Location EGN Date 9/25/17

Project / Client On-shore mooring

set up @ ~ 13:30
purging started @ 13:44

pump started @ 14:19

Test started @ 14:20
B: 6.91 V @ 14:39

Left mooring after one cycle passed - operating smoothly

Blue temp probe
RAD7 1222 LTC 1073778
Batteries #1 + 2

9/26/17

Pumps off 7:14
Battery change done @ 7:49
RAD7 accidentally stopped during battery change and restarted @ 7:48
Removed batteries #1 + 2
Added batteries #11 + 12

Location EGN Date 9/26/17

Project / Client

Scale

started purging: 9:30

USGS 1 consists of:
USGS RAD7s
HOBO 7730 (blue)
Black taped probe

USGS 2 consists of:
UF RAD 7s
HOBO 4828 (black)
Green taped probe

USGS 1 start: 10:~~X~~19
18:10

USGS 2 start: 10:22
18:10

Generator on: 10:08
YSI started: 10:09
pumps on : 10:10

Generator off: 18:10
YSI stopped: 18:11
Garmin transducer offset 23cm

Location EGN Date 9/26/17

Project / Client IRL Mapping

Transect	Direction	start time	stop time
T1A	N-S	10:44	11:00
T1B	S-N	11:10	11:31
T1C	N-S	11:39	11:54
~~T2A~~	~~S-N~~	~~12:05~~	
T2A	S-N	12:29	12:52
T2B	N-S	12:59	13:15
T2C	S-N	13:22	13:44
~~T3A~~	~~N-S~~	~~13:52~~	
T3A	~~S-N~~ N-S	14:15	14:35
T3B	S-N	14:40	15:01
T3C	N-S	15:11	15:30
T4A	S-N	15:42	16:00
T4B	N-S	16:07	16:28
T4C	S-N	16:33	16:49
T5A	N-S	16:56	17:16
T5B	S-N	17:21	17:39
T5C	N-S	17:45	18:06

Location EGN Date 9/26/17

Project / Client IRL Mapping

Scale

Transect	start	stop	Direction	corresponding
EGN701	10:44	11:03	N-S	T1A
~~EGN702~~	~~11:00~~	~~11:32~~	S-N	T1B
EGN703	11:40	*	N-S	T1C
~~EGN704~~	~~12:05~~	—	~~S-N~~	T2A
EGN705	12:29	12:54	S-N	T2A
EGN706	12:59	13:16	N-S	T2B
EGN707	13:22	13:46	S-N	T2C
~~EGN708~~	~~13:52~~		N-S	T3A
EGN709	14:18	14:37	N-S	~~T3A~~
EGN710	14:41	15:02	S-N	T3B
EGN711	15:11	15:31	N-S	T3C
EGN712	15:44	16:01	S-N	T4A
EGN713	16:07	16:30	N-S	T4B
EGN714	16:33	16:51	S-N	T4C
EGN715	16:56	17:18	N-S	T5A
EGN716	17:21	17:41	S-N	T5B
EGN717	17:45	18:07	N-S	T5C

* Not recorded

Location EGN Date 9/26/17

Project / Client IRL Mapping

Calm waters w/ winds @ 1-3 knot out of NE @ start of T1

Using full length of CRP cable because we forgot the pallet

CRP settings for files:
- 5 m pigtail
- 5 m electrode spacing
- -10 m GPS offset
- X = -60 m in survey info

- A few errors (TXOVL) on TIC
- Generator shutoff during first attempted pass of T2A so we had to stop, turn around after refueling & restart T2A (finished refuel 12:25)
- Ignore EGN703 - it was the first attempted pass of T2A when generator cut out
- "Main battery low" reading on EGN705 w/ #3 hooked to main battery

Location EGN Date 9/26/17

Project / Client IRL Mapping

Scale

- We switched main battery hook up to #4 and have boost power running off #3
- Still reading "main battery low" after switch so switched hook up to #6

- Pass T2A was off line by ~20 m to the east
- Crab traps at start of T3 on N-S pass caused us to be non-[redacted] (see note below)

