
(0:39	Finish at SP-50	So far, longer tubing has worked -
10	Head to SP-49	will measure length when ~ 8 ft long
11:00	Finish SP-49 veny mucky	12:43 Done at 5P-43
	Head W SP-47	Head back to SP-40 to see
11:18	Finish ar 47	if we can get in now.
	Tried mudders because it is	SP-43 coud be sampled at a
	mucky. Shaps do not hold	fairly high tide. Seep is emerging
	books into mudders.	from the bank.
11:37	Leave SP-46	12:52 Arrived av SP-40
	Too meddy Sunk in very	No seep present
	deep. so we could not get	Phons 70-73
	to seep. Try at higher hole?	Head to SP-44
	Head to SP = 45	13:14 parked boat at ramp and
11:54	Leave SP-45	walked over to seep because of
-1(1	Head to SP-40	shallow water,
		No seep present at SP-44 Reto in the Rain.

4		i i			K
13:15	Head	to SP	-46		
	Tide	Stitt to	oo high	now	- Seep
ì	COSTO	red.	Need	b Show	of for
	a Slice	when lo	wer to	de, T	ide leve
	inmal	18 - 0	.1	() () () () () () () () () ()	ide leve
-	Hard	db	50-06	und SP-	07
1312				V V-31	
13.42	lula	at SP-	20 100	6000	la and
		ked don			Const
	100 5	eep ar	SPO	1	11 12
	Just	a mo	Kle. V	lay se	had h
	Sompl	0.12	June:		
13:54	Head	no bo	ick, to	boar	ramp
	SP-0	con	ered w	in wo	itar, as
14105	we	pass or	our	wan!	back.
1205	> Retu	n to	book	ramy	2
		for t			
			-	0	
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	/				
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T					
		- M			5
-	Day 2	Seep	Reconn	aissanc	e
		4, ك			
* V	Crew:	Bent	Berggu	ist	
1		Suzar	ne bu	dziak	
		Sorda	n Mac	ke.	
		A	me C		
	Boar:	Biscove	ng -Je	FF Wils	on
9:10	Healt	n i Sate	y bne	hng of vai	
	^	ead ho	Upper	Turnir	9
	Basin		=0	70	
7:57	Amve	ar si	cap SP	-32	
10:17	tinisl	n ar	seep sr-	25T	
W10	heed	N ag	model	1 tron	1/1/20
				en san	
70 au	JOSON M	uen, c	to the	ucky a	
	Samol	ak	bont.	e Scap	
112.26		at si		0.00	
		1	SP-27		
				critical	Fir
1.64	Samp				
11:00	Finish	ar s	P-30		1
4.0				Rete	in the Rain.
		4			

6	7
11:15 Fin 121 at 50.21	12:22 Seep SP-37
11:15 Finish at SP-31	Too mucky, but may be able to
Access from shoveline it needed	g get closer to seep source from
for sampling -1.4 fide	bank at a higher tide.
Difficulty of boat because of	Tide is at the lowest - 2.4.
hitting bottom. So we are headed	12:36 SP-38 done.
to SP-33 and will come back to	Slighty mucky but able to
SP-28 and SP-29.	access.
River is also flowing quite Fast.	12:58 Amire at SP-24 tide-2.1
11:27 Amre near SP-33 but are	13:05 Finish at SP-24
not able to access shoreline	This is a good hide level to
because of high over flow.	sample at, could be a foot
But from the wat we do not	higher. Seeps all along the
see any water from from	13:20 Head back to SP-33, 28, and 29.
about so It away.	13:38 Done at SP-33
Head to SP-34	We were able to access and
Head to SP-34. 11:37 Too mucky to sample SP-39 - 1.9 tide	There was a small seep
Sank in easily to mid-calf, walnut	emerging from the base of a
Sank in easily to mid-calf. from	piling.
Very muckey. We were able to	13:51 -1.1 tide finish at SP-28
pull right up to the seep, place	Got here at -1.4. Probably
a board down in the mind	need to sample at this level.
and Sample.	No stake at slep.
1215 Finish at 'SP-36	Seep covered w/ water by the
Slight odor. Lowest DO so fav,	time we left. Retein the Rain.

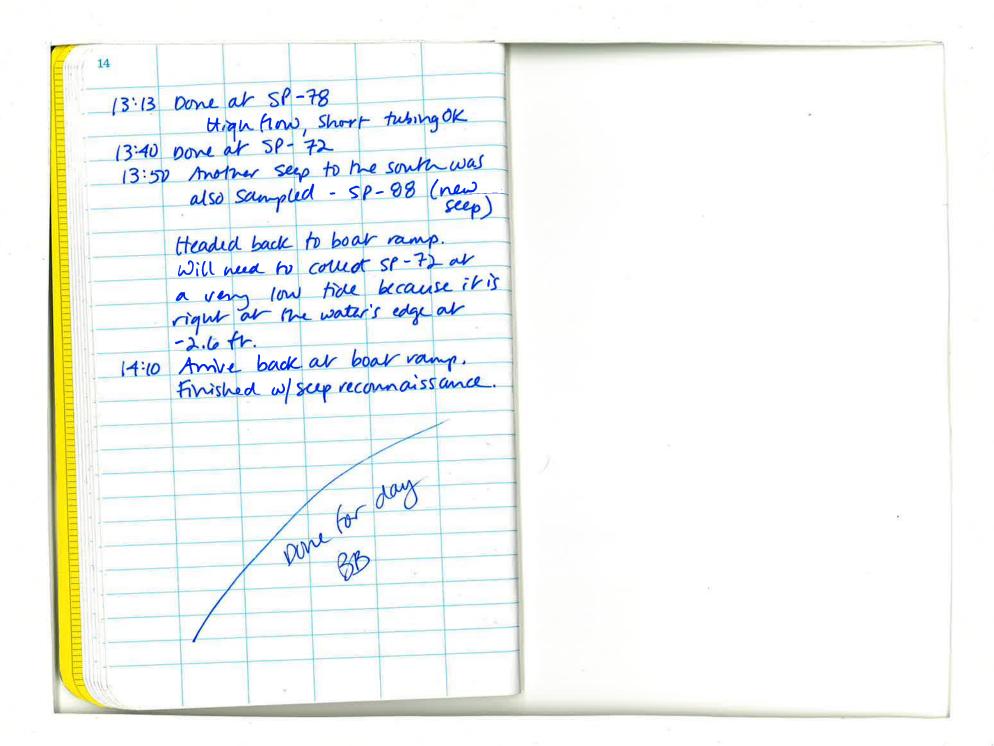
8	
14:15 Finish at SP-29 -0.3	
Veny mucky. Will be veny	
difficult to sample because of	
muck.	
14:23 Checked back at SP-34 tide 0.0	
Closer to source of seep but still	
too mucky to sample. Could be	
too mucky to sample Could be accessed from share?	
14:28 Checked our SP-37 again	
but now tide appears to be too	
high. Seep not visible; actually	
barely visible but muck prevents	
access to seep.	
14:35 Head back to book ramp. 14:48 Stopped at SP-46 1.01ide	
14:48 Stopped at SP-A6 Libral	*
again. Tide still too high.	
15:00 Rehim to boat ramp. Done for today,	
Done Por Hoday,	

Day 3 Seep Recoonnaissance May 17, 2018 Crew: Ben't Bergguist Suranne budziak Jordan Macke Christine Lopez Boat captoun: Jeft Wilson - Discovery 10:29 Leave 1st Ave S. Boat Ramp Healthand safely briefing on board. 11:01 Done at SP-05 Seep emerging at edge of 11:12 Amve near SP-Co3, but barge is in front. Ho access from the north of the barge or from the south Before sampling at SP-05 we noticed a sheen on the water Surface and called the coast guard oil spill hot we. Shear was closer to the 1st the Rite in the Rain.

10				11
	S. Bridge than SP-05.		Head to new see	e at SP-85
	SP-01 not accessable; burge in thoway.	12:50	Finishat SP-85	
	We see another seep we will		Easy access	higher lide OK for
	sample.	7	J	Sampling
	Collected sample at SP-83	13:03	Mire at SP-79	but
	Heed to head boat to other		Sheen and odor.	
	Gravity boat because they are		to walk through	0.000
10	having an electrical issue.		will check back.	1
	Headed back down over to		will also dreck of	
	SP-58 and 59.		tomorrow - both	
	On wrong side of bank for		in behind a bo	
	SP-58 and 59 but we see a	THE STATE OF THE S	Finish at SP-77.	
	new steep so will sangle it.		Easy access,	
	upon Girmer investigation, this	13:36	Finishat SP-65	-2.6 trale
1	is not a spec because it is		Need to be done s	
	flow emerging from a large		least at this is	. 4
	mudflar axea relainity for	14:02	Finishar SP-6	
	from the bank. will check wy		Shallow gradien	1 1
	Kahny's Susie to see it we should.		should be easy t	
	Sample.		Finish at SP-	
12:34	Amve at SP-91, but covered		lasy access and	
	w/ new np-rap. Found new		OK for sampler	rg '
	Slep, INd as SP-89.	14:31		13
The second control of	Finish at SP-84	,	easy access and h	righer tide OK
	Easy access -2.6		for sampling	Rite in the Rain.