- Caught in crab trap @ 13:58 - stopped EGN708 and back tracked to remove crab trap from line
- Start of T3, winds picked up to ~8-10 knots E-NE
- Disregard EGN708 + first attempt @ T3 pass
- T3/EGN709 will be off line on northern end due to adjustments for crab traps

Location EGN Date 9/26/17

Project / Client IRL Mapping

- multiple crab lines cross the transect (T3) @ a diagonal - avoiding means crossing in-and-out of crab line path
- Generator off @ 15:34 to refuel generator
- Generator back on @ 15:40
- "Main battery low" reading on T4B / EGN 713 for Supersting
- Switched main power hook-up to #3 + boost to #6 after T4B ended
- Waves increased during T4 to T5

Today used batteries #3, 4, 5+6 for barge

Location EGN Date 9/27/17

Project / Client IRL Mapping

Scale

started purging: 8:54

USGS 1 consists of:
- USGS RAD7s
- HOBO 7730
- black taped probe

USGS 2 consists of:
- UF RAD7s
- HOBO 4828
- green taped probe

USGS 1 started: 9:16
12:29

USGS 2 started: 9:20
12:30

Generator on: 9:13

VSI on: 9:14

pumps on: 9:15

Generator off: 12:28

VSI stopped: 14:00

Garmin offset @ 22 cm (@ submerged depth)

Location EGN Date 9/27/17

Project / Client IRL Mapping

Transect	Direction N-S	start	stop
T6A	~~N-S~~	9:48	10:06
T6B	S-N	10:13	10:34
T6C	N-S	10:40	10:59
T7A	S-N	11:09	11:29
T7B	N-S	11:36	11:53
T7C	S-N	12:01	12:22

Transect	Direction N-S	start	stop	Corresponding
EGN718	~~N-S~~	9:48	10:08	T6A
EGN719	S-N	10:13	10:37	T6B
EGN720	N-S	10:40	11:00	T6C
EGN721	S-N	11:09	11:31	T7A
EGN722	N-S	11:36	11:54	T7B
EGN723	S-N	12:01	12:23	T7C
EGN724	—	12:36	3:59	—

Location EGN Date 9/27/17

Project / Client IRL Mapping

Scale

- At end of T6B, trended off line to NE by 80m to safely maneuver the cable
- Southern end of T6C/EGN720 was offline by ~15-20m to the west
- Driente switched @ ~11:33/11:34 before T7B
- Wind @ start of day 0-1 Knots out of N
- Wind bumped up to ~6 knots out of E-NE around 12 pm
- T7 — EGN721, 722, 723 Lowrance reported incorrect depths (3.2m)
- T6 Lowrance ~~reported~~ depths seemed true ~ 0.7 m
- Note forgot to log sonar until after the first shore I started

Today we used batteries #3,4,5 NOT #6

Location EGN Date 9/27/17

Project / Client Mooring (on-shore)

- Mooring pumps stopped + RAD7 off battery @ 7:20
- Battery reconnected + RAD7 powered @ 7:25
- Emptied filter for bilge of sediment and turned bilge on @ 7:33
- Removed batteries #11 + 12
- Add batteries #1 + 2.

OFFSHORE MOORING 9/27/17

RAD7 1051

Green USB Easylogger

LTC 1073664

- started test @ ~17:25 @ Run 1 cycle 1
- RH came down in first cycle so be [redacted] aware of that

Location EGN Date 9/27/17

Project / Client IRL Mapping

M# = measurement number

EGN724

- Started traveling W-E on northern most 1 @ 12:36
- ~~Cable out~~ @ end at M# ~~126~~ 141 12:5~~8~~1
- start turn M# 143 12:52
- End turn M# 167 12:54
- start turn M# 178 12:56 onto 2nd most northern transect going E-W
- straight on transect @ 202 M# 12:59
- Start turn M# 341 @ 13:14
- End turn M# 379 @ 13:18
- start turn M# 405 13:21 onto 2nd most southern shore 1 going W-E
- straight on @ M# 435 13:24
- start turn M# 566 13:38
- End turn M# 592 13:40
- start turn onto 1 M# 600 13:41
- straight on last and southern most shore 1 @ M# 625 13:44
- start, M# 754 13:58 turn out of 1
- cut line 13:59