12	
1.0	
14:45 Finish at SP-70	w w
Spep originaling from hole in	
14:45 Finish at SP-70 Seep originalizing from how in bulkhead.	
Could not find SP-67 -no	
Conta to but found new	
Grand SP-812. Tide +1.1	
seep our st went to	
as an Image long board for	
SV-86, 60 mg Able to	
actual sample of ball or	
Could not find SP-let no longer there but found new seep at SP-86. Tide +1.1 Mucky right next to SP-86, bring long board for actual sampling. Able to sample at this tide or slightly higher. Head back to boat ramp	
Shappy higher	
Head back to boar racing	
	8
	2

Day 4 Seep Reconnaissance May 18, 2018 Crew: Ben't Bergquist Suranne Oudriak Jordan Macke Christine Copez Overright: Knisten Kerns USACE Boat: Jeff Wilson, Discovery 11:30 Health & Safety Briefing 11:40 Leave 15 Are S. book ramp 12:05 bone at SP-57 12:13 finish ar 5P-59 12:24 SP-58 now at the exact same location. collected at slightly different location. May need to change scep 20? Yes-changed to SP-B7 12:36 Head to SP-79 12:44 At SP-79 A few other seeps to the north 12:55 Finish ar SP-79 Short trying (2-3 ft) ok al ay seeps today Rite in the Rain



Photos

Photo No.: 1

Date: 05-17-18

Description:Duwamish AOC3
Reconnaissance at seep SP-05



Photo No.: 2

Date: 05-15-18

Description:Duwamish AOC3
Reconnaissance at seep SP-06





Photo No.: 3

Date: 05-16-18

Description:Duwamish AOC3
Reconnaissance at seep SP-24

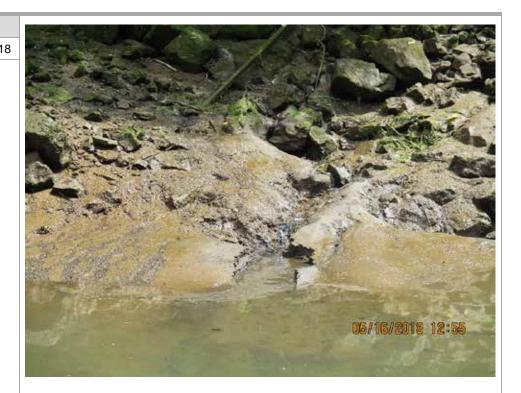


Photo No.: 4

Date: 05-16-18





Photo No.: 5

Date: 05-16-18

Description:Duwamish AOC3
Reconnaissance at seep SP-28



 Photo No.:
 6

 Date:
 05-16-18





Photo No.: 7

Date: 05-16-18

Description:Duwamish AOC3
Reconnaissance at seep SP-30



Photo No.: 8

Date: 05-16-18





Photo No.: 9

Date: 05-16-18

Description:Duwamish AOC3
Reconnaissance at seep SP-32



Photo No.: 10

Date: 05-16-18





Photo No.: 11

Date: 05-16-18

Description:Duwamish AOC3
Reconnaissance at seep SP-35



Photo No.: 12

Date: 05-16-18





Photo No.: 13

Date: 05-16-18

Description:Duwamish AOC3
Reconnaissance at seep SP-38



Photo No.: 14

Date: 05-15-18





Photo No.: 15

Date: 05-15-18

Description:Duwamish AOC3
Reconnaissance at seep SP-43



Photo No.: 16

Date: 05-15-18





Photo No.: 17

Date: 05-15-18

Description:Duwamish AOC3
Reconnaissance at seep SP-47



Photo No.: 18

Date: 05-15-18





Photo No.: 19

Date: 05-15-18

Description:Duwamish AOC3
Reconnaissance at seep SP-50



Photo No.: 20

Date: 05-15-18





Photo No.: 21

Date: 05-18-18

Description:Duwamish AOC3
Reconnaissance at seep SP-57



Photo No.: 22

Date: 05-18-18





Photo No.: 23

Date: 05-17-18

Description:Duwamish AOC3
Reconnaissance at seep SP-65



Photo No.: 24

Date: 05-17-18





Photo No.: 25

Date: 05-17-18

Description:Duwamish AOC3
Reconnaissance at seep SP-68

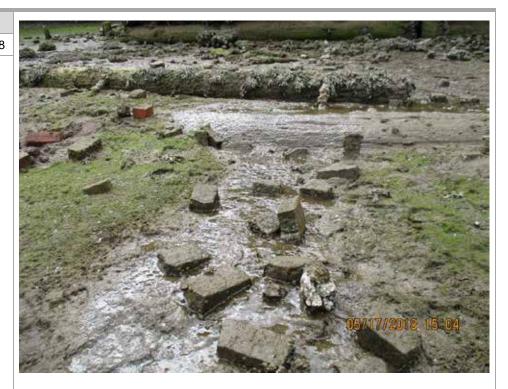


Photo No.: 26

Date: 05-17-18





Photo No.: 27

Date: 05-18-18

Description:Duwamish AOC3
Reconnaissance at seep SP-72



Photo No.: 28

Date: 05-17-18





Photo No.: 29

Date: 05-17-18

Description:Duwamish AOC3
Reconnaissance at seep SP-74



Photo No.: 30

Date: 05-17-18





Photo No.: 31

Date: 05-18-18

Description:Duwamish AOC3
Reconnaissance at seep SP-78



Photo No.: 32

Date: 05-18-18





Photo No.: 33

Date: 05-17-18

Description:Duwamish AOC3
Reconnaissance at seep SP-83



Photo No.: 34

Date: 05-17-18





Photo No.: 35

Date: 05-17-18

Description:Duwamish AOC3
Reconnaissance at seep SP-85



Photo No.: 36

Date: 05-17-18





Photo No.: 37

Date: 05-18-18

Description:Duwamish AOC3
Reconnaissance at seep SP-87



Photo No.: 38

Date: 05-18-18





Seep Sampling



Project Name: LDW AOC3				Project Task: Seep Sampling				
Date/Time: _(g/	15/18		Plan s	Crew: BB, TH, CL, Allison				
Weather:	12° Sur	rnu		Photo no.	Art, 00, /11110011			
	1							
Location ID: SP	- 01	Easting (x):		Northing (y):	Time: 1133	1 1 2 1		
Sample collection method:			mostly	od with f				
Flow rate collectio	n method:	, , , , , , , , , , , , , , , , , , , ,	ine vive	00001127				
Volume of contain	er:		-					
Time to fill contain	er:							
Calculated flow rat	te:							
Temp	SpC	DO	рН	Turbidity	Salinity			
117.7	124631	15.61	1 6.95	•	1			
2	2	2	2	2	2			
3	3	3	3	3	3			
Substrate descript								
(e.g., rock, soil, cobl	ole, gravel, sand,	silt, clay)		gravel covered with silt				
Seep observations material, colored dis	(e.g., sheen, bac charge, precipitat	cterial slime, staining, ottes, vegetation):	odor, waste	Lors of wo	Ste material and			
				dessis pi)	ses metal concrete	,		
				Lors of waste material and duris, pipes, need, concrete, orange-colored rocks				
Description of embankment that seep flows from and general seep characteristics:				reconvery steep, debnis, wide, fam-like slope face				
Seep location relati substrate:	ve to vertical char	nges in embankment o	or beach		Seep			

Project Name:	LDW AOC3		F	Project T	ask: Seep Samplir	20	
Date/Time:	6-14-1	8	4		rew: RA	BAHIMSP	
Weather:	-00	louds Coo	./	Photo no. 164-170			
	2-11	20.43 (00	,	Photo	по	164-110	
Location ID: 5	D						
		asting (x): 127/	817	Northing	(y): 1994	60 Time: 1408	
Sample collection	method:	1	1	.//	1 1 .		
Flow rate collection	n method:	tunh	el wi	146	tuping		
					0		
Volume of contain	er:						
Time to fill contain	Or:				A		
Time to im contain	er.						
Calculated flow rat	e:						
-							
Temp	SpC	DO	pH	- ·	Turbidity	Salinity	
1 /5.55	127295	1 4.14	1 7.2	5	11.59	1	
3	3	2	2		2	2	
Comment		3	3		3	andition.	
Substrate descripti (e.g., rock, soil, cobb	on ble, gravel, sand, silt,	clay)					
Seep observations material, colored disc	(e.g., sheen, bacteria charge, precipitates, v	al slime, staining, odor, vegetation):	waste	Sum Cleo	ar seep	econ except ; No organics in water	
Description of emba characteristics:	nkment that seep flo	ws from and general se	еер				
Seep location relativ substrate:	e to vertical changes	in embankment or bea	ich /		\$		

Project Name:	LDW AOC3			Project Ta	sk: Seep Samplin	ng
Date/Time:	6-13-	-18			The second secon	1 AV 5D
Weather:	Cool	Clouder			no.	
						01-16
Location ID: 5	P-06	Easting (x): 1272	090	Northing	(y): 1994	66 Time: 953
Sample collection	method:					
Flow rate collection		Funn	11+	tub,	ns	
Trow rate collection	m method:	5top wa	tek		U	
Volume of contain	er:	/				
Time to fill contain		300mL				
Time to fill contain	ier:	Imix 23	Sec.			
Calculated flow rate	te:				7	
Temp 0 =	SpC	DO 7,	l nU			
1 592	1 2456	9 1 97 1	1 7	00	Turbidity	Salinity
2	2	2 ///	2	97	1 /1.51	1
3	3	3	3		3	3
V= see 5	sheet fo	3 sec 300		Change	in con	dition
Substrate descripti (e.g., rock, soil, cobb	UII					
(1-g., 1-d., don, dob.	ole, graver, sariu, s	siit, Clay)	V	Wo	uter no	t as furbid
				95	recon	
Seep observations material, colored disc	(e.g., sheen, bact	terial slime, staining, odor,	waste	_		.0
and the second second	orialge, precipitate	ss, vegeration):	1			s from base
				96	rip rop)
				600		
Description of emba characteristics:	inkment that seep	flows from and general se	еер			Seep g
						31 98
4				<u>10</u>	Constitution of the Consti	
Seep location relative	e to vertical chang	ges in embankment or bea	ach			
dustrate:			./			
ž						