Location EGN Date 9/28/17

Project / Client moorings

— On-shore mooring ——

- Removed batteries #1 + 2
- Deployed batteries #10 + 4
- Batteries and drierite changed out at 9:06 AM
- Filter emptied @ 9:12

Location EGN Date 9/28/17

Project / Client

Scale

24 cm depth to Garmin transducer

EGN - 9/28/17 - 1:58 pm

water depths - electrodes

★ Transect 4 ★

TOA-EG01 0.625 m → 0.625 m (TOA-EG01)

2	0.595 m		
3	0.620 m	16	0.645 m
4	0.615 m	17	0.630 m
5	0.600 m	18	0.640 m
6	0.620 m	19	0.630 m
7	0.620 m	20	0.635 m
8	0.610 m	21	0.610 m
9	0.600 m	22	0.620 m
10	0.590 m	23	0.575 m
11	0.590 m	24	0.620 m
12	0.600 m	25	0.600 m
13	0.620 m	26	0.590 m
14	0.610 m	27	0.590 m
15	0.630 m	28	0.585 m

Location EGN Date 9/28/17

Project / Client

* (ERT) T04 EG701 — correction by cg

First run of transect 4

Using ~~VD28M~~

→ ~~VD~~ dd 28F

correction by cg

~~T0408~~ * T04EG702

Second run on trans. 4

using DG28F1

* T04EG703

third run on trans. 4

using DD_SG28R

T04 EG704

same as above

T05 EG705

cmd dd28F

orientation S to N

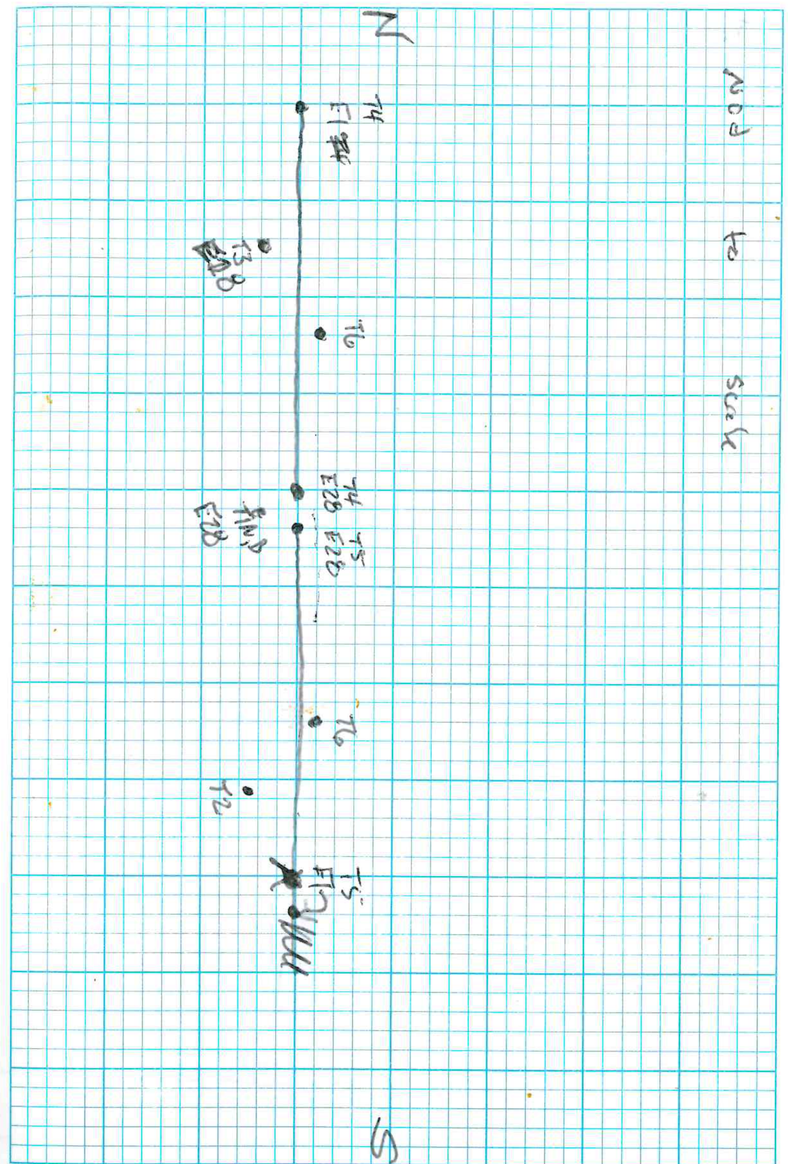
1st row 1 905

only 27 electrodes being assessed

Location EGN Date 9/28/17

Project / Client

Scale



Location EGN Date 9/28/17

Project / Client

TOS EG706 → 2nd run transect 5
cmd-file dg28f1
~~Elect. 1-27~~ Electrodes 1-27
Spacing 2-M

TOS EG709 → 3rd run transect 5
cmd-file dd-sg28f
electrodes 1-27
spacing 2-m

TOS EG708 → 4th run transect 5
cmd-file dg28f1
elec. 1-28
spacing 2m

TOS EG710 → 1st run on Transect 1
cmd-file dd28f
elec 1-28
spacing 2m

TOS EG712 → 2nd run on Transect 1
cmd-file dg28f1
elec 1-28
spacing 2m