Project Name: LDW AOC3				ect Task: Seep Samplin	ng		
Date/Time:	113/18		N. L.				
Weather:	163° Suy	1		Photo no. 19-24			
Location ID: SF	24. E	asting (x): /277	566 No	rthing (y): /9 2 9	37 Time: 12:35		
Sample collection	method:	Fa	innel	& tubing			
Flow rate collection	n method:			0			
Volume of containe	er:				79482 1 V 407 11		
Time to fill contain	er:						
Calculated flow rat	e:						
Temp	SpC	DO	рН	Turbidity	Salinity		
1/6.29	1/6895	17.10	1 7.68	1 3,57	1 7		
2	2/6920	2	2	2	2		
3 Comments:	3	3	3	3	3		
Substrate descripti (e.g., rock, soil, cobb	e sheef on ole, gravel, sand, silt,	from recon	n-no	change in	D DUPLICATES condition		
Seep observations material, colored disc	(e.g., sheen, bacteri charge, precipitates,	al slime, staining, odor, vegetation):	waste				
Description of embankment that seep flows from and general seep characteristics:				000 Z 0,000 Z 0 100			
V							
Seep location relative substrate:	e to vertical change	s in embankment or bea	ach				
V							

Project Name:	LDW AOC3	10	P	roject Task: Seep Sa	mpling	
Date/Time:	6-12	-18/9	38	Crew:	O TI	11 14
Weather:	Some Cla	onds & Sun		Photo no.	0 47	21-11
		Cool	SF	-27/5F	-89	01=11
Location ID: S	P-27/	Easting (x): 1278	761.18	Northing (y): 1 900	24,64	Time: 938
Sample collection	method: 89	Funnel				700
Flow rate collection	n method:	Stop 1	1			
Volume of containe	er:	300 m	_			
Time to fill contain	er:	1 min 54	5 3	00 m/		
Calculated flow rat	e:			,		
Temp C	SmC	no W/				
1 700 1/1 5	SpC	DO M/L	pH	Turbidity	Salin	nity
2	125600	7 1 8,78	1 7,6	3 17.88	8 1	
3	3	3	3	3	3	
Jo leas of	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	at SP-Z	7, 0 (min 5	bserved f	You.	26 South 06 Stake from 5P-27
Substrate descripti (e.g., rock, soil, cobb	le, gravel, sand, sil			Gravel + Gray	Si'lt Brown	4
Seep observations of material, colored disc	(e.g., sheen, bacte harge, precipitates	rial slime, staining, odor, s, vegetation):	waste	Clear Si	low 7	-/100
				No Sheer	No	Odor
Description of emba characteristics:	nkment that seep f	lows from and general se	еер	Flow from	m ber + 40	hinds sheet 5'5 of SP-27
Seep location relative ubstrate:	e to vertical change	es in embankment or bea	ch	Seep com		
			V.	1 (111-11	7

SP-27 - 40, Flow Stake from SP-27

Project Name:	LDW AOC3		Project 1	Task: Seep Sampli	na			
Date/Time:	6-12-1	8/1206		Crew: JM AH SD				
Weather:	Overcast	- Warn			44-46			
					74-46			
Location ID: 5		asting (x):/ 2785	5/3 Northin	g (y): /89 89	96 Time: 1206			
Sample collection	n method:		1 1					
Flow rate collection	on method:	[-unnel	& tubir	8				
Ton rate concess	on method.	_		0				
Volume of contain	ner:							
Time to fill contain			A					
Time to fill contain	ner:							
Calculated flow ra	ate:							
-								
Temp	SpC	DO	рН	Turbidity	Salinity			
2	1 19463	1 3.74	1 6.79	15,3	1			
3	3	3	3	3	3			
Substrate descript (e.g., rock, soil, cob	tion bble, gravel, sand, silt,			ange in c	condition			
Seep observations material, colored dis	s (e.g., sheen, bacteria scharge, precipitates, v	al slime, staining, odor, vegetation):	waste	aderate ?	5/ou			
Description of emb characteristics:	ankment that seep floo	ws from and general se	еер					
Seep location relati substrate:	ve to vertical changes	in embankment or bea	ch					

Project Name:	roject Name: LDW AOC3				Project Task: Seep Sampling			
Date/Time:	12/18			Crew: BB, CL, SW				
Weather:	59° Scat	tered clouds	& SUN P	1) Photo no. 1 – 9				
-	, ,	TO TO THE TOP OF THE TOP OF	/					
Location ID: Sp	32	Easting (x): 1277	82) Nort	hing (y): /00/0	70 Time: 09:19			
Sample collection		Funnel P						
		rametr	LETVIOLE	(long we	ing)			
Flow rate collection	n method:		-	4				
Volume of containe	er:							
Time to fill contain	er:		l.					
Calculated flow rat	0:							
Calculated flow fac								
Temp	SpC	DO	pН	Turbidity	Salinity			
1 16.649	122493	1 69.5	1262	14,46	1			
2	222487	2	2	2	2			
3	3	3	3	3	3			
Comments: Jample	clear	, seep flow	closer	to water,	still mucky!			
Substrate descripti (e.g., rock, soil, cobb		ilt clav)	,					
	A series of carray of	, 3.8377		V= same as recon-no enange in condition				
	A.		-					
Seep observations material, colored dis-	(e.g., sheen, bacte charge, precipitate	erial slime, staining, odor, s, vegetation):	waste					
/			-					
V					d.			
					<u> </u>			
Description of emba	ankment that seep	flows from and general s	еер	distribution of the state of th				
			9	71				
V				1				
Seep location relative substrate:	ve to vertical chang	ges in embankment or be	ach					
. /								
V								

Project Name:	LDW AOC3		Proje	ect Task: Seep Samp	oling	
Date/Time:	6-13-	18	spire) - 1	Crew:	DAVJ	h K
Weather:	Clouds	2 Some Su	en cool P	hoto no.	80-83	
9	100	39	-	11		
Location ID:	P-33	Easting (x): / 2 >	774Z Nor	thing (y): 1965	19 Time: / 2	2/7
Sample collection	n method:	Funnel	tubing -	R 55 bou	ul. Let wa	ter sit
Flow rate collecti	on method:	for 5	mins bet	Gore sanf	U, Let wa	lade/
Volume of contai	ner:	into E	soffles			,
Time to fill contain	ner:					
Calculated flow r	ate:		**************************************			
Temp C	SpC	DO mole	pH	Turbidity	Salinity	
1 19.49	1 1884	21 8,29	1 7.8	5 135.2	9 1	
2	2	2	2	2	2	
3	3	3	3	3	3	
Substrate descrip (e.g., rock, soil, co	otion	Sample of	L			cordition
Seep observation material, colored d		cterial slime, staining, o ates, vegetation):	dor, waste	lery diff lot a dist	hitse flow hinch stream entifiable sh	like reco
Description of emcharacteristics:	bankment that see	ep flows from and gener				
Seep location rela substrate:	ative to vertical cha	anges in embankment o	r beach		Til en	Huse Umudglat

Project Name: LDW AOÇ3				Project Task: Seep Sampling			
Date/Time:	6/12/18	lan.		Crew: BB, CL, SW			
Weather:	570,000	ear Sum	W	Photo no	-12,1:	3-23	
	- / /		J	con	reback		
Location ID:	SP 35	Easting (x): /2	77196	Northing (y): 1904	199	Time: 1056	>
Sample collecti	on method:	Funne	lmeth	od w/bo	wl for	settline	P
Flow rate collec	ction method:)
Volume of cont	ainer:						
Time to fill con	tainer:						
Calculated flow	rate:	4.					
Temp	SpC	DO	рН	Turbidity	Sali	nity	
117.550	1 1/2050	1217,7	7 17.5	5/ 163,	5 1		
2	2-1/954	2	2	2	2		
3	3	3	3	3	3		
Sa	mpling,	from th	e boat,	ck to laste twice for	r enov	ighwate 5 minset	Tw/
Substrate desc (e.g., rock, soil,	ription cobble, gravel, sand,	, silt, clay)		V= Same	is reco	n-no cho	ange
V				in Ci	in condition		
	ons (e.g., sheen, ba d discharge, precipita		g, odor, waste				
✓				ē			-
Description of characteristics:	embankment that se	ep flows from and ge	eneral seep				
V				7	1		
Seep location substrate:	relative to vertical cha	anges in embankme	nt or beach				
/			F Ser in a				
				1			

Project Name:			Project Task: Seep Sampling					
Date/Time:	6-12-1	8/10	027	Crew: BB JM AH				
Weather: 5	un + Clau	eds, Coo,	/		o			
Location ID:	0 7 % 5	asting (x): /77	11100	l			1	
2	4 9 9	stilly (x). [2]	6484	Northing (11913	59 Time: 10 Z	7	
Sample collection	method:	SP	38	0	/	, / ,		
Flow rate collection	n method:			TUY	nel 8	2 tubing		
Volume of contain	er:							
T:								
Time to fill contain	er:							
Calculated flow rat	te:							
Temp	SpC	DO	рН	Т	urbidity	Calinity		
1 17,48	119545	1 5 97	1 7	7 1	- 1	Salinity 1		
2	2	2	2	2	- 11 N	2		
3 Comments:	3	3	3	3		3		
Substrate descripti (e.g., rock, soil, cobb	on on gravel, sand, silt,	clay)	ксерт	+/00	15 5	lonsey		
Seep observations material, colored disc	(e.g., sheen, bacteria charge, precipitates, v	Il slime, staining, o regetation):	dor, waste					
V				0/60	10			
				Moderate Flow				
Description of emba characteristics:	nkment that seep floo	vs from and gener	al seep					
Seep location relative substrate:	e to vertical changes	in embankment or	beach					

Project Name: LDW AOC3				Project Task: Seep Sampling				
	12/18	r		Crew: BB, CL, SW, Allison				
Weather: ~ (oto Clea	y a sunny		Photo no. 87-38				
	70	, , , ,						
Location ID: 01	042	Easting (x): /275	910	Northing (y): /	93788	Time: 12.05		
Sample collection	le collection method: Funnel meth				a tubin	9)		
Flow rate collection	n method:	<u>'</u>			,	n/		
Volume of contain	er:							
Time to fill contain	ner:							
Calculated flow ra	te:							
Temp	SpC	DO	pH	Turbic	lity Sa	linity		
166,654	14969	1 39.6	1 40	76 13,	88 1			
2	2 4970	2	2	2	2	N. Managarana		
Comments:	3	3	3	3	3			
		ing sam		ongenen	5	- 1		
Substrate descript (e.g., rock, soil, cob		silt, clay)		1/= wan	IR UN VE	con - no chance		
/		a a		in 6	undition	con no change		
Seep observations material, colored dis	e (e.g., sheen, bact scharge, precipitate	terial slime, staining, odd es, vegetation):	or, waste	very c	lear Co things	solving same as Recor		
Description of emb characteristics:	ankment that seep	o flows from and general	seep					
Seep location relation substrate:	ve to vertical chan	iges in embankment or t	peach		-			

Project Name:	LDW AOC3		Pr	oject Task: Seep Sampl	ina
Date/Time:	6-12	-18/13		Crew: AH	TM 30
Weather:	Overcas	+ con	/	Photo no.	110 60
		/			45-56
Location ID:	P-43 E	asting (x): 1275	804 N	orthing (y): /944	7/ Time: 1300
Sample collection		121)	00/	301/199	7/ Time: 1309
9		Funn	0/2	Tubin	
Flow rate collectio	n method:		,		
Volume of contain	er:	<u> </u>		*	
Time to fill contain	er:				
Calculated flow rat	e:		-		
Temp	SpC	DO	рН	Turbidity	Salinity
1 15.29	1 18852	-15.97	160	g 17.7/	1
2	2	2	2	2	2
Comments:	3	3	3	o change in	3
Substrate descripti (e.g., rock, soil, cobb	on ole, gravel, sand, silt,	Collecte	d Pa	E sample.	1300
Seep observations material, colored disc	(e.g., sheen, bacteria charge, precipitates,	al slime, staining, odor, vegetation):	waste		
	V				
Description of emba characteristics:	nkment that seep flo	ws from and general se	еер		
	V				
Seep location relative	e to vertical changes	in embankment or bea	ch		
	V		5 1		
	1	•			

Project Name: Date/Time: Weather:	45/18 15/18 30, Sun	ny	Project Ta	ew: BB, JA	ep Samp Cing			
Location ID:	, -	sting (x): /274/	199 Northing	(y): 196708	3 Time: 1345			
Sample collection r	nethod:	Funnel method w tubing						
Flow rate collection	n method:							
Volume of containe	er:							
Time to fill containe	er:							
Calculated flow rate	e:							
Temp	SpC	DO	pH	Turbidity	Salinity			
126,74	123907	1 9,89	17,18	1/10/05	1			
2	227881	2	2	2	2			
3 Comments:	3	3	3	3	3			
Substrate description (e.g., rock, soil, cobb	ep colle	ction poi	nt for f	unnel.	- no change in cond			
Seep observations material, colored disc	(e.g., sheen, bacteria charge, precipitates, v	al slime, staining, odor, vegetation):	waste	**				
Description of emba characteristics:	nkment that seep floo	ws from and general se	еер					
Seep location relative substrate:	e to vertical changes	in embankment or bea	ich					

Project Name: LDW				Project Task: Seep Sampling					
Date/Time: 6/15/18				Crew: BB, JM, CL					
Weather: NEST, Sunny				Photo		1			
	/	J							
Location ID:	747 Ea	sting (x): 1273	621	Northing	(y): 19723	0	Time:	1316	
Sample collection	method:				•	-			
Flow rate collection	n method:								
Volume of containe	er:								
Time to fill contain	er:		×						
Calculated flow rate	e:								
Temp	SpC	DO pH			Turbidity Sa		alinity		
1/8.7	128/24	19.34	17,4	40	1 8.70	1			
2	228140.	2 2			2	2	2		
3 Comments:	3	3	3		3	3			
Substrate descripti	= See 9h	eet from	re coi	n. N.	e charge	in	cond.	ition.	
(e.g., rock, soil, cobb	le, gravel, sand, silt,	clay)							
Seep observations material, colored disc	(e.g., sheen, bacteria charge, precipitates, v	al slime, staining, odor, vegetation):	waste						
Description of emba characteristics:									
V									
Seep location relative substrate:	e to vertical changes	in embankment or bea	ch						

Project Name: LDW AOC3					Project Task: Seep Sampling				
Date/Time: 6//	3/12			Crew: AH, SW, CL					
Weather: ~ 62° COVENCUCK SUNDICE Deboto no. 6-18									
		KEZE GAZE E							
Location ID: 5/6	149	Easting (x): 12	73036	Northing	(y): /977	44	Time:	1025	
Sample collection	method:								
			Market Market						
Flow rate collection	n method:								
Volume of containe	or.								
Voiding or gontaine								-	
Time to fill contain	er:								
Calculated flow rat	e:				2				
Temp	SpC 103	DO	рН		Turbidity	Sali	nity		
1/7. H	14/1/00	LAH 18,6	17,	クチ	13,61	1			
2	24/228	2 HH 2	2		2	2			
3	3	3	3		3	3			
ultra	Comments: When mucky-boardssinking condition to high to sample 1/= see sheet from recon - No change in condition								
Substrate descripti (e.g., rock, soil, cobt	ion		7					÷	
Seep observations material, colored dis			g, odor, waste		-				
Description of embicharacteristics: Seep location relation substrate:							2		
V								v	

Project Name: Date/Time: Weather: Location ID: Sample collection reflow rate collection	method:	C3 18 / 1245 w Clouds Easting (x): 1272387 No Sarp &			Photo	ew:	B JM CL		
Volume of containe	er:								
Time to fill containe	er:								
Calculated flow rate	e:								
Temp 0	SpC	DO		рН		Turbidity		Salinity	
124.34 C	134826	1 6	0//	1 7 /	14	1 mm.	7	1	
2	234823	2		2		2	2	2	
3	3	3		3		3		3	
Substrate descripti (e.g., rock, soil, cobb	on	e re		eet			gh	in cordition	
Seep observations material, colored disc	(e.g., sheen, bacte charge, precipitate	erial slime, stans, vegetation	aining, odor, w):	vaste		-			
Description of emba characteristics: Seep location relatives									

Project Name:	LDW AOC3		Proje	t Task: Seep Sampli		
Date/Time:	6-14-	18/104/	/	Crew:		
Weather:	2001, C					
	,	four s	Pr	oto no/	3-19	
Location ID:	50					
	5P-57	Easting (x): 12699	54/ North	ing (y): 2011 3	9 Time: 1041	
Sample collection	method:	Fun	1-11			-
Flow rate collection	n method:	runne,	1 + tub	15		
				0		
Volume of contain	er:					
Time to fill						
Time to fill contain	ier:					
Calculated flow rat	te:					
Temp 0 C	SpC	DO M9/2	рН	Turbidity	Salinity	
1 14,75	12654		1 7.96	1268	1	
3	3	3	2	2	2	
	1 -		3	3	3	
un	der /	Ave Bridge				
V= 5ee .	sheet e	from recon	Non		1. 1.	1
	71	, , , ,	- 100 CM	unge in co	dost spri	
Substrate description	on		T	4		
(e.g., rock, soil, cobb	le, gravel, sand, s	ilt, clay)	A. Committee			
Seep observations (e a sheen had	erial slime, staining, odor,				
material, colored disc	harge, precipitate	s, vegetation):	waste Fas	+ Flow		\dashv
				1 100		
			1			
characteristics:	nkment that seep	flows from and general se	ер			
			1			
eep location relative	to vertical change	es in embankment or beac	ch			
ubstrate.			L			
			1			
				p		
-			* \			