Location EGN Date 9/28/17

Project / Client

Scale

approx. 4-5 cm waves averaging to get water depth

Transect 5 - water depths (~~cm~~ m)

Elect	Depth (m)	Distance
1	0.69	2
2	0.67	4
3	0.67	6
4	0.68	8
5	0.69	10
6	0.68	12
7	0.70	14
8	0.69	16
9	0.685	18
10	0.68	20
11	0.69	22
12	0.68	24
13	0.67	26
14	0.69	28
15	0.69	30
16	0.67	32
17	0.67	34
18	0.68	36
19	0.675	38
20	0.66	40
21	0.67	42
22	0.67	44
23	0.67	46
24	0.67	48
25	0.67	50
26	0.68	52
27	0.68	54

Location EGN Date 9/28/17

Project / Client

POREWATER

Refractor correction 34.03

YSI

50 mS/cm → YSI reads 51.9 psu salinity

REFRAC

50 mS/cm → refrac reads 27.5

we are going to adj refractometer to match YSI salinity

New reading

Location EGN Date 9/28/17

Project / Client

Scale

Transect 1 water depths (m)

waves ~10cm

Electrode	Distance	Water Depth (m)
1	2	1.04
2	4	0.875
3	6	0.875
4	8	0.875
5	10	0.87
6	12	0.87
7	14	0.87
8	16	0.87
9	18	0.865
10	20	0.865
11	22	0.86
12	24	0.855
13	26	0.86
14	28	0.82
15	30	0.80
16	32	0.80
17	34	0.78
18	36	0.78
19	38	0.77
20	40	0.77
21	42	0.76
22	44	0.74
23	46	0.71
24	48	0.68
25	50	0.635
26	52	0.59
27	54	0.54
28	54	0.48

Location EGN Date 9/28/17

Project / Client

~~Tues~~ TO1EG714 → 3rd run on Transect 1

cmd. file dd-sg28~~5~~

elect. 1-28

spacing 2-m

Blue @#28 electrode
Green @#0 electrode

Blue (1071679) always at the end
Green (1071736) always at the start

Location EGN Date 9/29/17

Project / Client On-shore mooring

Scale

Batteries and dherite swapped @ 8:30 am

#4 & #10 came out and #9 & # came out

Flow rate was sluggish when approached mooring but flow picked up post battery switch