Project Name:	LDW,	AOC3	Pi	roject Ta	isk: <i>5e</i>	ep Sampling
Date/Time:	-15-18	, /325			ew: AA	(SA 511)
Weather:	Sunny w/	Cloubs; a		Photo	, ,	77 71
	0					L 6 1/2
Location ID: 5	P-66 E	asting (x): 1266	514 N	lorthing	(y): 20625-	7 Time: /325
Sample collection	method:	Furnel				7,525
Flow rate collection	n method:			(
Volume of containe	er:					
Time to fill contain	er:					
Calculated flow rate	e:					
Temp °C	SpC	DO	pH		Turbidity	Salinity
1/8.7	127145	1 8,44	1 3,5	4	1 2,54	1
2	227/6/	2	2 8,3	**	2	2
Comments:	3	3	3		3	3
No cho	ame as r ange in co.	ndition *	* USed	1 Znc	pot work	boat
Substrate descripti (e.g., rock, soil, cobb		t, clay)				
Seep observations material, colored disc	(e.g., sheen, bacter charge, precipitates	rial slime, staining, odor, , vegetation):	waste		Except w Flow	
Description of embacharacteristics:	ankment that seep fl	lows from and general se	еер			
Seep location relative substrate:	ve to vertical change	es in embankment or bea	ach	V		

SEEP COLLECTION FORM LOWADE 3 **Project Name:** Project Task: Date/Time: Weather: Location ID: Easting (x): Northing (y): 2/0059 1266 029 Sample collection method: Flow rate collection method: Volume of container: Time to fill container: Calculated flow rate: SpC DO pH Turbidity Salinity 3 3 Comments: * pH sensor failed * * used znd probe on recon boat no Charge in condition Substrate description (e.g., rock, soil, cobble, gravel, sand, silt, clay) Seep observations (e.g., sheen, bacterial slime, staining, odor, waste material, colored discharge, precipitates, vegetation): Description of embankment that seep flows from and general seep characteristics: Seep location relative to vertical changes in embankment or beach substrate:

Project Name: LDW AOC	3		Proje	Project Task: Seep Sampling				
Date/Time: 0/14//	8			Crew: B	B, SW	CL	7.5	
Weather: ~63°	over	cast	P	hoto no.		,		
/								
Location ID: SP 73	Eas	sting (x): /267:	245 Nor	thing (y): Zo	8409	Time: / 2	208	
Sample collection method:		Funne!	w/tu	bing				
Flow rate collection method:								
Volume of container:								
Time to fill container:					a			
Calculated flow rate:								
Temp SpC	15-7-52	DO	pH	Turbidit	у	Salinity		
120,875 1259	91,2	1 9,37	1 -6.02	1 13	173	1		
2 2		2	2	2		2		
3 3 Comments:		3	3	3		3		
V= 5ee sheets Substrate description	from	recon-n	o Charg	e in co	rditio.	Þ		
(e.g., rock, soil, cobble, gravel,								
Seep observations (e.g., shee material, colored discharge, pre	en, bacteria ecipitates, v	I slime, staining, odor, regetation):	waste					
Description of embankment th characteristics:	at seep flov	ws from and general s	еер					
Seep location relative to vertic substrate:	al changes	in embankment or bea	ach					

Project Name:	LDW AOC3			Project Tas	k: Seep Sampling	,	
Date/Time:	6-14	1-18 / 13	314		w:S	11	TM
Weather:	tigh Clo	uds Was	m	Photo n		, , , ,	1011
	0				·-		
Location ID: 5	P-74	Easting (x):		Northing ()	·):	Time:	1314
Sample collection	method:	T	. /	- /	/ .		1011
Flow rate collection	n mothod:	Fu	nnel	2 4r	bing		
	ii iiietiioa.						
Volume of contain	er:						
Time to 50							
Time to fill contain	ier:						
Calculated flow ra	te:						
Temp 0C	SpC	DO 19/4	рН	Т	urbidity	Salinity	
2 8.7	1 14805		17	53 1	8.59	1	
3	3	2	2	2		2	
Comments:	13	3	3	3		3	
	No cha	nge in col		7			à
Substrate descripti (e.g., rock, soil, cobb	on ble, gravel, sand, s	silt, clay)					ζ.
Seep observations	(e.g., sheen, bacte	terial slime, staining, odor	, waste				
material, colored disc	charge, precipitate	es, vegetation):					
Description of emba	nkment that seep	flows from and general s	seep				
eep location relative	e to vertical chang	ges in embankment or be	ach				
		l					

Project Name:	LDW AOC3			Project T	ask: Seep Sampling			
Date/Time:	6-14-	-18	ergick.		rew: AH			11
Weather:	Cloud	5. Cool				111	0	1 /0/
)		Photo	по	19.	-76	
Location ID:	0			_				<u> </u>
3	-77	Easting (x): 1268	446	Northing	(y): 2059-	72	Time: /	210
Sample collection	method:	- fram	10					
Flow rate collectio	n mothod:	Fuhre	18	tubin	Same			
. Tow rate conection	ii iiietiiou.	**						and the second
Volume of contain	er:					-	- 1	
Time to fill contain	er:							
Calculated flow rat				33.00	2 10			
odiculated flow fat	е.							
Temp	SpC	DO	Н		Turbidity	Calini		
1 15,53	120693	3 1 2.71	1 77	51	1 1.44	Salini 1	ty	
2	2	2	2		2	2		
Comments:	3	3	3		3	3		
V = 5-ee Co Substrate description (e.g., rock, soil, cobb	econ she	stren on s 5 ft 5 ob cet-No chan	str	te br	om reco.	0		- steep
material, colored disc	narge, precipitate			Slig	ant yello	ow	color	7
orial dotoristics.		flows from and general se		V				
				V)

Project Name:	DW AOC3		P	Project Task: Seep Sampling				
Date/Time:	114/18			Cre	w. 51.2 R	B		
Weather: 26	1° . Ever	reastu/Sur	lareake	Photo n	10			
			- A - A - A - A - A - A - A - A - A - A	,				
Location ID: Sp	- 78	Easting (x): 12686	629	Northing (y): 204281	Time: 1204		
Sample collection i	method:	(-	201201	.00		
	-	funnel wit	h tu	Long	•			
Flow rate collection			•	2)			
Volume of containe	er:			The second secon				
Time to fill containe	er:							
							-	
Calculated flow rate	e:							
Temp	SpC	DO	рН	1-	Turbidity	Salinity		
1 15.47	127658	1 9.19			3.3	1		
2	2	2	2	2		2		
3 Comments:	3	3	3	3	3	3		
Substrate description (e.g., rock, soil, cobb	econ skee on le, gravel, sand, si		in co.					
Seep observations (material, colored disc	(e.g., sheen, bacte harge, precipitates	erial slime, staining, odor, s, vegetation):	waste	dis.	finct su	elfur oder		
Description of embal characteristics:	nkment that seep f	flows from and general se	еер					
Seep location relative substrate:	e to vertical change	es in embankment or bea	ach					

Project Name:	LDW AOC3		Pro	pject Task: Seep San	molina
Date/Time:	6/14/1	8/950	>		H, JU, 50
Weather:	al Cloud	5	strange a		
	UI CIVIC			Photo no.	01-12
Location ID: 5	P-79 E	asting (x): 126	87/3 No	orthing (y): 2040	089 Time: 950
Sample collection	n method:			d tubin	
Flow rate collecti	on method:	1 001	TE 1 DO	4 100/1	S
Volume of contain	ner:				
Time to fill contai	ner:				
Calculated flow ra	ate:				
Temp C	SpC	DO M3/2	pH	Turbidity	Collinite
1 14,42	123390	14.89	1 2 46	11	Salinity
2	2	2	2	7 1 /2,3	2
3	3	3	3	3	3
	t ion ble, gravel, sand, silt,		V		be ~ 7.44
Seep observations naterial, colored dis	(e.g., sheen, bacteria charge, precipitates,	al slime, staining, odor vegetation):	A	ime as i	recon; Sulfur odos yellow fint
Description of emba	ankment that seep flo	ws from and general s	seep Sc fr	mplity la	e at the base of
eep location relativ ubstrate:	e to vertical changes	in embankment or be	each	1 Sept 1	Seep State

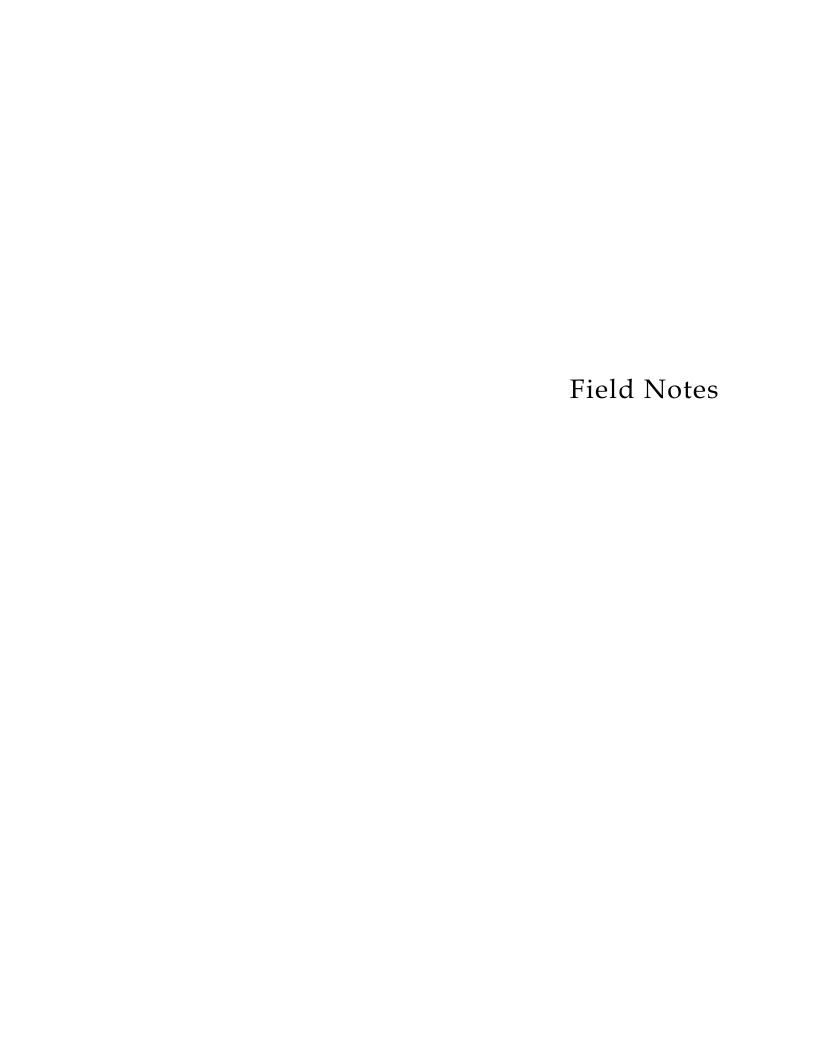
Project Name:	LDW AOC3			Project Task: Seep Sampling					
Date/Time:	0/15/18			Crew: JM, BB, AS					
Weather: 5	anny m	ild		Photo no).)	3 0		
Location ID: 5	P-83	Easting (x): /Z	70757	Northing (y	20/59	3	Time: 1/2(18	
Sample collection	n method:				00/00		* 4	70	
		Funnel	w/tubi	ng					
Flow rate collecti	on method:			0					
Volume of contain	ner:	/							
Time to fill contai	ner:								
Calculated flow ra	ato:								
Gaiodiated 110W 18	ate.								
Temp	SpC	DO	рН	Tu	ırbidity	Salin	ity	A	
117.24	1 23028	17.98	17.4	3 1	4.02	1			
2	2	2	2	2		2			
3 Comments:	3	3	3	3	17	3			
Substrate descrip	tion bble, gravel, sand, s	rom recon	-No C	hange!	in cone	diho	על		
	, , , , , , , , , , , , , , , , , , , ,	, 3.6.5)							
Seep observations material, colored dis	s (e.g., sheen, bacte scharge, precipitate	erial slime, staining, o	odor, waste	582					
V									
Description of embed characteristics:	pankment that seep	flows from and gene	ral seep	And the same of th			Z		
\checkmark									
Seep location relation substrate:	ive to vertical chang	ges in embankment o	r beach			W			
	1		=						

	/		Casa		Photo no. 2 -		
Location ID:	SP 84	Easting (x	d: 1269	9599 Nor	thing (y): 203	350 Time: 09 18	73
Sample collec	tion method:	7	Funn	el with	(tubing		
Flow rate coll	ection method:				9		- wiley
Volume of co	ntainer:						
Time to fill co	ntainer:						
Calculated flo	w rate:				-		
Temp	SpC	DO		pH	Turbidity	Salinity	
1	12629	6,21	6	1	1	1	
2/6,26	3	75.928	,13	27,79	2. 93	2	- 4
Comments:	Sample = see she	eet fro			charge in	cordition	
Comments:	sample = see sk	eet fro			charge in	cordition	
Comments: O CLAN Substrate des (e.g., rock, soil	Sample = see she	nd, silt, clay)	staining od	con-no			ris
Substrate des (e.g., rock, soil	cription, cobble, gravel, sar	nd, silt, clay) bacterial slime, oitates, vegetati	staining, od	dor, waste		es but debi looks like to	ris

SEEP COLLE	CTION FOR	.M					4		
Project Name:	LDW	AOC 3		Project Ta	1sk: 5	ep	Sary	oline	
Date/Time:	6-15-1	18:, 1219		Cr	ew: A	4	SA	20)
Weather:	Sunna	2000 cloud	s was			15	-71	Seed Seed	
	(3,-	1000			//			
Location ID:	SP-86	Easting (x): 1265	956	Northing	(y): 2069	09	Time:	121	9
Sample collection	method:				2001	0/		121	
		Funnel	2 tu	bing					
Flow rate collectio	n method:			0				,	
Volume of contain	er:						*		
Time to fill contain	ier:								
Calculated flow rat	te:								
Temp C	SpC	DO mg/	-11						
1 17.58	1298-	78 1 7 72	pH 1 ₩		Turbidity	Sali	nity		
2	2 2994	7_2	26,9	73	12,25	2			
3	3	3	3		3	2			
		from recon							
Substrate descripti (e.g., rock, soil, cobb	ion				elf silt			Sandy	Grave,
				13	at bas	e 0/2	5000		
2 /				Gray	-Brown	614	h 6/0	ick us	1 derneet
Seep observations material, colored disc	(e.g., sheen, bac charge, precipita	cterial slime, staining, odor ites, vegetation):	r, waste						
Description of embacharacteristics:	ankment that see	ep flows from and general s	seep	/	Seep a	omes with	out se	io an	bricks
Seep location relative substrate:	ve to vertical cha	inges in embankment or be	each						7

Project Name:	LDW AOC3		Pro	Project Task: Seep Sampling Crew: SW, BB, JM				
Date/Time:(0/14/18							
Weather:	ol, overcas	r		Photo no. (4)				
		×						
Location ID: 5	P-87 E	Easting (x): 126	9567 No	orthing (y): 2667	04 Time:]:			
Sample collection	method:	Funnel w/	tubalan		/ 11.1			
Flow rate collection	on method:	(10000					
Volume of contair	ner:							
Time to fill contain	ner:		*					
Calculated flow ra	te:							
Temp	SpC	DO	pH	T				
1 14.7	14638	1 4.96	1 7.21	Turbidity	Salinity	0.00		
2	2 20686.5	2	2	1 6.63	1			
3	3 58	3	3	3	3			
Very V= See	slow from	on reco	ample	hange in con	11/2			
Substrate descript (e.g., rock, soil, cobl			710 2	nunge In Coi	Wition			
Seep observations material, colored dis	(e.g., sheen, bacter charge, precipitates,	ial slime, staining, od vegetation):	or, waste					
Description of embacharacteristics:	ankment that seep fl	ows from and genera	l seep	200-08-2-2-3-15		560 - e C		
			, -1					
Seep location relative substrate:	ve to vertical change	s in embankment or I	beach					
	2							

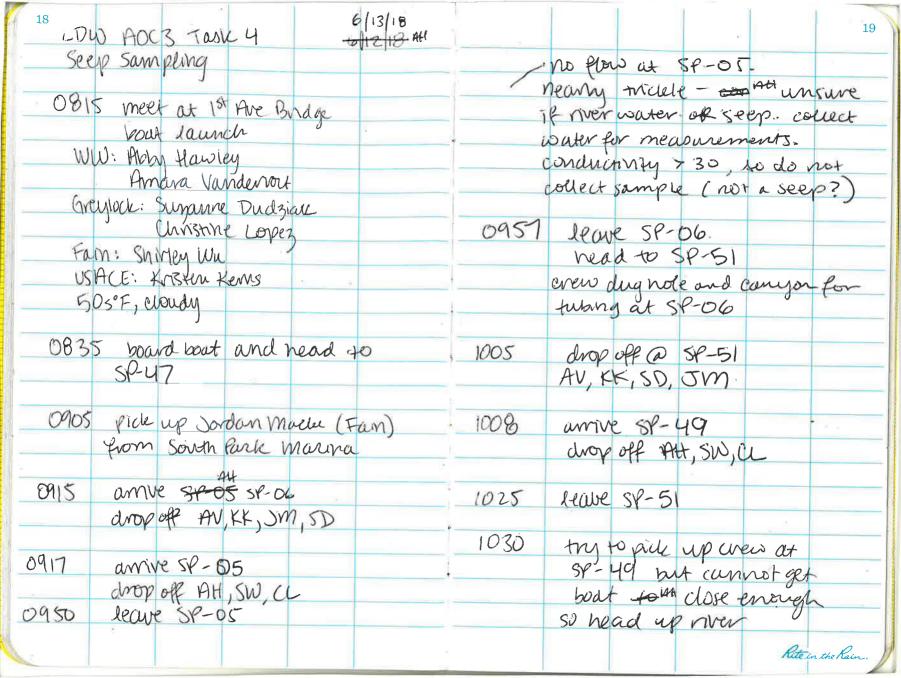
	LDW A.	/ 1052 Cool		Project Task: 5e Crew: AH Photo no. 01	ep Sampling SD, SW
Location ID: 5		asting (x): 12670	98	Northing (y): 2/06	9/ Time: 1052
Sample collection	method:	Funne			1002
Flow rate collection	n method:			aping	
Volume of contain	er:				
Time to fill contain	er:				
Calculated flow rat	e:				
Temp OC	SpC	DO mg//_	pH	Turbidity	la
1 15, 14	1 35/39	17.89	1 💥	1 1. 20	Salinity 1
2/5,10	2 27987	2 7,91	2 *	2015	2
Comments:	3	3	3	3	3
Substrate description (e.g., rock, soil, cobble	on e, gravel, sand, silt, o	clay)	H neu	r not working seep water	
Seep observations (material, colored disc	e.g., sheen, bacterial harge, precipitates, v	I slime, staining, odor, v egetation):	waste		
Description of embar characteristics:	nkment that seep flow	vs from and general se	ер	- 10 ft up: Stake	stream from
Seep location relative ubstrate:	to vertical changes i	in embankment or bead	ch L	/	



2 LDW ADC3 Tasky June 12,2018	3
	NO Plow at SP-27 or in the
seep sampling	immediate vicinity
EO. 05 (1000)	
0730 meet at 1st Ave Bridge boat	irrarby stream of water from
0130 414000	behind bulkhoall/sheet ple
gravity: Jeff witson	wall, posside seep?
windward: Berit Berguist	took photos, readings, from rate
Phoby Holisley	Recorded as SP-891 in GPS
Evreylock: Suzanne Dudziak	but unsure if seep.
Christine Lopen	0938 leave 5P-27
Fam: Soraan Madu	
Shirtey Wu	0946 arrive SP-33
USACE: Altson Shess	no ville from
0735 introductions	
0740 Sam Health and Safety	0950 leave SP-33
meeting (SD reads)	
0745 review sampling procedure and	0955 arrive SP-35
Circun Hainds Dinzy Hainds	1000 leave SP-35
load boat	1006 arrive SP-38
0800 bout Hearth and Safety - Jeff	1030 leave St-38
nead up river	1038 arrive SP-35
dvoy of Berit's teum	Manymoidity so fill bow and
V=1×1 11 V	letsette for 5 min. Repeat
0903 arrive SP-27	spaces to get enough water.
	Rete in the Rain.