Sed trap emptied @ 8:12

Location EGN Date 9/29/17

Project / Client Porewater Sampling

Distance	Depth (cm)	Sal	Rn	Majors	NOTES
5	10	5	9:20	✓	
5	20	5	9:46	✓	
5	30	4	10:03	✓	Tough time clearing of sed – encountered resistant unit (milky tan/white)
5	40	2	10:13	✓	
5	50	4	10:40	✓	Resistant unit ~1-2 cm above 50cm mark
5	SW	21	10:52	✓	
10	SW	24	11:10	✓	
10	10	9	11:24	✓	
10	20	5	11:34	✓	
10	30	4	11:42	✓	
10	40	3	11:50	✓	
10	50	5	12:05 → B	✓	Brown/tan milky color to some water (iron oxides?) 12:13 → C+A
20	10	22	12:48	✓	
20	20	21	12:59	✓	Smell of sulfur + grey hue to water
20	30	19	13:19	✓	
20	40	18	13:28	✓	
20	50	18	13:46	✓	
20	SW	21	13:58	✓	
22.5	SW	21	15:05	✓	
22.5	10	21	15:15	✓	
22.5	20	23	15:33	✓	
22.5	30	25	15:43	✓	
EGN713	50	3	16:47	✓	

Location EGN Date 9/29/17

Project / Client

Scale

Waypoint NOTES

DI blank Sal 4

22.5 → 40 → Rn 16:00

22.5 → 50 → Rn 16:15

Location EGN Date 9/29/17

Project / Client Porewater Sampling

— 5m distance PW @ 50 cm —

- Sal @ start of Rn bottle was 4 Collected: 10:04
- Majors ✓
- Ra fiber start: 10:34
  stop: 10:41

2L filtered thru
Sal 4 at start
Sal 4 at stop

Location Date 10/3/17

Project / Client Lab Salinity measurements on PW for Majors Scale

Sample	Salinity
~~EGN~~ 707 SW	22
~~EGN~~ 707 50	23
~~EGN~~ 709 SW	22
~~EGN~~ 709 50	23
~~EGN~~ 710 SW	24
~~EGN~~ 710 50	24
~~EGN~~ 715 SW	23
~~EGN~~ 715 50	24

Salinity measurements taken in lab post field using refractometer

Location EGN Date 9/30/17

Project / Client Porewater Sampling

Sample	Depth	Sal	Rn	Majors	NOTES
EGN-712-50	50	5	11:10	✓	Orange-tan milky hue to PW
EGN714-50	50	5	11:36	✓	Milky white hue to water
EGN715-50	50	23	12:19	✓	
EGN716-50	—	—	—	—	
EGN0	10		13:45	✓	waypoint: EGN 0 SHORE
EGN 0	20		14:00	✓	Yellow hue to 10cm + 20cm
EGN 0	30		14:21	✓	clear colorless @ 30cm
EGN 0	40		14:40	✓	
EGN 0	50		15:07	✓	

Location EGN Date 9/30/17

Project / Client Porewater Sampling

Scale

Vial A - too much suspended sed

Vial B + C — tried to reduce but still sig. amount

SW sal 23

N 28° 06.938 W 80° 37.218

N 28.11563° W 80.62031°

Enough PW collected for majors to measure salinity

Location EGN Date 9/30/17

Project / Client Head difference

EGN 5 - 50 cm
Head difference 7.5 cm

① Water level: 42.5 cm
PW head: 51

② Water level: 43 cm
PW head: 52 cm

③ Water level: 43 cm
PW head: 47 cm

④ Water level: 44 cm
PW head: 53 cm

Jon Martin's ~~⊘~~ sampler
- Twice we got 4 cm head difference by sticking tubing into a loop into the SW
- Non quantitative

Location EGN Date 9/30/17

Project / Client

Scale

① Water level: 67 cm
PW head: 74.5 cm

② Water level: 66 cm
PW head: 70. cm

③

Screened end broke off sipper ending ability to conduct head difference test