1eave SP-35 1113 arrive SP-30 1125 1209 leave SP-30 1243 arrive SP-43 leave 5P-43 1310 collected a set of QC bottles at SP-43 looked at accessibility of SP-63 and SP-01 on our way back to the 1st Ave Bridge boat launch. 1345 arrived of boot launch and der unloaded boat QC bottles and load coolers COC 435 head to ARI 612/18 nearry tellanter

16	17
bout - directly from back of	come back and pick us up.
boar so we don't need to	12:25 Boot returned and we
Step off. But the seep became	needed to collect a PCB sample
turbed so we will return later.	because we did not have a
10:08 Arrive at SP-38	bottle Collected PCB sample,
10:27 Corect last sample at	after letting sample settle in
SP-38. Not mudey-	sour because water appeared
good access.	turbia after re-setting the
10:45 Arrive at SP-35. Collected sample	funnel in the seep.
directing from the boat we let	12:40 Arrived at SP-43
The sample settle for 5 min in	13:00 Sample collection time.
bowl. Had to go back and	collècted ac samples here.
collect about I'L more because	13:10 Start heading back to the
not enough sample in bowl from	boat ramp.
first collection.	Stopped at SP-63 and SP-01 on
10:5% sample collection time	ne way back to walnate
11:13 finish at SP-35	access. Barges still present:
11:25 Arrive ar 5P-828	13:46 Arrive at boat vamp.
But tide is too high	Unload and QC samples, fill
11:28 Arrive at SP-30 and	out cocs
drop off the other crew.	14:32 bone at boot ramp.
11:32 -1.5 tide	It cad to las
11:45 Amire or SP-92	
12:05 Collect sample at SP-12	BB
and wait for boar to	Rite in the Rain



20	21
	7-12
1045 my to get to SP-27 (and SP-28) but too snallow	approx 1310 leave SP-27
Sp-28) but too snallow	7 1
for boat to get under	1329 leave 2th SP-28
for boat to get under the bridge	Mostale at CP-28 bet
	easy to identify using
1105 state awave SP-33	easy to identify using
do du took measurements,	
dropped off AV, KK, JM	After VISITING "SP-89", went to
slightly lower vol. in bittles for metals + TOC/DEC	50-28 Fin was good, so bout left to pick up crew from
1125 leave even at SP-33 and	boat left to pick up crew from
go to pick up crew at SP-49	58-24-
	1310 tide B Bry too quickly -
1150 (approx) 1eave SP-49 and	1310 tide B Bring too quickly - compor sample SP-28.
head to SP-24 in Slip 6	
	1350 drove by SP-45. Tide 3 100 high (covering) for SP-45 and SP-47.
1211 arrive SP-24	100 high (covering) for SP-45
leave Att, CL, SW	and sp-47.
attempted to go to SP-27	
no flow at SP-27 (same as	1401 drop AV, KK, JM st to rear SP-87 to walk back
yesterday).	SP-87 to wall buck
Walked to "SP-89" -	
assessed flow situation - it	1415 arrive SP-83. cannot sample-
was barely flowing (dripping)	no flow. May be sampleable at
and & runoff from delois	18WPT tide inn cop top it some
beand sneet pie wall.	but no from. 18ave SP-83 - Rite in the Rain.

22 Amire near SP 83 so Att 1423 SP-87 STate AH Convot find stake for SP-87 Attempted to get sample but tide came in too fast. Could not get sample. leave SP-87 1510 offwarer organize samples, fill out COCS 1530 leave for PRI 1605 6/13/18 Abertanbis

6/15/2018 LDW ACCS TOSKY seep sampeng 0950 meet @ Harror Island Manna WW: Abby Hawley Gerit Bergquist Geregeock: Suranne Dudniak Christine Lopez Fam: Svivley Wu Sordan macke load boats Healthand Safety 1028 teaves with Att, SD, SW. Head to SY-88 1034 Arrive SP-88 collect sample @ SP-88 1052 1059 1eave 50-88 Head to 50-70 Annive SP-70 1104 Rite in the Rain.

are on their last sleep and collect sample at SP-70 do not need nelp so we head to Harbor Island Marina. leave SP-70 1117 head to SP-86 1350 dock at Horbor Island self parked poar north of Marina and unload Kellogy Island and craw walked M 1400 boat unloaded, load collected sample at 51-86 1219 enicle, wait for other Jeam so we can QC 1245 1eff S-86 and arrived at bottles (labels and fill out COC. Kellogy Island second boat arrives - unload Reposition boat conile crew labels bottles ac lasels/ bottles fill our coc, load rest of 1259 Arrive 58-66 equipment/coolers into truck. collect Sample at 58-66 1325 1545 deave for ARI. Hattwiley 6/15/18 leave SP-66 1330 Contact Berit's Ham - they Rete in the Rain.

26			27
	Seep Sampling 6/15/18	1316e	Collect Sample at SP45 58-47
	Windward: Bent Bergguist	1345	collect sample at SP-45
	Fain Jordan Macke		Head back to marina
	Greylock! Christme Copez		Arrived back at manina.
	ACOE: Allison suess		Unloaded and QC'd sample
	(rainy: Ryan McEliece (Discovery)		jars and filled our cocs.
9:50	Mive at Harbor Island.		
	Manra. Load up boats		1
		2	
(F)	for two crews.		
1015	Health and Safety		
1030			10
	SUP 3		Done with
11:00	Arrive at Slip 3.		sleping sampling
(1# 	AS, I mand BB raved skiff to .		
	SP-01. Sampled at 1133.		Rrs .
1140			
	Sampled there. Collected at		
	1208.	/	
1230	Head to SP-SI		
1250	Conducting too high at SP-51	V	
//	So heading to SP47.		
	Tide (wel 15 -3.5 ft		Rite in the Rain

Photos

Photo No.: 1

Date: 06-15-18

Description:Duwamish AOC3
Sampling at seep SP-



Photo No.: 2

Date: 06-14-18

Description:Duwamish AOC3
Sampling at seep SP-05





Photo No.: 3

Date: 06-13-18

Description:

Duwamish AOC3 Sampling at seep SP-



Photo No.: 4

Date: 06-13-18

Description:





Photo No.: 5

Date: 06-12-18

Description:Duwamish AOC3
Sampling at seep SP-



Photo No.: 6

Date: 06-12-18

Description:Duwamish AOC3
Sampling at seep SP-





Photo No.: 7

Date: 06-13-18

Description:

Duwamish AOC3
Sampling at seep SP-



Photo No.: 8

Date: 06-12-18

Description:





Photo No.: 9

Date: 06-12-18

Description:

Duwamish AOC3
Sampling at seep SP-



Photo No.: 10

Date: 06-12-18

Description:





Photo No.: 11

Date: 06-12-18

Description:

Duwamish AOC3
Sampling at seep SP-



Photo No.: 12

Date: 06-15-18

Description:





Photo No.: 13 Date: 06-15-18

Description: Duwamish AOC3

Sampling at seep SP-



Photo No.: 14 Date: 06-14-18

Description:





Photo No.: 15

Date: 06-15-18

Description:Duwamish AOC3

Sampling at seep SP-



Photo No.: 16

Date: 06-15-18

Description:





Photo No.: 17

Date: 06-14-18

Description:Duwamish AOC3
Sampling at seep SP-



Photo No.: 18

Date: 06-14-18

Description:Duwamish AOC3
Sampling at seep SP-74

no photo available



Photo No.: 19

Date: 06-15-18

Description:Duwamish AOC3
Sampling at seep SP-



 Photo No.:
 20

 Date:
 06-14-18

Description:Duwamish AOC3
Sampling at seep SP-78





Photo No.: 21

Date: 06-14-18

Description:Duwamish AOC3
Sampling at seep SP-79



Photo No.: 22

Date: 06-15-18

Description:Duwamish AOC3
Sampling at seep SP-83





Photo No.: 23

Date: 06-14-18

Description: Duwamish AOC3

Sampling at seep SP-



Photo No.: 24

Date: 06-15-18

Description:





Photo No.: 25

Date: 06-14-18

Description:Duwamish AOC3
Sampling at seep SP-



Photo No.: **26**Date: 06-15-18

Description:Duwamish AOC3
Sampling at seep SP-88





COCs

_i of			CHA	AIN-OF-	CUSTO	DY/	ΓES	T	REQ	UES	ST F	ORA	1	2 ton	0 0 6
Project/Client Na	ame: Wik	dward						72						jio	3 4 8 2
Project Num		Ship to: ARI LOUPS Attn: Sue Durnihod Shipping Date: 6/12/18									1/10				
Contact Name: Arnava Vandervort						SI		-	and c					Number:	
Sampled By: 88 AS AH SD CL SW, JM									evit B					nd requested:	
1, 1, 11, 30, 50, 30;						· · · · · · · · · · · · · · · · · · ·	out by	30%	74	37	00,),		Turnaroui	no requesteu.	30.
						Test(s) Requested (check test(s) required)									
Sample Collection Date (m/d/y)	Time	Sample Iden	Matrix	10¢ /boc	225	YAKIS	PCB Aroclors	SVOCS	VINENCEUS/	Dioxins/ Crouns(hald	DOUS BOOKS (hold)	1	ents / Instructions tag number(s)]		
6/11/18	1612	LPWIS-SP-	RBI	8	W	X	4	Х	X	X	X	X	X		
6/11/18	1637	L-DW18-SP	-482	8		X	K	X	X	X	X	×	X	Hold	
10/12/18	12-06	LOWIS - SP	- 30	7	W	XI.	X .	X	X	X	X	X			
6/12/18	0919	LOW 18 - SP-	-32-	7	W	X		X	X	X	X	X			
6/12-118	1056	LOWB-SP	-35	7	W	X.	4	X	X	X	×	X			
6/12/13	1027	LOWIS-SP-	38	7	W	X	X.	X	X	×	X	X			
6/11-118	1205	LOWIN- St		- 9	W	X	X	X	X	×	X	×	X		
6/12/18	1300	LOWIG-SF	-43	14	W	X	X	X	X	X	X	X		extrave	olumetar ac
												100			
												1			
												Şe.			
		Total Number of		66	Purchase Orde	r / Stater	nent (of Wo	ork#						144.1
1) Released by:			1) Rec'd by:	01066-91		2) Releas	ed by:					2) Re	c'd by:		
Print name:	mr se	NAG WASH	Agricant Control		J. Santill	Print n						+			-
Company:	wanar	2	Company:			Signatu						Co	mpany:		
Data/Time	1/18		Date/Time: 06/13/18	19.	5 (**	Date/T						Da	te/Time:		
Distribution: White co	opies accompar	ny shipment; yellow reta	ined by consignor.							To be	compl	eted by	/ Labora	atory upon s	ample receipt:



200 West Mercer Street Suite 401 Seattle, WA 98119 Tel: (206) 378-1364 Fax: (206) 217-9343

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

Of CHAIN-OF-CUSTODY/TEST REQUEST FORM												
Project/Client N	ame: WW	idward			Shi	p to: A	RIL	abs				7 4 W W
		3 Task 4				ue Di		Mas		Ship	ping Date: 6/13/18	
Contact Name: AVN ava Varider vort							and c					Number: NA
Sampled By: AH, AV, SD, CL, JYN, SW, KK					Form filled out by: A training Turnaround requested: Sta							
1.					T	Test(s) Requeste	ed (check	test(s) red	ouired)		
Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample # of Containers Matrix Test(s) Requested (check test(s) required) Comments / Institute Comments / Institute									
6/13/18	0953	LDW18-59-06	7	N	XX	X	×	X	X	X		
6113118	1217	LDW18-58-33	7	W	XX	×	×	×	×	×		
6/13/18	1235	LDW18-58-24	8	W	XX	X	X	X	X	X	X	
613118	1242	UDN18-58-24-FD	8	W	XX	×	×	×	×	\times	X	
1												
							-					
			1.5									
		Total Number of Containers	30	Purchase Order	/ Stateme	ent of W	ork #					
1) Released by:					2) Released	by:				2) Red	c'd by:	
Print name: V	Print name: Abby Hawley Print name:											

Signature:

Company:

Date/Time:

* Distribution: White copies accompany shipment; yellow retained by consignor.

1626



Signature:

Company:

Date/Time:

200 West Mercer Street Suite 401 Seattle, WA 98119 Tel: (206) 378-1364 Fax: (206) 217-9343

Company:

Date/Time:

To be completed by Laboratory upon sample receipt:

Company:

Date/Time:

Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

of	1	_ CHA	AIN-OF-	CUSTOE	DY/TEST REQUEST FORM					
Project/Client Na	_		:1		Ship to: ARI LOWS					
		OC3 Task 4 Attn: She Durning Date: 6/14/13								
		mara Vandervort Shipper: Hand deliver Airbill Number: IVA								
Sampled	ву: <u>88</u>	AH Windward	(Form	orm filled out by: Bent Bengaust Turnaround requested: Std.					
Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required) Comments / Instructions [Jar tag number(s)]					

water

	1519	LDWIS - 31	- 74	- 12			(1)	×	X	X	X	X			
		LDW18-5		8			XX	X	X	X	X	X	X	T	
	1204	LOW18 - 9	SP-78	8)	L.X	X	X	X	X	X	X		
	0950	LOW18 - SI	P-79	8			Xy	X	X	×	X	X	X		
	0953	LDW18-5	P-84	7			XIX	X	X	×	X	X			
1	Service Commission of the Service Commission	LOWIB-S	51-87	9	V		XX	X	X	X	X	X	X		
	36														
		Total Number of	Containers	75	Purchase Ord	er / Si	/ Statement of Work #								
1) Released by:	1. Hansh	ey	1) Rec'd by:			2) Released by:							2) Rec'd by:		
1) Released by: A. Hantey (1) Rec'd by: Print name: Phopy Hawley					15her	Р	rint nar	ne:							
Signature: Authoritism Company: Nn						S	ignatur	1:				Co	Company:		
Company:	viriduea	v d	1	TOLI		C	ompan	y:							
Date/Time:	14/18	1545	Date/Time:	8	1546	D	Date/Time:					Da	Date/Time:		

* Distribution: White copies accompany shipment; yellow retained by consignor.

LOW 19 - SP-05

LOW 18-58-57



200 West Mercer Street Suite 401 Seattle, WA 98119 Tel: (206) 378-1364 Fax: (206) 217-9343 Date of receipt:

Condition upon receipt:

Cooler temperature:

Completed by Laboratory upon sample receipt:

Laboratory W.O. #:

Time of receipt:

Received by:

Extravolume for QC

of	_1_	_	CHA	AIN-OF-C	CUSTO	DY	/TI	ST	REQ	UES	ST F	ORA	Λ	112 3085	
Project/Client Na	ame: W(V	idward		22			Ship	to:	rei L	alex					
Project Number: 1903 Task 4						Ship to: FRI LOWS Attn: Sul Durning O Shipping Date: 6/15/18								ning Date: 1.115/19	
Contact Name: ANNOVA VONCEN VONE								-	and c					Number: NA	
Sampled By: Windward - 3B AH						orm fille			ent			ا المالة		nd requested:	
			.a out	Бу	1324 1 1	BWY	1 300		Turnaroui	ild requested:					
							Test(s) Requested (check test(s) required)								
Sample Collection Date				Volume of Sample / # of		or Face	rss	PPHIE	PCPS	SVOCS	MAC YOUS!	PIDXINS)	Shapeners Heled	Comments / Instructions	
(m/d/y)	Time	Sample Ider	tification	Containers	Matrix	-	1	the same	五年	N	£ 5.	D\$ 3	180C	[Jar tag number(s)]	
6/15/18	1133	LOWIS-SP-	-0i	8	Water	X	X	X	X	X	X	X	X		
- i	1345	LOWIB-SP	-45	7	ż	X	X	X	X	X	X	X			
	1316	LOW18-S	P-47		1	X	1X	X	X	X	X	X			
	1315	CON18-5	P-606	9		×	ЧX	X	X	X	×	X	X		
No. of the last	1113	LDW18 -SI	2-70	S		X	JX	X	X	×	X	X	X		
	1208	LOW 18-51	2-83	The state of the s		7		X	关	×	X	X			
	12-19	LOWIS - SP	1-86	8		X	X	X	X	X	X	X	X		
V	1052	C06118-39	-98	9	V	X	X	Y.	X.	X	X	X	X		
							and the same of th								
							1								
		Total Number of	Containers	Col	Purchase Orde	er / Sta	teme	nt of W	ork #						
1) Released by:	Borain	ast -	(1) Rec'd by:			2) Rel	eased I	oy:				2) Re	ec'd by:		
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Signature: 🏂		Dyn.	Company:	A01		Sig	nature:					Co	Company:		
Company: V			02 4 35	Liter			mpany					_			
Date/Time:	15/18 1	6:10	Date/Time:	18 161	0	Da	te/Time	:				Da	ate/Time:		
Distribution: White o	opies accompar	ny shipment; yellow reta	ined by consignor.							T .	PARTIE			William Orthographic Mark	
			200 Most M	orcar Street			18	102.1		10 be		215	200	atory upon sample receipt:	
-	200 West Mercer Street Suite 401				Date of re	eceipt::			L. W	-31.1	-	aborator	/ W.O. #:		
Win	d/Wa	ental LLC	Seattle, WA 9 Tel: (206) 37		Condition	n upon	receip	t:				Time of re	ceipt:		
Fax: (206) 2															

Cooler temperature:

Received by: